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Assortative Meeting and Mating: Unintended Consequences of Organized Settings for Partner Choices*

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Abstract

An important hypothesis about why people generally interact with people who are socially or culturally similar to themselves is that the opportunities they have to meet similar others are greater than the opportunities they have to meet dissimilar others. We examine this supply-side perspective on social relationships by empirically linking marriage choices to the type of setting couples had in common before they married. We focus on five meeting settings (work, school, the neighborhood, common family networks, and voluntary associations) and five types of homogamy (with respect to age, education, class destinations, class origins, and religious background). Using data from face-to-face interviews among married and cohabiting couples in the Netherlands, we show that these five contexts account for a sizable portion of the places where partners have met. Using loglinear analyses, we subsequently examine whether couples who shared settings are more homogamous than couples who did not share a setting. Our results indicate that schools promote most forms of homogamy, while work places only promote homogamy with respect to class destinations. Neighborhoods and common family networks promote religious homogamy, but they are not related to homogamy with respect to class origins. While in some cases, settings have unexpected effects on marriage choice, our findings generally confirm the notion that mating requires meeting: the pool of available interaction partners is shaped by various institutionally organized arrangements and these constrain the type of people with whom we form personal relationships.

The choice of partners for personal relationships is constrained by the opportunities people have to meet and interact with others. Because interaction opportunities are not randomly distributed, they are an important reason why people generally

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form relationships with persons who are socially or culturally similar to themselves. Hypotheses about interaction opportunities are part of a general supply-side perspective on social relations. The supply-side perspective argues that the social contexts in which people participate, mold their networks by shaping the pool from which they draw their contacts (Fischer et al. 1977; Flap 1999; Huckfeldt 1983; Marsden 1990). Demand-side theories, in contrast, emphasize the preferences people have to meet and select a specific type of partner (e.g., Buss & Barnes 1986; South 1991). The two perspectives provide complementary insights in the way personal relationships are formed and are sometimes combined into the notion of filtering (e.g., Murstein 1986). Institutional arrangements delimit the pool from which people can choose, and preferences determine how people choose partners out of the pool they face. The supply-side perspective is particularly relevant in that it makes a classic sociological claim: it relates seemingly personal decisions to societal conditions, thereby facilitating our understanding of social and historical patterns in individual behavior.

The supply-side perspective has been applied to all sorts of relationships, such as friendships (McPherson & Smith-Lovin 1987; Verbrugge 1977), dating and sexual relationships (Laumann et al. 1994; Van der Vliet 1990), marital relationships (Blau & Schwartz 1984; Kalmijn 1998), contacts with extended family (Greenwell & Bengtson 1997), relationships at work among colleagues (Flap, Bulder & Völker 1998; South et al. 1982; Tsui & O'Reilly III 1989), relationships among neighbors (Huckfeldt 1983; Völker & Flap 1997), and discussion networks (Marsden 1990). Some of these studies focus on how interaction opportunities affect the nature or frequency of contact (e.g., Greenwell & Bengtson 1997), others focus on how opportunities affect the type of partner people choose (e.g., McPherson & Smith-Lovin 1987). Studies also differ in the type of opportunities they consider relevant. Some focus on macro-level interaction opportunities, such as relative group size and geographic distributions, others focus on contact opportunities in smaller settings, such as schools and neighborhoods.

Macro-level interaction opportunities have mostly been studied in research on marital choice. Macro-level opportunities depend on the relative size of groups in a population as well as on the distribution of groups across different regions. Many studies have shown that inmarriage is more common in larger groups than in smaller groups (Lieberson & Waters 1988), and that inmarriage of a specific group is more common in areas where that group is larger. Asian Americans less often marry out in California, where they are a larger minority, than in the rest of the United States (Wong 1989), for example, and blacks marry more endogamously in states where the percentage of blacks in the population is larger (Kalmijn 1993). Conjectures about the effects of group size and its corollary, heterogeneity, on homogamy, have also been examined by analyzing states and (S)MSA's through correlational analyses. These studies find that relative group size is negatively correlated with black and ethnic outmarriage. Similarly, racial, ethnic and

occupational heterogeneity have positive effects on the respective types of intermarriage (Anderson & Saenz 1994; Blau, Blum & Schwartz 1982; Blum 1985; Hwang, Saenz & Aguirre 1994).

Microlevel interaction opportunities have primarily been studied in research on friends and networks. This perspective starts from the observation that people spend most of their time in specific places, such as schools, work places, voluntary associations, and neighborhoods. Such settings are not designed to be a meeting ground — they are institutionally designed to fulfill other functions in life—but as a by-product they provide opportunities for social contacts. Because such local settings are often socially segregated, they provide an additional explanation for why people choose partners within the group. Several researchers have shown that the diversity in social background characteristics of particular settings positively affects how homogeneous the friendships and personal networks are of the people who participate in such settings. The work context leads to homogeneity of networks with respect to education (and to heterogeneity with respect to race and religion), and comembership in voluntary organizations stimulates the emergence of networks that are homogeneous with respect to religion (Fischer et al. 1977; Marsden 1990). Sharing a neighborhood does not seem to have an effect on social and cultural similarities of network ties (Marsden 1990), although there are such effects in socialist societies (Völker & Flap 1997). Studies of networks in organizations reveal similar effects. Same age friendships are more likely when people work in age homogeneous work departments (Feld 1984) and the average socioeconomic status distance between friends is smaller when people are members of voluntary organizations which are homogeneous with respect those characteristics (McPherson & Smith-Lovin 1987).

In this study, we reconsider the supply-side perspective on personal relationships by linking micro-level meeting opportunities to the choice of a marriage partner. Using a nationally representative sample of the Dutch population, we first describe the settings where married and cohabiting couples have met. To analyze meeting patterns, we asked whether the various settings in which persons were involved, were shared by the partner before the relationship began. More specifically, we asked couples if they went to the same school(s), if they lived in the same neighborhood, if they were members of the same voluntary associations, if they worked in the same firm or organization, and if their families knew each other before they met. We focus on these five settings because they can be regarded as given for an individual, i.e., they are not intended as a meeting ground but provide interaction opportunities as a by-product. We characterize these settings as organized or institutional because schools, firms, and voluntary association are consciously designed organizations. Neighborhoods and family networks are not designed, but they are socially constructed. They are collective entities with emergent properties affecting the individuals involved and can therefore be characterized as organized as well.

The second aim of our study is to examine how these organized settings affect marital choice. We focus on five types of homogamy: with respect to age, education, class destinations, class background, and religious background. Our central hypothesis is that couples who meet in an organized setting are more homogamous than other couples. When people meet in organized settings, preferences for similar mates are combined by interaction opportunities that are not chosen and that help people finding someone who is similar. These opportunities make it easier for people to realize their ingroup preferences, which generally leads to a stronger degree of homogamy. We test hypotheses about effects of organized settings through a loglinear analysis in which we compare the marital choices of couples who share a specific setting to the marital choices of partners who did not share these settings.

Our study adds to the literature in different ways. The role of micro-level opportunities has mostly been studied in research on networks. Our study applies the argument about micro-opportunities to the formation of marital relationships, which yields a stronger test than has been presented before. While one can have many friends at the same time, marriage is a choice for a long term exclusive relationship. Because it is generally less dramatic to lose friends than to divorce, and easier to make new friends than to remarry, friendships will be affected more heavily by the opportunities people face. The saying, "out of sight, out of touch," applies more to a type of relationship for which several different persons can be chosen than to a relationship for which one chooses a single person for a considerable period of time. Moreover, marriage decisions are among the most private choices people make in modern society, and according to popular opinion, are therefore influenced less by societal conditions. If we are able to show that marital relationships are affected by the structure of local interaction opportunities as well, we have a strong case for the supply-side perspective on social relationships.

Even though research on marital similarity has mostly focused on the composition of larger areas, there are studies in which some attention has been paid to the influence of smaller settings. Bozon and Heran (1989) find that upper class people who find their spouse in closed settings, such as clubs and private parties, more often marry endogamously than upper class people who find their spouse in more public places. Smeenk (1998) analyzes the same data that we use here to examine the role of local marriage markets in promoting age homogamy and finds that age differences between partners are smaller when people have met at school. Laumann et al. (1994) present data on marital homogamy as a sideline in their study of sexual networks and find that schools promote homogamy by education and age, while meeting at work leads to less homogamy with respect to age and religion. In contrast to these earlier studies, our article makes the link between organized settings and marital choice the central focus of the analyses. Another improvement of our contribution is that we examine more than one setting and more than one form of homogamy in one study, allowing for a more elaborate examination of the strengths and weaknesses of the basic theoretical argument.

Hypotheses about Organized Settings and Homogamy

We consider five settings: the neighborhood, the school, work places, voluntary associations, and family networks. These settings are compared to each other as well as to the situation where no organized setting is shared. Couples who meet outside organized settings may either meet by coincidence, or may find a partner through bars, private parties, or their own network. The main difference between the “setting” and “no setting” condition lies in the distinction between preference and constraint. When people meet in organized settings, preferences and opportunities are both operating in the same direction. When people meet outside organized settings, in contrast, the selection process is largely shaped by preferences. People have preferences for socially or culturally similar spouses and these preferences either directly lead to homogamy, or they lead to the selection of smaller pools from which a spouse is chosen, such as bars or networks (Choquet 1988). Although these pools may be homogeneous, they are chosen rather than given and therefore less homogeneous than the organized settings we consider.

The five organized settings differ in how closely they are linked to the parental home. The neighborhood where people grew up and the networks parents have, are directly related to the parental home. Work places and institutions of higher education, on the other hand, are settings people engage in at a later stage in their life course. Voluntary associations are mixed: these can be associations in which people participate when they are still living at home, but that is not necessarily the case. Next to a distinction between settings, we consider five types of assortative mating: mating by age, education, class destinations, class background, and religious background. The first three can be regarded as individual or achieved traits, the latter two are characteristics of the parental home and are therefore ascribed (Kalmijn 1991).

The settings also differ in how much opportunity they offer for meeting a potential spouse. The greater the share of younger persons in a setting and the more heterogeneous the setting is with respect to sex, the more likely it is that the setting provides potential mates. In this sense, schools are considered favorable marriage markets because they are highly homogeneous with respect to age and — at least today — have equal numbers of young single men and women. A similar reasoning applies to voluntary associations, although some voluntary associations are highly segregated by sex, making them less important as a marriage market (McPherson & Smith-Lovin 1986). Work places are considered less favorable, in this sense, although increased participation of women in the labor market and declining occupational sex segregation suggest that this may have changed. On the other hand, work settings also have proscriptions against romantic liaisons due to the conflict of roles that is involved, which makes them a less favorable marriage market.

To formulate specific hypotheses, we need to make assumptions about the composition of organized settings. We begin with the two ‘ascribed’ settings: the neighborhood where people grew up and common family networks. What

TABLE 1: Hypotheses about the Effects of Sharing Organized Settings on Endogamy or Homogamy with Respect to Five Social Characteristics

Endogamy/ Homogamy with Respect to:	Living in Same Neighborhood When Young	Connection between Spouses' Families	Member of Same Voluntary Associations	Attended the Same School(s)	Employed in the Same Firm or Organization
Age at marriage	0	0	+	+	0
Completed education	0	0	0	+	+
Class destinations	0	0	0	0	+
Class origins	+	+	0	0	0
Religious origins	+	+	+	+	0

Note: + means that meeting in such a setting fosters homogamy (in comparison to no shared organized setting).

distinguishes the neighborhood from other meeting places is that it is usually homogeneous with respect to ascribed factors such as ethnicity, race, religion and class background, i.e., characteristics transmitted by parents. We therefore expect that meeting someone in one's neighborhood will foster homogamy with respect to religion and class background. Meeting someone through one's family — the son or daughter of one's parents' friends, for example — is also believed to foster ascriptive forms of homogamy. Friends generally have similar achieved characteristics and hence marrying the son or daughter of one's parents' friends will result in similarity with respect to ascribed characteristics.

Schools are by design homogeneous with respect to age, the age range being at most four to five years. Couples who met at school should thus be homogamous with respect to age. Schools also seem homogeneous with respect to educational level, but this is not entirely so. Differences in ultimate educational attainment are larger in elementary and grammar schools than in higher-level schools such as universities, simply because the educational system works like a funnel, particularly in the U.S., but to a lesser extent in the Netherlands as well. Hence, school settings will primarily lead to educational homogamy at the higher levels of schooling (Mare 1991). Schools are also homogeneous with respect to religion. In the heyday of pillarization in the Netherlands, many settings were highly segregated by religious denomination. This applies in particular to elementary schools and to grammar schools. As a result we would expect schools to foster religious homogamy.

The composition of work places is different from that of schools. In terms of religion, work places were never segregated, possibly only as a by-product of regional segregation of industrial activity and religious groups. Work places are also not segregated by age, except for organizations containing many youthful occupations (Oppenheimer & Kalmijn 1995). To formulate hypotheses about the effects of work organizations on class homogamy, we need to consider the occupational

heterogeneity of work places. Although work places may contain several different kinds of occupations, most firms or organizations are probably more homogeneous with respect to occupation than the general working population. Firms in manufacturing industries, for instance, contain mostly skilled manual workers, clerical organizations contain mostly lower level nonmanual workers, and research departments contain professional workers. Due to the occupational homogeneity of work settings, we believe sharing a work setting in general leads to homogamy with respect to class destinations. Due to the correlation between education and occupation, we may also expect that work organizations promote educational homogamy as a by-product.

The composition of voluntary associations is more difficult to gauge, primarily because there are so many different types of associations. In the Netherlands, the most important types of active associations are, in descending order of importance, sports clubs, hobby clubs, cultural organizations, religious organizations, political organizations, and youth organizations (Social and Cultural Planning Bureau 1998:). Because we consider shared settings when people are of marriageable age, the associations that are reported by our respondents, are probably of a recreative nature, such as sports clubs and youth organizations. It is well known that most recreative associations are not very homogeneous with respect to occupational status, income or education, with the exception of a few elite associations, such as tennis clubs and rowing associations (Héran 1988; McPherson 1983). As a result, we do not expect effects of sharing a voluntary association on educational and class homogamy, except perhaps in the higher strata. While not clearly segregated by class, voluntary associations in the Netherlands are traditionally segregated by religion. Meeting in a voluntary association should therefore promote religious homogamy. Associations generally also contain many younger persons, so that age homogamy should be promoted as well, perhaps with the exception of religious organizations, which are often multigenerational (Beggs & Hurlbert 1997). We summarize our hypotheses in Table 1.

Analysis

We analyze data from the survey *Households in the Netherlands*, which is based on a probability sample from the noninstitutionalized population in the Netherlands in 1995 (Kalmijn, Bernasco & Weesie 1996). Young respondents were oversampled for purposes unrelated to the topic at hand. Information was obtained through a combination of joint interviews of husbands and wives, personal interviews with the spouses, and selfadministered questionnaires. For this analysis, we selected all married and cohabiting (heterosexual) couples in which at least one partner is between 18 and 64 years of age ($N = 1519$). Our sample includes persons who were widowed or divorced when they began their current marriage or cohabiting

relationship, but this is a small group (6.1% of the husbands and 5.7% of the wives). When examining age homogamy, we will replicate our models for a subsample of first marriages.

Measures of Meeting Settings

Couples were asked the following five questions:

- (a) if they lived in the same neighborhood as their partner,
- (b) if they went to the same primary school, the same grammar school, the same university or higher vocational school,
- (c) if they worked in the same firm or organization,
- (d) if they were members of the same voluntary associations,
- (e) if the husband's parents or siblings knew the wife's parents or siblings before the couple met and vice versa.

All questions are retrospective and pertain to the time before the couple got involved. To make sure that shared neighborhoods refer to the neighborhood where spouses lived when growing up, we also assessed if partners lived in the same city or village at age 14. Only when this is the case, did we count a reported "same neighborhood" as shared.

Note that our question refers to the settings that couples shared, whereas earlier studies have asked about the place where partners first met. Whether couples share a specific setting is in some ways a better measure of interaction opportunities because couples may share more than one setting; in questions on first meeting places, respondents are asked to report on only one setting. In addition, it is unclear what is meant by "first meeting" each other. For example, two persons may know each other from school and the neighborhood, but exchange the first kiss in a bar. What should be regarded as 'first' is then unclear. A possible disadvantage of our measure is that couples who share a setting may not always have met their partner in that setting. Although we also have data on first meeting places, we prefer using our data on shared settings, because a shared setting can be regarded as causally prior to the first meeting place.

One limitation of our measure is that we do not have information on the actual social composition of the settings that couples shared. For example, we know if partners went to the same school, but we do not know the religious composition of that particular school. We make educated guesses about the composition of the various settings, and while this is often unproblematic (as in the case of schools, for instance), there are also settings for which it is more difficult to make plausible assumptions (as in the case of voluntary associations). The main reason why we cannot know the composition of the settings in which people are involved is that we do not have a closed population, as is sometimes available in research on friendships in organizations (Feld 1982; McPherson & Smith-Lovin 1987).

Measures of Homogamy

To measure homogamy, we rely on information provided by husbands and wives in the individual interviews. Age at marriage is categorized into four groups: 20 and younger, 21-23, 24-26, and 27 or older. We use broad age categories to facilitate our loglinear analysis (see below). Education is the highest level of completed education, and is categorized into four groups: elementary and lower vocational schooling, secondary education, middle vocational schooling, and higher vocational schooling and university. We use the highest level of completed education, and not the level of education at the time when the couple first met, because partners may not have the same educational careers after they first met. To measure religion, we used the religion of the mother of the respondent when the respondent was living at home (or the father, if reports on the mother were missing). Religion is distinguished into four groups: no religion, Catholic, Dutch Reformed Protestant, and Re-Reformed Protestant. In the Netherlands, the Dutch Reformed are liberal and the Re-Reformed are orthodox. To measure class background, we rely on the father's occupation when the respondent was living at home. We use a condensed version of the Erikson-Goldthorpe-Portecarero classification (Erikson & Goldthorpe 1992) and distinguish four social classes: the service class (professionals, managers, higher grade technicians, nonmanual supervisors), routine non-manual workers (employees in administration and commerce, sales personnel, rank-and-file service workers), manual workers (lower technicians, manual supervisors, (un)skilled manual workers, small proprietors, artisans), and farmers (including farm laborers). Class destination is measured in the same way and is based on the occupation of husband and wife at the time they married or began cohabiting (or the occupation they had before that). With this procedure, we are able to measure class positions for 89% of the wives and for 91% of the husbands. Because there are very few people with farm destinations, we decided to delete this group from our analyses.

We begin our analyses by describing the settings partners had in common before they first met. In this descriptive part of the paper, we also show how the prevalence of these settings has changed over time and we present data on differences by age at marriage, education, class destinations, class origins, and religious background, the same characteristics we use in the analyses of homogamy. After this descriptive analyses, we present loglinear analyses to examine whether meeting in organized settings affects homogamy.

Which Settings Were Shared by Prospective Partners?

The data in Table 2 first indicate that the five settings we consider, account for 42% of the meeting places of contemporary couples. When considering specific types of settings, it appears that schools and kin are the most important: 15% of the couples in our survey visited the same school before they first met, and in nearly

TABLE 2: Percentage of Married and Cohabiting Couples Who Shared a Setting before They Got to Know One Another

	Neighbor- hood ^a	Family Overlap ^b	Asso- ciations	School ^c	Work- place	No Shared Setting
All couples	11.5	14.4	10.7	14.5	8.0	57.7
Year of marriage or cohabitation						
1945-1965	11.8	18.3	10.1	11.8	5.3	59.2
1966-1985	13.3	15.2	9.3	14.0	7.8	57.2
1986-1995	9.7	12.7	12.4	15.8	9.0	57.6
Trend parameter ^d (N = 1,519)	-.16*	-.15*	+.13	+.14†	+.16†	-.02

^a Refers to neighborhood when growing up (is counted as shared if partners 'lived in the same neighborhood' and if 'partners lived in the same city when they were 14 years of age').

^b Whether husband's and wife's parents or siblings knew one another.

^c Same elementary school (5%), same secondary school (7%), or same higher school (4%).

^d Coefficient for the effect of year of marriage (continuous and scaled in decades) in a logistic regression model with the setting as a dependent variable.

† $p < .10$ * $p < .05$

15% of the couples, there were preexisting ties between the families of husband and wife. The remaining settings are less important, although they are not trivial either: around 12% lived in the same neighborhood when growing up, 8% worked in the same firm or organization, and 11% were a member of the same voluntary association. Not reported analyses indicate that there are also couples who shared more than one setting before their relationship began. About 13% shared at least two settings and 4% shared at least three settings. Of the reported combinations of settings, those involving the neighborhood are most common.

To decide if these numbers are high or low, is difficult to say without a benchmark. Information about the sources of personal networks may provide some point of comparison. Feld (1982:799) shows that 12% of people's network ties originate at work, 17% in the neighborhood, and 7% in voluntary associations. Although one should be careful in comparing because Feld did not allow for overlapping settings, we nonetheless can see that the figures are not all that different. The work and neighborhood contexts seem somewhat less important for marriage partners, whereas voluntary associations seem somewhat more important. Schools may also be more important for marriage partners, but Feld did not provide data on this.

The remaining 58% of the couples did not share an organized setting. This does not mean that these couples shared no setting at all. Of the couples who did

not share any of the organized settings we consider, 45% went to the same bars or other outgoing places before they met, and 42% had common friends before they met. In other words, even among these couples, meeting is rarely without context. Nonetheless, bars and networks are contexts that are also used by the couples who did share an organized setting. Of the couples who had an organized setting in common, 42% went to the same bars or other outgoing places before they met, and 52% had common friends. Hence, bars and networks are not alternatives to organized settings. Our comparison between couples who met through organized settings and other couples is therefore not confounded by possible homogenizing effects of other types of meeting places.

Have the settings changed in importance over time? By comparing unions of partner relations which were formed in different periods (marriage cohorts), it is possible to reconstruct whether trends have occurred in the settings spouses had in common (cf. Smeenk 1998). In Table 2, we present percentages for three marriage cohorts after World War II and we test whether possible trends are statistically significant. First of all, there are no clear signs of the marriage market becoming less organized. In all cohorts, around 42% of the couples shared at least one context before they got involved (58% shared no setting). More detailed analyses confirm that organized settings have not decreased in importance over time: the average number of settings is about 0.60 in all three cohorts. When limiting this comparison to couples who have at least one organized setting in common, the average number of settings is about 1.40 in all three cohorts, showing that combinations of settings are not becoming less or more frequent. These findings are not consistent with the sometimes suggested process of unbundling (Coleman 1990). It has been argued in the past that the various needs and functions in everyday life are increasingly fulfilled by specialized and nonoverlapping institutions. Our findings show that when the shared settings of marriage partners are used as an indicator, connections between various different institutions are not becoming looser.

While organized settings as a whole remain important, we do see a change in the type of settings people use. We notice a light decline in the importance of the neighborhood (from 12 in the oldest cohort to 10% in the youngest cohort) and a somewhat stronger decline in the overlap of families of origin (from 19 to 13%). The declining importance of ascriptive settings is in part compensated by a rising importance of settings which can be characterized as achieved. Work organizations and schools have become more important over time, although even in recent cohorts, these are not very important numerically. Voluntary associations turn out to have been as important in the past as they are today. These findings suggest that there has been a shift in relationships being formed in more familiar, ascribed settings like the neighborhood and the family context in which parents have some control, to more public settings like voluntary associations, schools, and work organizations in which parents exert little control.

Do the various social classes meet in different local settings? To answer this question, we present the percentage of couples who share specific settings for each

TABLE 3: Percentage of Married and Cohabiting Couples Who Shared an Organized Setting before They Got to Know One Another by Selected Background Characteristics

	Neighbor- hood	Family Overlap	Asso- ciations	School	Work- place	No Shared Setting
Husband's class origins ^a	0.3	17.1*	7.8*	14.9*	6.1†	5.4
Service class	11.9	12.5	14.4	17.1	7.5	55.4
Routine nonmanual	12.4	10.3	9.5	19.0	11.6	53.3
Manual	11.2	14.9	9.3	10.8	7.8	60.7
Farm	11.4	24.8	9.9	17.7	5.0	56.7
Wife's religious origins ^a	3.4	7.4†	8.8*	13.3*	1.6	10.6*
None	13.7	15.4	9.8	15.2	7.6	55.7
Catholic	10.2	13.6	9.6	10.9	9.1	61.7
Reformed	10.9	11.5	10.6	15.9	6.8	58.7
Re-Reformed	10.4	19.8	17.0	21.4	8.2	48.9
Wife's marriage age ^a	25.9*	16.3*	5.1	21.0*	13.9*	15.8*
20 or younger	13.4	17.5	11.9	14.8	5.3	54.0
21-23	15.2	16.4	11.1	17.8	6.5	55.4
24-26	8.8	13.4	12.0	15.2	10.2	56.9
27 or older	3.8	6.7	6.7	5.4	12.6	69.0
Husband's education ^a	6.8†	8.1*	18.4*	43.7*	10.3*	25.3*
Elementary/lower vocational	11.3	15.7	6.4	6.1	4.9	66.7
Secondary education	15.1	14.4	9.9	15.7	11.2	52.9
Middle vocational	11.9	17.2	10.9	14.1	7.7	59.7
Higher vocational/ university	8.9	10.5	15.6	22.3	9.1	50.7
Husband's class destinations ^a	2.0	1.8	4.5†	13.7*	24.8*	22.4*
Service class	11.3	12.0	12.2	14.9	10.7	56.3
Routine nonmanual	13.9	14.2	10.5	16.1	14.6	49.4
Manual	10.5	14.7	8.3	8.6	4.7	65.8

(N = 1,519)

^a This row presents Pearson's χ^2 tests.

† $p < .10$ * $p < .05$

of the four origin classes separately (Table 3). We first notice that the nonmanual classes more often share local settings than the other classes. Members of the service class and routine nonmanual class more often attend the same school, members of the service class more often share a voluntary association, and members of the routine nonmanual class more often work in the same firm or organization before getting involved. Similar results are observed when focusing on class destinations rather than on class origins. These results suggest that the lives of the manual classes

are less strongly organized institutionally: they more often shared no organized setting than the other classes and thus rely more on open fields to meet and mate (cf. Bozon & Héran 1989). The only exception to this pattern is that the manual class more often uses the family as a way to meet prospective mates. This also applies to the farm class: among people with farm origins, family overlap is the most frequently used meeting channel.

Differences by religion do not appear to be pronounced, except that the most orthodox group, that of the Re-Reformed Protestants, reveals a deviant pattern. They are more likely than the other groups to have met each other through voluntary associations and schools. This probably reflects the fact that the Re-Reformed are highly involved in their church and that many schools and voluntary associations are church organized. They form about the only pillar in Dutch society that is still standing upright, and they succeed in decreasing meetings of their offspring in the open field by providing shared settings to their own group.

We finally find differences in meeting settings by education and age at marriage. When people postpone marriage, the settings they use change. Family overlap and neighborhoods become less important, and work settings become more important, suggesting that ascribed settings lose their importance as people grow older before getting married. This decline does not appear to be compensated by a rising importance in achieved settings. The percentages of those who met at school do not change, except that the latest marriers, women marrying after age 27, less often attended the same school as their husband. Differences by level of education, finally, show that the highest educated most often use the school as a meeting setting, confirming the idea that higher vocational schools and universities are most favorable toward meeting a spouse.

How Do Meeting Settings Affect Homogamy?

Following prior research on homogamy (e.g., Hout 1983; Kalmijn 1991; Mare 1991), we use loglinear models to examine the effects of settings on marriage choice. For each of the five social characteristics, we have a cross-classification of husband and wife which needs to be cross-classified by the type of setting. Because the five settings we examine may overlap, we make five cross-classifications, each time comparing couples who met in a specific organized setting to couples who shared no organized setting. We start with a baseline model. Let i stand for husband's characteristics, j for wife's characteristics, and k for setting (shared setting or no shared setting). The baseline model is defined as follows:

$$\text{Model A: } \ln F_{ijk} = \lambda_i + \lambda_j + \lambda_k + \lambda_{ik} + \lambda_{jk} + \epsilon$$

The parameters λ_i and λ_j in model A adjust for the marginal distributions of husband's and wife's characteristics, thereby taking into account the effect of relative group size in a population on homogamy. The parameter λ_k adjusts for the

proportion of couples who shared a setting. The model further includes interaction parameters λ_{ik} and λ_{jk} , which control for the fact that the characteristics of husband and wife we consider are related to the type of setting that couples shared (e.g., the higher educated more often meet in school, early marriages are formed more often in the neighborhood).

To test our hypotheses for education, class and religion, we focus on the distinction between ingroup and outgroup marriages. Marriages outside the diagonal of the marriage table are systematically structured as well, but we do not have hypotheses about how such patterns vary by setting. We use a simple and a more elaborate model to describe inmarriage. The simple model includes one diagonal parameter indicating whether couples more often marry within the group than expected (Hout 1983). The more elaborate model allows the strength of endogamy to vary across social groups, a parameter for each diagonal cell in the marriage table (Hout 1983). These models are defined as follows:

$$\text{Model B1: } \ln F_{ijk} = [\text{Model A}] + \delta + \epsilon$$

$$\text{Model C1: } \ln F_{ijk} = [\text{Model A}] + \delta_i + \epsilon$$

where $\delta = 1$ if $i = j$, 0 otherwise. To examine how endogamy varies across settings, we include interaction parameters of endogamy by setting:

$$\text{Model B2: } \ln F_{ijk} = [\text{Model A}] + \delta k + \epsilon$$

$$\text{Model C2: } \ln F_{ijk} = [\text{Model A}] + \delta_{ik} + \epsilon$$

Model B2 allows the general endogamy parameter to differ across settings. Model C2 allows the specific endogamy parameters to differ across settings, thereby enabling us to examine which social groups are most affected by sharing organized settings.

For the marriage table of husband's and wife's age at marriage, we use a different model because age categories cannot be regarded as natural groups. Deviations from random mating by age do not consist of marrying someone of the same exact age. Most men marry somewhat younger women, while at the same time, there is a strong association between spouses' ages. The association occurs because people are more likely to marry someone close in age than someone distant in age. To model this correlation, we define broad age categories and use a model of uniform association and a model in which the uniform association parameter is interacted by setting (Goodman 1979; Hout 1983):

$$\text{Model B1*}: \ln F_{ijk} = [\text{Model A}] + \gamma + \epsilon$$

$$\text{Model B2*}: \ln F_{ijk} = [\text{Model A}] + \gamma k + \epsilon$$

where $\gamma = (i \times j)$. The parameter γ can be interpreted as a correlation: the more positive the parameter, the more likely it is that people marry someone close rather than distant in age. Model B2* reveals whether the uniform association parameter is greater when couples shared a local setting.

TABLE 4: Parameters and Likelihood Ratio Tests for Loglinear Models of Age Homogamy and Meeting Settings

	No Shared Setting	Compared to Couples Who Shared No Setting	Neigh- bor- hood	Family Overlap	Asso- ciations	School	Work place
Parameters Model B2*							
Association	.95*	+ .01	-.26*	-.35*	+.42*	-.49*	
Parameters Model B2* ^a							
Association	.91*	+ .03	-.15	-.28*	+.44*	-.39*	
Likelihood ratio tests							
A: Baseline (18)		439	447	413	500	405	
B1*: Association (17)		22	38	28	43	36	
B2*: By setting (16)		22	35	23	38	24	
N		1,048	1,092	1,036	1,094	995	

Note: For a formal description of models, see text. Degrees of freedom in parentheses.

^a Model estimated for a sample limited to first marriages.

* $p < .05$ (one-tailed tests)

For education, class origins, class destinations, and religion, we fitted five models (A, B1, B2, C1, C2), each time contrasting one of the five settings to "no setting," yielding a total of $5 \times 5 = 25$ models per characteristic. For age, we fitted three models (A, B1*, B2*), for each of the five contrasts, a total of $3 \times 5 = 15$ models. Fit statistics, presented in Tables 4 through 8, should be taken cautiously because in some cases, the cross-classifications are sparse. For the analysis of education, class destinations, and religion, this does not seem to be a problem. The percentage of cells with counts below five vary from 1 to 19%, an acceptable figure. The age-setting cross-classifications are sparser, with 19 to 28% of the cells having counts below five. That the age cross-classifications are sparse is due to the strong degree of association between husband's and wife's ages: there are few couples with large age differences. Because we model this association with a single association parameter, this should not be too much of a problem. The cross-classifications for class origins and setting are sparse as well (16 to 25% of the cells have low counts). This is primarily due to the inclusion of the small farm origin group. We nonetheless want to keep this group separate because prior research has shown that their marriage choices are rather distinct (Kalmijn 1991). To check the sensitivity of our results, we also fitted models for social class origins without the farm origin group.

One might think that it is important to include age at marriage in the analysis, because we have shown that age at marriage affects the type of setting one is exposed to (Table 3). Because in loglinear models, it is difficult to include other covariates,

TABLE 5: Parameters and Likelihood Ratio Tests for Loglinear Models of Educational Endogamy and Meeting Settings

	No Shared Setting	Compared to Couples Who Shared No Setting				
		Neighbor- hood	Family Overlap	Asso- ciations	School	Work- place
Parameters Model B2						
Overall endogamy	.81*	+.05	-.11	+.15	+.41*	+.02
Parameters Model C2						
Lower	1.29*	+.05	-.50	+.84	+.38	-.41
Secondary	.37*	-.18	-.00	-.20	-.15	-1.15*
Middle						
vocational	.27	+.60	+.13	-.23	+.74*	+.81
Higher	1.28*	-.06	+.34	+.36	+.79*	+1.51*
Likelihood ratio tests						
A: Baseline (18)		214	208	230	269	235
B1: Endogamy (17)		58	58	71	75	89
B2: Interaction by setting (16)		58	58	70	68	89
C1: Specific endogamy (14)		29	28	32	41	53
C2: Interactions by setting (10)		27	26	29	30	40
N		1,049	1,092	1,037	1,094	996

Note: For a formal description of models, see text. Degrees of freedom in parentheses.

* $p < .05$ (one tailed tests)

we conducted an additional logistic regression analysis which includes age at marriage as a control variable (not shown). In these models, the dependent variable is the probability that a couple is married endogamously (with respect to either origin class, destination class, education, or religion). The logistic regression models show that age at marriage does not affect the probability of marrying within the group when indicators of settings are also in the model. Hence, there is no direct effect of age at marriage on homogamy. Note that this does not apply to age homogamy, but in that loglinear model, age at marriage is already in the model.

Because the number of models is large, we summarize the results by presenting selected parameter estimates in Tables 4 through 8. The first column of these tables present the degree of endogamy or association for couples who shared no setting. The more positive this parameter, the greater the level of endogamy or association among these couples. The other columns show to what extent the level of endogamy or association is greater (or smaller) when couples shared a specific setting. These columns also provide tests of whether differences between couples who shared no setting and couples who shared a specific setting are statistically significant.

We first focus on age homogamy (Table 4). Our results show that there is a strong positive association between the marriage ages of husband and wife, the

TABLE 6: Parameters and Likelihood Ratio Tests for Loglinear Models of Class Destination Endogamy and Meeting Settings

	No Shared Setting	Compared to Neighbor- hood	Couples Who Shared Family Overlap	No Setting Asso- ciations	School	Work- place
Parameters Model B2						
Overall endogamy	.54*	-.13	+.07	-.23	+.15	+.76*
Parameters Model C2						
Service class	.49*	-.06	+.06	-.27	+.88	+.40
Routine nonmanual	.04	-.36	-.02	-.52	-.76	+1.42*
Manual	1.01*	+.38	+.27	+.41	+.99	+.60
Likelihood ratio tests						
A: Baseline (8)		56	61	59	70	86
B1: Endogamy (7)		16	14	21	22	22
B2: Interaction by setting (6)		16	14	20	22	12
C1: Specific endogamy (5)		3	3	7	8	16
C2: Interactions by setting (2)		2	2	5	2	2
N		848	867	834	852	826

Note: For a formal description of models, see text. Degrees of freedom in parentheses.

* $p < .05$ (one tailed tests)

association parameter is .95. This association is significantly stronger when people have met in school ($.95 + .42 = 1.37$), which is in line with our expectation and consistent with an earlier analysis of our data which uses a different method of analysis, *i.e.*, logistic regression analysis (Smeenk 1998). Voluntary associations were also believed to promote age homogamy, although to a lesser extent than schools, but the data do not confirm this. Couples who shared a voluntary association appear to be less rather than more similar in age. Work settings and family overlap reveal the same pattern: couples who shared a work setting and couples whose families knew one another are significantly less similar in age than couples who shared no setting. That these latter two settings do not promote age homogamy is consistent with our expectations. That they promote age heterogamy, however, is more difficult to understand.

Because age differences between spouses are different in second marriages, and because certain settings may be more favorable for finding a spouse after having been widowed or divorced (e.g., work settings), we replicate our models for a subsample of first marriages (Table 4). These results generally reveal the same pattern, except that the effects of meeting settings are somewhat weaker. The only difference is that the effect of family networks on age homogamy is no longer statistically significant, although it is still negative.

TABLE 7: Parameters and Likelihood Ratio Tests for Loglinear Models of Class Origin Endogamy and Meeting Settings

	No Shared Setting	Compared to Couples Who Shared No Setting Neighborhood	Family Overlap	Asso- ciations	School ^b	Work- place
Parameters Model B2						
Overall endogamy	.48*	-.13	+.15	+.24	+.18	-.20
Parameters Model C2						
Service class origin	.70*	-.05	+.13	+.02	+.61*	— ^b
Nonmanual origin	.06	-.07	-.06	+1.09*	-.24	
Manual origin	.34*	-.14	-.01	-.35	-.27	
Farm origin	1.10*	-.33	+.35	+1.89*	+1.14*	
Parameters Model B2 ^a						
Overall endogamy	.45*	-.09	+.05	+.08	+.05	-.14
Parameters Model C2 ^a						
Service class origin	.62*	-.19	-.28	+.19	+.46	-.39
Nonmanual origin	-.19	+.01	+.04	+1.16*	-.17	-.68
Manual origin	.58*	-.07	+.27	-.56	-.18	+.19
Likelihood ratio tests						
A: Baseline (18)		75	95	103	109	73
B1: Endogamy (17)		32	40	48	50	33
B2: Interaction by setting (16)		31	39	46	49	32
C1: Specific endogamy (14)		22	26	33	29	23
C2: Interactions by setting (10)		21	25	23	23	21
N		1,016	1,058	1,005	1,064	966

Note: For a formal description of models, see text. Degrees of freedom in parentheses.

^a Models estimated without the farm origin group.

^b Model not estimated.

* $p < .05$ (one tailed tests)

The results for educational endogamy are generally in line with our expectations (Table 5). Partners who shared a school setting are more often educationally similar than partners who shared no setting, as revealed by the significantly stronger general endogamy parameter for those who attended the same school. When focusing on educational endogamy in more detail in Table 5, we observe that this tendency is stronger among the higher educated. The higher educated who shared no setting have an endogamy parameter of 1.28. When they attended the same school, the endogamy parameter is $1.28 + .79 = 2.07$. For the lower educated, in contrast, these parameters are 1.29 and 1.67 respectively, a smaller difference. This is consistent with our expectations as well because it is at

TABLE 8: Parameters and Likelihood Ratio Tests for Loglinear Models of Religious Endogamy and Meeting Settings

	No Shared Setting	Compared to Couples Neighbor- hood ^a	Family Overlap ^c	Asso- ciations	No Setting School ^b	Work- place
Parameters Model B2						
Overall endogamy	1.17*	+.31*	+.71*	+.06	+.49*	-.51*
Parameters Model C2						
No religion	.43*	+.18	+.61	-.31	+.32	-.41
Catholic	2.16*	+.47	+.70	-.17	+.09	-.38
Reformed	.53*	+.58	+.33	+.44	+.69	-.39
Re-Reformed	1.78*	+.15	+1.47*	+.20	+1.17*	-2.02*
Likelihood ratio tests						
A: Baseline (18)		474	551	434	513	376
B1: Endogamy (17)		122	131	108	116	103
B2: Interaction by setting (16)		119	112	108	107	96
C1: Specific endogamy (14)		55	53	40	46	40
C2: Interactions by setting (10)		51	34	39	34	29
N		1,035	1,078	1,024	1,082	983

Note: For a formal description of models, see text. Degrees of freedom in parentheses.

* $p < .05$ (one tailed tests)

the higher levels of schooling where educational institutions are most homogeneous with respect to (completed) educational attainment.

We also expected educational endogamy to be greater when partners shared a work organization. Table 5 shows that this is generally not the case. When focusing on the results of our more elaborate model, however, we do observe such a tendency for the higher educated. When the higher educated meet at work, they are significantly more endogamous with respect to education than when they shared no setting. For the lower educated, we find the opposite result: sharing a work place leads to more outmarriage. Sharing a voluntary organization was not believed to foster educational homogeneity, and this is borne out by the data.

For endogamy with respect to class destinations, we expected to find effects of sharing a work setting only. The results in Table 6 confirm this. The class endogamy parameter for couples who shared no setting is .54. When partners worked in the same firm or organization, the level of endogamy is significantly stronger, $.54 + .76 = 1.30$. Results for the more detailed model show that this pattern exists in all classes, although it is strongest for routine nonmanual workers. When focusing on the remaining columns in Table 6, we find that endogamy with respect to class destinations is not affected by sharing other organized settings, which is consistent with our hypotheses.

The results for endogamy with respect to class origins are mixed (Table 7). Effects of settings on class origin endogamy are generally weak, or limited to specific origin classes. The neighborhood where people grow up is generally socially segregated, so that it is homogeneous with respect to the class background of the offspring generation. We therefore expected the neighborhood to lead to class origin endogamy, but this appears not to be the case. In a similar vein, we expected positive effects of family networks on class origin endogamy, but this is not borne out by the data either. When focusing on the models that allow endogamy to vary across classes, we generally find the same pattern. Some exceptions are noteworthy. Farm endogamy is significantly stronger when partners shared a voluntary association and when partners attended the same school. Given the small size of the farm origin group, these findings should be interpreted with care. A stronger result is found when looking at the effects of voluntary associations. Routine nonmanual workers' children are more endogamous when they shared a voluntary association, a result which is also obtained in the model excluding the farm group. This finding can be interpreted in terms of the class based nature of voluntary associations. Interestingly, this interpretation only applies to the class of origin, because we did not find a positive effect on endogamy when analyzing class destinations.

Religious endogamy, the last of our five types of homogamy, is more systematically related to the setting that couples shared (Table 8). Most of our results here are in line with our expectations. Couples who shared no setting, have an endogamy parameter of 1.17. When partners lived in the same neighborhood or attended the same school, they are more likely to marry within the religious group. The endogamy parameters here are substantially stronger: 1.48 and 1.66 respectively. In addition, we find that when the parents or siblings of the spouses knew each other, couples are religiously more endogamous. This effect is greater than the effects of sharing a neighborhood or attending the same school. Sharing a voluntary association also promotes religious endogamy, but this effect is the weakest and statistically not significant. Work settings, finally, do not promote religious endogamy, which is consistent with the fact that work organizations are generally not religiously segregated. In fact, sharing a work setting appears to lead to religious exogamy. When focusing on the more elaborate models for religious endogamy, we notice that most of the effects are strongest for the most orthodox group, the Re-Reformed Protestants.

If we consider the setting effect on the five types of homogamy in combination, it is interesting to see that school settings have the strongest effects: sharing a school setting leads to more homogamy in four of the five characteristics, and these effects are on average larger than the effects of the other settings. This suggests that settings which constitute favorable marriage markets, have stronger effects on homogamy than less favorable marriage markets. After all, due to their sex- and age composition, schools are more favorable marriage markets than neighborhoods, work organizations, and family networks.

Conclusion

How important are work places, schools, neighborhoods, voluntary associations, and family networks, for meeting a spouse? Our analyses show that such contexts account for about 40% of the meeting places of Dutch couples, suggesting that even very private choices are often made in the context of institutional settings. What are the implications of these settings for the type of spouse one marries? In many respects, partners who shared organized settings before they got to know each other are more similar to each other than partners who did not share a setting. Schools appear to have the most systematic effects: they affect four of the five types of homogamy we examine, and these effects are generally strong. The evidence is not as strong for the other settings, although here we find homogenizing effects as well. A result against our expectations is that common family networks and the neighborhood when growing up, do not appear to promote homogamy with respect to class origins. In general, however, our study supports the argument that assortative mating is fostered by assortative meeting: the pool of available interaction partners is shaped by various institutionally organized arrangements and these constrain the type of people with whom we form personal relationships. Our analysis provides a stronger case for the supply-side perspective than has been presented before because the type of relationship we consider is generally long term, private, and exclusive.

Another important conclusion is that even outside the settings we consider, there is a considerable amount of homogamy. Among couples who shared no setting, most forms of homogamy are strong and significant, and in the case of age, sometimes even stronger than among couples who did share a setting. The "no setting" group is a mixed bag, containing not only people who met at random, but also people who met through friends and people who met in bars or other outgoing places. It is clear that networks and bars are homogeneous in many respects, such as age and probably class and education as well. Nonetheless, these settings are not an alternative for organized settings because even among couples who share organized settings, there are many who also share bars or other outgoing places and there are many who share networks. Hence, these findings suggest that preferences remain an important source of homogamy in partner choice.

In this article, we have tried to generalize research on networks and friends by applying the logic of micro-level interaction opportunities to the choice of a marriage partner. The next step would be to combine the two lines of research in one inquiry, using the same sample and similar measurements. By doing this, we could test hypotheses about differences between intimate and less intimate interaction partners. One possible hypothesis is that less intimate ties are more sensitive to the influence of organized settings than more intimate ties. An additional goal of such an integrative approach is that notions of unbundling of institutional settings could be put to the test more thoroughly. Are organized settings as important for finding friends as for finding partners, and has the importance of

settings historically changed for friends in the same way as it has for marriage partners? In such a comparison, it also becomes important to analyze meeting settings in a dynamic fashion. An important question here is whether changes in people's networks are a function of changes in the contexts people were exposed to in their life course.

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