The Political Economy of Gender: Explaining Cross-National Variation in Household Bargaining, Divorce, and the Gender Voting Gap

Torben Iversen Department of Government, Harvard University

and

Frances Rosenbluth Department of Political Science Yale University

August 2003

Abstract

Mainstream political economy has tended to treat the family as a unit when examining the distributional consequences of labor market institutions and of public policy. In a world with high divorce rates, we argue that this simplification is more likely to obscure than to instruct. We find that labor market opportunities for women affect women's bargaining power within the family and as a result, can explain much of the cross country variation in the household division of labor, patterns of divorce, and political preferences.

This paper was prepared for presentation at the Annual Meetings of the American Political Science Association, August 28-31, 2003, in Philadelphia, Pennsylvania. The authors are grateful to Joseph Altonji, Robert Pollak, and Justin Wolfers for helpful comments and information, and to Nirmala Ravishankar and Alastair Hamilton for able research assistance.

1. Introduction

Some of the most notable variance in income, labor market status, and the division of labor is gender based. On average, women participate less in the labor market than men, whereas they assume the lion's share of unpaid work in the household. Women also tend to be less well paid than men when they do work, and they occupy jobs with lower job security, fewer prospects of advancement, and less responsibility. Often, these inequalities spill over into a gender gap in political preferences and voting behavior.

Following Gary Becker's (1964; 1971; 1981; 1985) seminal work on the family, economists have traditionally explained the gender division of labor as the outcome of a coordination game where a more or less complete division of labor is the efficient solution due to increasing returns to human capital. Although the biological advantages of women specializing in household skills are slim in a modern economy, such specialization may be reinforced by childhood socialization in which parents rationally seek to maximize the success of children later in life. Since gender roles are assigned before "true" preferences are observable, the coordination game is solved by using (inherently small) gender differences as the cue.

But while the efficiency model captures some key aspects of the family as an institution, it is incapable of accounting for the stark differences in female labor force participation across economies at comparable levels of development, and it fails to explain why there is so much variance in the distribution of housework between the sexes *after* controlling for hours spent in paid work and earnings. Building on recent economic bargaining models of the family (Folbre 1987; Braunstein and Folbre 2001; Pollak 1999; 2003; Lundberg and Pollak 1996; 2001), we argue that this *division of labor puzzle* can only be understood by treating marriage as an incomplete contract that is potentially subject to termination. When this is the case, both men and women have an incentive to cultivate their outside options by entering into paid work, and the distribution of unpaid work is determined by bargaining where bargaining power is dependent on political-economic factors outside the family. We make use of recent political economy arguments, as well as some derived from sociologists like Esping-Andersen(1990; 1999), to tie macro-level conditions to intra-family bargaining over the division of labor.

Considering the family as a bargaining arena opens the window into a second puzzle, the link between *labor markets and divorce rates*. There is a close empirical association between female labor force participation and divorce rates (as we confirm below), but the reasons are unclear. On the one hand, as divorce has become increasingly easy and common in the industrialized west, women might be seeking to insure themselves against post-divorce poverty by investing in market skills and experience, at the expense of family-specific investments. Countries with higher divorce rates ought to have, with some lag, higher female labor force participation. On the other hand, perhaps the rising divorce rates are themselves a response to an increase in women's outside options. In that case, a country with more accommodating labor markets for women ought to have higher divorce rates, all else equal.

A third puzzle, *the rising, but country-specific, gender gap in political preferences and voting behavior*, looms large in the political world yet has received little attention by comparativists. In economic efficiency models of the family there is no room for men and women to favor different

public policies. *Families* will differ over policies depending on their position in the age and class structure and the like, but family members are assumed to have more or less identical preferences. Both spouses have an incentive to support whatever policies maximize the welfare of the family as a whole, even when this means fewer labor market opportunities for women and greater gender segregation in the labor market.

Yet, this logic is completely altered when divorce is a serious prospect. In this case we have to treat family members as individuals with distinct and potentially conflicting preferences. Basically, when outside options are important for long-term welfare, both sexes will prefer social and economic policies that maximize these options, even when this reduces total household income or other measures of aggregate welfare. But whether the distributive game over outside options, which is played in every marriage with a risk of marriage termination, translates into differences in political preferences depends critically on the structure of the economy. The key, we argue, is the extent to which the political economy facilitates female labor force participation, which in turn depends on whether production relies on specific as opposed to general skills and the extent to which the state provides a broad range of social services.

The rest of the paper is organized as follows. Section 2 lays out the standard efficiency model of family division of labor, and the bargaining model alternative that better fits today's world. Our empirical findings are that, controlling for a variety of factors, women with stronger outside employment options are able to reduce their share of family work. Section 3 explores the interrelationship between labor markets and divorce. Section 4 explains cross-country variation in gender-based political preferences. Section 5 concludes.

2. Explaining the gender division of labor

In Becker's efficiency model, one family member will specialize in marketable skills and paid work, while another will specialize in household skills and unpaid work. The member specializing in household skills may enter the labor market part time if the domestic workload permits this – something that is more likely to be the case early and late in a marriage corresponding to the years before children are born and after they start school or leave the household.

In principle, either the husband or the wife could specialize in market or household skills, but there are two reasons why women will almost invariably specialize in the latter. The first is a comparative biological advantage in caring for very young children. Yet this advantage only lasts for the first months of a child's life, and it is not hard to imagine that a similar distribution of preferences for type of work across the sexes would lead to a far more even distribution of family responsibilities and paid work than we actually observe. Becker solves this puzzle in two ways. First, a small comparative advantage is magnified by increasing returns to human capital (it's better to keep doing the same thing without interruption). Second, parents have an incentive to prepare their children for responsibilities they will assume later in life, and this may reinforce the gender division of labor by instilling preferences through childhood socialization. Since children are unlikely to reveal their true role dispositions at a very early age, parents choose to socialize their children in skills that they are most likely to be good at. This magnifies biological differences and solves the family coordination problem later in life.

In hindsight (Becker developed his argument in the early 1960s) it is easy to ridicule Becker's model as an intellectual justification for the traditional 1950s family. But it is precisely the capacity of the model to account for the stark gender division of labor and the differences in the socialization of girls and boys in the traditional family that makes it so powerful. Still, it is clear that something fundamental has changed in a number of countries in North America and Europe. The gender division of labor has undergone significant changes, and gender roles and socialization patterns have been significantly revised in many families. Girls in the US, for example, are being taught to be assertive and independent at a far greater frequency than used to be the case, and to a greater extent than in countries where the gender division of labor remains extensive (Hrdy 1999).

One factor that looms large in the explanation of these changes is the rise in divorce rates. Whether divorce rates are a response to exogenous changes in divorce law, or whether divorce is endogenous to a growth in labor market opportunities for women, divorce is now an accepted part of modern life in most rich democracies. In 1950 the probability that a first marriage would end in divorce was one in five in the US, and any behavior that could conceivably lead to divorce – infidelity but also overt challenges to established gender roles – were considered taboo by widely held religious and community norms. Today the divorce rate is one in two for first marriages and is now considered an acceptable, even desirable, solution to marital problems. This makes a tremendous difference to the Becker framework because spouses must now concern themselves with what they can do to secure their welfare in the event that the marriage breaks up. In other words, their outside options become critical. And if we want to understand the implications of this for the division of labor and patterns of socialization, we have to treat family members as individuals with distinct preferences. The family cannot be treated as a unitary actor.

The most obvious potential conflict of interest concerns the division of labor -- precisely the variable Becker's model was designed to explain. The problem is that heavy investment in household-specific skills is likely to undermine outside options. Not only may such investments crowd out investments in marketable skills, but the value of marketable skills is likely to be seriously reduced by longer absences from the labor market (Polachek 1975; 1978). In principle, household skills can be "sold" on the re-marriage market, but since one critical "skill" in this market is to produce and nurture offspring, a woman's position in the re-marriage market will be seriously reduced as soon as she has children in another marriage. Adding insult to injury, another valuable commodity in the re-marriage market is youth and beauty, which also deteriorates with time. Hence, even in the remarriage market, the only non-perishable commodity is earnings power – and perhaps also the attractiveness that comes with education and an active lifestyle.

Since labor market participation is essential to cultivate outside options, women have strong reasons to resist a complete division of labor in the family. But by the same token men have an incentive to resist taking on more domestic responsibilities. The division labor, especially the division of household labor, therefore becomes subject to contestation. Bargaining models of marriage capture this by assuming that compromises have to be found in a bargaining space that is constrained by the outside options. The simplest conception of outside options is whatever

utility either party can get outside the marriage. But some models also allow for the possibility of non-cooperative outcomes without divorce where spouses recede into separate "spheres" characterized by more or less separate finances, partially divided living spaces, etc. (Lundberg and Pollak 1996).

In either formulation, opportunities in the labor market are crucial in determining outside options and hence the marriage bargaining space. In a simple Rubinstein bargaining model with identical discount rates and negligible first-mover advantage, the outcome of the game splits the difference between the ideal points at the boundary of the bargaining space. So, for example, if outside options are equally attractive to both sides, and both spouses want to maximize paid work and minimize unpaid work (and thus invest in marketable instead of household skills), we would predict an even distribution of household work. More realistically, since women's outside options tend to be inferior to men's, women will tend to do more of the household work. But the reason is no longer only efficiency in the allocation of work as in the Becker model, but rather, in addition, the weaker bargaining position of women (Braunstein and Folbre 2001; Lundberg and Pollak 1996; 2001).

Since household bargaining may lead to a less complete, and hence less efficient, division of labor it is logically conceivable that a marriage contract could compensate women for the risks of specialization in household skills (and the associated deterioration of marketable skills) by guaranteeing a lump sum severance payment or the sharing of future income streams (such as alimony and child support) in the event of divorce. But to prevent problems of moral hazard, shirking, and other well-known maladies of incomplete information such prenuptial agreements would have to stipulate all relevant contingencies in advance – including just cause for divorce, fair treatment of the other party in the marriage, the division of custody in the event of divorce, and penalties for non-compliance with any stipulations in the contract. Precisely this type of detailed marriage contracting has reached almost farcical complexity among Hollywood celebrities where the stakes are very high, both because of the assets involved and because of very high divorce rates. But few would claim that prenuptial agreements constitute a general solution to incomplete marriage contracting. Just as in non-standard economic contracting, comprehensive ex ante agreements are either impractical or prohibitively expensive to write and enforce.

With incomplete contracting we expect a woman's bargaining power within the family to be inversely related to the labor market's premium on specific skills. As labor economists point out, women are generally at a disadvantage when competing for jobs with men because they are expected to leave the labor market for purposes of child birth and rearing (Mincer 1962; 1978; Polachek 1975; 1987). Employers will therefore be more reluctant to invest in skills of women, and young women are likewise more reluctant to build up substantial employer-specific assets or even invest in the education that is needed for a specific skills kind of job since these may be forfeited with the birth of their first child (Anderson, Binder, and Krause, forthcoming).

How great the motherhood disadvantage is, however, depends on the nature of skills that employers are seeking as argued by Estevez-Abe (1999) and Estevez-Abe et al. (2000). If such skills are highly specific to firms, or even to industries, and if a substantial part of training is paid by the employer, there is a strong disincentive to make these investments in female employees where the average time horizon is comparatively short. This is reinforced by women's own decisions because they have disincentives to invest in specific skills for which there is an abundant supply of males. Even if a woman invests to acquire a specific skill, her investment will not be protected to the same degree as men's. Women are therefore more likely than men to invest in general skills and/or in skills that are less prone to deteriorate by not being used for some period of time (lower atrophy rates). This implies a heavily gendered structure of educational choices, and it is not surprising that vocations with more general educational content and low atrophy rates such as commerce, services and home economics are overwhelmingly female in composition (Estevez-Abe 2002). Women facing tough labor market constraints may be better off aiming as high as possible in the marriage market, and educating themselves in the "gracious arts" rather than in marketable skills.

The importance of this argument for understanding variation in bargaining dynamics inside the family is reinforced by broader cross-national differences in the structure of production. Taking advantage of the international division of labor some countries have specialized in the production of goods that uses specific skills intensely while others have specialized in production that uses general skills intensely (Hall and Soskice 2000). In the latter, women are generally better able to compete on an equal footing with men in the labor market because investments in skills are mostly borne by workers rather than by employers (say, though college education) and because general skills do not depend on staying with a particular employer for a long period of time. This difference is reinforced by institutions that are designed to either protect specific skill investments or encourage investment in portable skills. Protective institutions, such as high job security, seniority pay, and generous employer-financed benefits, tend to create insider-outsider divisions, and since women are more likely to be outsiders, they are at a greater disadvantage compared to more flexible labor markets where low protection encourages investment in general skills. Furthermore, because compression of wage differentials is one way to protect investment in specific skills, some specific skills systems are characterized by high minimum wages that tend to push up the cost of daycare and other family-oriented services.

Because of these differences, the outside options of women in general skills systems tend to be better than in specific skills systems, and so is their concomitant bargaining power. This implies that, everything else equal, female labor market participation tends to be lower in specific skills systems, and the distribution of household work more unequal, than in general skills systems. Yet, these effects will be mediated by social and economic policies deliberately designed to counter them. In particular, publicly provided services, and employment for women in these services, can compensate for the exclusion of women from good jobs in the private labor market. The Scandinavian countries in particular have attained high female participation rates by creating a large, and heavily feminized, public sector.

2.1 Empirical Analysis of Household Bargaining

The data for our analysis are from the 1994 International Social Survey Program, which focuses on the family and gender relations. The data cover most established democracies, a few east European transition economies, and one developing country (the Philippines). We focus on the former since we have macro-level data for our institutional and labor market variables for these countries. None of these data are available for the east European cases, which transitioned to democracy a few years before the survey and were still in the early phase of privatization. The cases included in the analysis below are Australia, Austria, Canada, Ireland, Italy, (west) Germany, Japan, the Netherlands, New Zealand, Norway, Spain, Sweden, the UK, and the US. One case, Spain, is missing so many of the key independent variables that it had to be excluded from the individual-level analysis.

We focus exclusively on married and cohabitating couples. The dependent variable is an index constructed from a battery of four questions asking who in the household, the man or the woman, performs a variety of household tasks. For example, one question reads: In your household who does the laundry, the washing and ironing? 1. Always the woman, 2. usually the woman, 3. about equal or both, 4. usually the man, 5. always the man? The other three questions ask who cares for sick family members, who shops for groceries, and who decides what is for dinner. One additional question asks who does repair work around the house. But as pointed out by Hochschild (1989), such work is infrequent and often has a leisure or hobby component. This is confirmed by a principal factor analysis performed on all five items, which identifies two dimensions: one where only the first four items have high, and about equally large, factor loadings, and one where only the repair item has a (moderately) high loading.¹

Based on these results, we created a simple additive division of household labor index based on the first four items, where higher values mean that more of the work is performed by the woman. Since most household labor is done by the woman, one can loosely think of higher values as indicating more inequality in the division of labor. The variable ranges from 1 to 5, with 3 being an even sharing of work. The mean for the variable is 3.97, which is equivalent to an average response to each question of "usually the woman". None of the reported results below change substantively if we instead use an index based on all five items.

The fact that child care is left out of these questions undoubtedly leads to a substantial understatement of the woman's family. Research on family work based on time diaries, which do include a category for child care, show that children of all ages increase women's overall unpaid work time three to four times more than they increase men's (Bittman, England, Folbre, Matheson 2001).² But we expect, at least, that the male-female division of childcare responsibilities will parallel the way they divide other family tasks.

While it is not possible to know with precision how the survey-generated index (without childcare time) maps on to actual hours of work done, we can get a good sense of this by

¹ The complet	e factor loadings ar	re as follows:
	Factor 1	Factor 2
Laundry	0.51	-0.09
Caring for sick	0.59	0.08
Shopping	0.67	0.01
Dinner	0.66	-0.05
Repairs	0.15	0.22

 2 Time diaries, which ask respondents to keep track of how they allocate time during the day, are preferable to less complete surveys of this sort. Unfortunately, they are only available for a few countries.

comparing the index to the results of international time budget research. According to one authoritative study of this nature, women on average perform more than two thirds of total household work (Gershuny 2000). This study also shows that the average adult spends 230 minutes per day on domestic work, equivalent to 460 minutes, or almost 8 hours, for a household with two adults. If the answer always the (wo)man means that the (wo)man literally does all the work, the index's range of 4 units is equivalent to 460 minutes, or about 115 minutes per unit (or 14 hours per week). One standard deviation on the index is .67 or about 77 minutes of work (9 hours per week).

We use five sets of independent variables to explain the individual-level variance in the division of labor. Two of these concern the spouse's relationship to the labor market and are measured for the husband and wife separately. The first is labor force participation, which is based on two variables asking about the employment status of the respondent and of the spouse. It is coded 1 for those who are full-time employed, 0.5 for part-time employed, 0.25 for less than part-time employed, and 0 for those who consider themselves homemakers or who are retired. Unemployed and students are ignored. The variables are coded for men and women separately.

A similar approach was used to measure the (pre-tax) wage income of the husband and wife. In this case, however, we only have direct information about the income of the respondent. The earnings of the spouse are inferred from information about household income. To do this we have to assume that all income is wage income and that husband and wife are the only wage earners in the household. Since there are non-wage sources of income, and sometimes more than two adult wage earners, this would suggest that income estimates based on the difference between family income and respondent=s income exceed the latter on average. In fact, inferred incomes of spouses are slightly lower than respondent incomes, but generally very similar (within 90 percent of the respondent=s income). This suggests that the inferred number is a fairly good proxy for the spouse's income.³

Following Librizzi (2002), the third pair of variables measures each spouse's investment in household-specific skills. The greater is this investment, keeping the investment of the spouse constant, the greater is the comparative advantage in household work. Also, since marketable skills are at least partly a (negative) function of time spent acquiring household-specific skills, the latter also partly captures the former. We measure household-specific skills using a battery of questions about (past) family-related labor market absences. Specifically, the questions inquire about time taken off during four different phases of child rearing: i) before the birth of the first child, ii) before the youngest child entered school, iii) after the youngest child entered school, and iv) after the children have left home. The variable takes on the value 0 when the wo(man) did not work during any of these periods, and the value 1 when the wo(man) worked full time during all four periods (part-time work is coded .5).

Another family-related variable measures the number of dependents. It is calculated by combining information about the number of household members with information about whether the family is headed by one or two adults. In most cases it refers to the number of children,

³ It does at any rate not *systematically* bias the estimates of male and female income since the respondents were roughly equally divided between men and women.

although it will also capture older generations of family members living in the household. In either case, this variable is a proxy for the demand for household labor, and it will tend to raise the share of household labor assumed by the spouse specializing in such labor - i.e., usually the woman.

One variable of considerable theoretical interest, education, causes the most difficulties in terms of measurement. Although the survey *does* ask the respondent about his or her education, there is no question about the education of the spouse. Information about the respondent's education can still be used, but only in a limited way as we explain below.

An alternative source of information about skills is occupation, which is recorded for both spouses. In some countries (Australia, Canada, Ireland, Germany, and New Zealand) ISSP used the 1988 ILO standard classification of occupations (ISCO-88) to code the occupation of both spouses. Since this classification divides all occupations into four skill levels we can use this as a (rough) measure of the education of each spouse. In three other cases (Austria, Norway, and the US), the classification of occupations is based on an earlier version of ISCO-88, ISCO-68. This version does not distinguish occupations by skill level. However the ISCO-68 classes can be roughly translated into ISCO-88 format we can extract the skill level information as before.

A similar approach can be used in two cases, Sweden and the UK, where national-specific codes can be roughly translated into ISCO-88 using conversion tables developed by the respective national statistical offices. In the remaining cases (Italy, Japan, the Netherlands, and Spain) occupational classifications are either not available or they are based on formats that are impossible to translate into skill levels.

We should warn that in several of the cases where codes are translated into ISCO-88 the original classifications are only available at a high level of aggregation. In Britain, for example, occupations are only available at a 2-digit level where assignment to proper ISCO-88 categories is problematic. Still the correlation between skill levels defined by occupations and by educational level is .47, which is in fact better than the correlation between the educational level and years of schooling (.09). So while the measure is imperfect, it is not unreasonable.

Education is important for our purposes because it addresses a key difference between an efficiency and bargaining perspective. While there is no reason for education to matter in efficiency models -- except in so far as it affects labor force participation and earnings -- in bargaining models education matters even after controlling for these variables because it affects spouses' outside options. Even a married woman who does not work will be in a better bargaining position the more well-educated she is since education constitutes a marketable asset. She should therefore be able to cut a better deal in the bargaining game over who does how much of the household labor.

The final variable of theoretical interest is age. Although information about age is only available for the respondent, the respondent's age is highly correlated with the age of the spouse and thus serves as a proxy for both. As in the case of education, age does not play any role in efficiency models, except in so far as it affects labor force participation or is associated with having

dependent family members. We control for these variables directly. By contrast, age plays a role in bargaining models because it differentially affects the position of men and women in the remarriage market. As suggested above there are two reasons. First, the value of household specific skills deteriorates with age because they are so closely related to the bearing and rearing of children. Second, age itself tends to be a liability in the re-marriage market.

2.2 Empirical Results

Table 1 shows the results of regressions that are based on pooled data from our 13 cases. They include country dummies to capture national differences in the division of household labor (the results for these dummies are omitted). We examine cross-national differences in the division of labor separately below. The regressions also include a control for the gender of the respondent since there is reason to expect that men and women will try to make themselves look better, or the spouse worse, on the questions about who does most of the work.

	1	2	2	4	5
	1	2	3	4	3
Female income (log)	-0.081 (0.010)	-0.059 (0.014)	-0.060 (0.017)		
Male income (log)	0.065 (0.012)	0.029 (0.016)	0.039 (0.021)		
Female labor force participation	~ /	-0.200 (0.027)	-0.198 (0.035)		
Male labor force participation		(0.029) (0.034)	0.236	0.284	0.237 (0.043)
Number of dependents		(0.031) (0.033) (0.008)	0.030	0.045	(0.013) (0.053) (0.012)
Fem. household-specific skills	0.314	(0.050) (0.215) (0.054)	0.199	(0.011) (0.239) (0.045)	(0.012) 0.162 (0.050)
Male household-specific skills	-0.075	0.002 (0.064)	-0.027 (0.090)	-0.240 (0.049)	-0.102 (0.117)
Female education	(0.022)		-0.033	(0.0.13)	(0117)
Male education			(0.012) 0.000 (0.012)		
Respondent=s education			(0.012)	-0.033 (0.010)	-0.034 (0.014)
Age	0.002 (0.001)	0.007	0.008	0.005	0.006
Gender of respondent	0.202 (0.021)	0.206 (0.024)	0.225 (0.029)	(0.001)	(0.001)
Adj. R-squared	.169	.198	.135	.197	.158

Table 1: The determinants of the domestic division of labor

N	5922	4367	2969	2181	1577
No of countries	13	12	9	12	12

Note: All models include a full set of country dummies (not shown).

Model 1 is specified with an eye to maximizing the number of observations. Since the Netherlands is missing data on labor market participation for the spouse as well as on the variable for the number of dependents, these variables have been omitted. The same is true for the educational variables where data are missing for several countries.

As expected, income has a strong effect on the division of labor. Since the dependent variable is the female share of household work, a negative coefficient on female income means that higher income leads to a smaller share of the work. A positive coefficient for male income has the same interpretation (i.e., higher male income causes the woman to do more of the work). Note that the effect of income is somewhat greater for the woman than for the man. This tendency is particularly strong for the effect of past labor market absences, what we have referred to as household-specific skills. Household-specific investments appear to matter a great deal for the women, increasing her share of household work, while it matters little or not at all for the man. In other words, a woman taking off work to care for children appears to get locked into doing most of the household work, whereas for the man such breaks in paid employment does not seem to have any lasting consequences. This pattern holds across model specifications.

Another consistent result is that age increases the share of work performed by the woman. The only possible explanation for this effect in an efficiency model is that age is correlated with labor market participation or the scope of domestic work. Yet, the effect of age is *stronger* when we include controls for labor market participation and the number of dependents. Specifically, if we compare a newly wed couple at age 20 to a married couple at age 40, and controlling for everything else, the woman in the latter will work about 20 additional minutes a day (using the time use equivalents explained above).⁴

As noted, this effect of age is consistent with a bargaining perspective because age differentially affects men and women on the re-marriage market. Yet, it is also consistent with a generational hypothesis that younger generations have more equitable work norms. The data does not allow us to distinguish between these interpretations. But, *if* norms have changed over time the next question is the cause of this change, and the bargaining model in fact has something to say about that. When outside options are important, and they *have* become more important over time in line with the rise in divorce rates, there is reason to expect that parents will raise their daughters to have more similar tastes for paid work as their sons. This makes daughters less willing to assume all domestic duties as adults. We consider this a fruitful area for future research.

Including labor market participation and the number of dependents as independent variables (model 2) notably increases the explained variance, and the new variables are highly significant in the predicted direction. The direct effect of a woman entering full time paid work is to reduce her share of household work by .2 on the dependent variable, which is roughly equivalent half an

⁴ 20 years in age is equal to .17 units on the dependent variable in the fully specified model, and a unit is equivalent to about 115 minutes of work.

hour of daily work. In addition there is a knock-on effect of labor market participation though income of about 10 minutes a day. This shows the critical importance of paid work for the domestic division of labor. At the same time it must be noted that even if the man is not working at all and the woman works full time, the predicted value on the dependent variable is 3.14, which implies that the woman still does more of the domestic work.

In model 3 we have included the educational variables derived form the occupational classifications. This notably drops the number of cases, largely because we are lacking information on occupation for three countries (in addition to the Netherlands). The explained variance also drops, largely because the omitted country dummies account for a significant portion of the variance in the previous specifications.

With these qualifications in mind, the results indicate that women with a high education take on a significantly smaller share of household work than women with low education. The estimated effect is about .1 on the dependent variable, which is equivalent to roughly 12 minutes of work per day. Of course, there are also significant knock-on effects of education through labor force participation and income, but these are anticipated by both efficiency and bargaining models. By contrast, it is difficult to reconcile the fact that education has a direct *effect* on the division of household labor within a pure efficiency model (Librizzi 2002).

Since education is not measured very precisely by occupation, the true effect of education may be greater. This seems to be confirmed when we use the respondent's actual educational level as independent variable. However, knowing the education of the respondent does not in itself imply any effect on the dependent variable since it depends on the gender of the respondent. Instead, we focus here exclusively on those who are out of work. No matter what the work and educational status of their spouse, there is no reason that education should play a role for the division of household labor when the respondent is not in the labor market. Except, that is, if education is also a measure of outside options and hence bargaining power.

Model 4 shows the results when we include both non-working men and women while model 5 shows the results when we only include women. They are evidently very similar reflecting the fact that most non-working individuals are women. As before, education reduces the share of work done by the respondent. But the effect of going from the lowest to the highest level of education is twice that of using the educational variable derived from the occupational categories. Specifically, someone with a university degree who is out of work has an expected score on the dependent variable that is .2 lower than someone without any education, which is equivalent to about 23 minutes of work per day. Again, it is difficult to make sense of this effect except as a result of bargaining power.

Turning now to the differences across countries, we need to acknowledge from the outset that with only 14 cases (including Spain) it is difficult to account for the cross-national variance in any statistically controlled manner. Still, we *can* check whether the macro-level variables that are hypothesized to affect bargaining power are systematically associated with the division of household labor in a way we would expect from the theory and from the micro-level evidence. The key variable is the value of outside options for women, and this in turn depends on women's equal access to well-paid jobs. The micro-level evidence that we have just examined

unambiguously shows that labor market participation, market income, and possession of general skills are conducive to an equal division of household labor.

While there are many potential variables affecting access to good jobs, we have stressed two in particular: the skill structure of the economy, and the willingness of governments to provide service jobs in the public sector. Women are at a disadvantage in specific skills countries because employers are more likely to favor men when they make long-term investments in their employees. Also, heavy regulation of labor markets that tends to accompany specific skills as insurance measures puts a damper on the availability of low-skilled jobs for women in the private service sector. The outside options of women in specific skills economies therefore depends crucially on access to general skills jobs in the public sector. Where such opportunities are lacking, women are in a poor bargaining situation in the family and will likely assume a larger share of domestic work. In this context women may also find it particularly difficult to escape unsuccessful marriages.

The implication is that cross-national differences in the division of household labor are largely a function of the interaction of skill specificity and the size of the public sector. As we move from general to specific skill countries we would expect the division of household labor to become increasingly inegalitarian, except where the state steps in to provide jobs in the public sector. The relationship is illustrated in figure1 where the national mean scores on the division of labor variable are plotted against an index that measures the emphasis on specific as opposed to general skills in national training systems. The index is the mean, after standardization, of vocational training intensity and firm tenure rates.⁵ We assume that skills tend to be more specific the more training systems emphasize vocational training and the longer workers stay with particular firms.

Note that the relationship between skills and the division of labor is clearly dependent on the size of the public sector, here measured in terms of public consumption as a percent of GDP. The relationship tends to be positive, but it is steeper the smaller the size of the public sector. This conditional relationship is confirmed by a simple regression model that uses the division of labor index as the dependent variable and skill specificity plus the interaction of specificity and public sector size as independent variables (see Table2). Public sector size is not included here as a separate independent variable because it has no direct effect on the division of labor (the parameter is practically zero), leaves the parameters on the other two largely unchanged, while significantly increasing the standard errors due to muticolinearity.

The results imply that if the public sector is as large as in Norway or Canada there is no relationship between skill regime and division of work. But with a small public sector such as that in Japan, going from a general skills regime such as that in New Zealand to a system with an intermediate value on the skill variable raises the share of household work done but the woman by about .4 on the dependent variable. That translates into about 45 minutes of work every day.

⁵ [Note on data]





Table 2: The division of household labor as a function of skill specificity and public sector size

	With the Netherlands	Without the Netherlands
Specific skill emphasis	1.63	2.04
	(.58)	(0.58)
Specific skill emphasis *	-0.083	-0.103
size of public sector	(0.031)	(0.030)
R-squared	0.48	0.56
Ν	13	13

It should be noted that the Netherlands is a notable outlier that significantly affects the results. Although the Netherlands has a specific skills training regime and a small public sector, it is in fact a country with a fairly equal division of labor. The reason may be that the Dutch have very generous transfers to single mothers, unlike other transfer intensive countries that emphasize support for the traditional family. But we leave this puzzle for other to solve.

3. Divorce and Labor Markets

If household bargaining is occasioned by the possibility of marital exit, and labor market opportunities shape outside options of the bargaining parties, it is important to understand the relationship between these variables. This is easier said than done. So close are the upward trends in both female labor force participation and divorce rates in industrialized countries beginning in the 1960s that it is difficult to sort out the causal relationship between them. There are essentially two competing stories, each of which is backed by an array of statistical studies. In one, the rise in divorce levels has increased the risk to stay-at-home women of a substantial drop in living standards. Women have responded by entering the labor market as a form of insurance against this possibility. As to why divorce rates have increased, some cite post-industrial value change (Inglehart and Norris 2002). Edlund and Pande (2001) fault easy contraception for a lower value that men place on marriage, assuming that the traditional marriage was a Ricardian barter of sex for income. Other scholars focus on a rise in no-fault divorce laws (Parkman 1992; Allen 1992; Friedberg 1999). Whatever the reasons for divorce, this school of thought stresses the increasing incentives for women to work once the risk of divorce reaches a certain threshold.

A second causal argument moves in the opposite direction, endogenizing divorce rates to labor market conditions. In this account, some percentage of married women who are unhappy with their marriages will nevertheless stay married if they don't have the means to support themselves. The key is an increase in work opportunities for women, particularly with the rise of general skills service sector jobs that apply a smaller penalty for career interruptions on account of child rearing (Goldin 1990; Allen 1998; Hwang and Polachek 2002). Service sector jobs, particularly when they were in the public sector where wages and job security can be politically determined apart from market forces, give more women the opportunity to choose between specialization within a marriage and greater economic independence. In this line of argument, growing divorce rates merely reflect the proportion of unhappy marriages and no-fault divorce allowed a new equilibrium to emerge rather quickly.

The Coase Theorem provides theoretical grounds to doubt that the adoption of no-fault divorce laws should affect the rate of divorce. If it becomes legally possible for one spouse to leave without the consent of his or her partner, the other spouse can still compensate the unhappy one to stay—by doing a larger share of household chores, for example--thereby raising the divorce-inclined spouse's satisfaction level to what it would be outside the marriage (Becker, Landes, and Michael 1977; Peters 1986).⁶ Justin Wolfers (2002) finds, in fact, that divorce law reform in

⁶ Of course marital bargaining is not transaction-cost free, but the question is how close to zero those costs are. Allen (1990; 1998) argues the costs can be substantial, including quirks in property laws at the time of divorce, government failures to enforce child support; and indivisible family assets (including children) can be difficult and

U.S. states seems to increase the divorce rate only temporarily, presumably by clearing a backlog of bad marriages of couples that preferred to stay legally married to paying the time, financial, and psychic costs of a cumbersome divorce process.⁷

The example of Japan is instructive because it combines a legal provision for quick and easy mutual consent divorce with low prevailing divorce rates. A spouse who fears a welfare loss in the event of divorce—including but not restricted to financial welfare—can make personal sacrifices to keep a marriage going, up to the point where his or her own welfare would be improved by letting the marriage end. The adoption of no-fault, unilateral divorce would replicate this bargaining situation, but shift the bargaining power from the divorce-opposer to the divorce-instigator. The spouse with more utility from the marriage can transfer some of that to the unhappy spouse, up to the point where further transfers render the marriage unpalatable to the previously committed spouse. Low divorce rates in Japan, given its divorce code, could indicate that marriages are "efficient".⁸ It is more likely the result of poor labor market opportunities for women, and the dramatic loss of economic welfare that married women would experience in the event of divorce. We furthermore suspect that the social stigma attached to divorce in Japan, as with the stigma attached to working women in most countries a mere four or five decades ago, has more to do with what is societally "normal" than with what is an enduring cultural value.⁹ If what has occurred elsewhere is any guide, this stigma will fade as the number of people willing and able to defy the stigma increases.

Comparative divorce data do suggest, however, that where additional and substantial barriers to divorce exist beyond the requirement that couples agree to marital dissolution, divorce rates tend to be lower. The distinction, therefore, might be more usefully drawn between systems that allow couples to divorce with little court interference (either unilaterally or by mutual consent) and those that actively discourage them by providing strict fault-based grounds for divorce such as in Ireland, Italy, and Spain. In these latter countries, the low divorce figures may disguise many "inefficient marriages."

Where low legal barriers exist to divorce we would expect the gender division of labor to be subject to more contestation than where such barriers are high. The primary reason is the heightened concern for outside options. But patterns of contestation are likely to be reinforced by socialization. Contrary to the pattern identified by Becker, caring parents are now more likely to teach their daughters, not only their sons, that education, independence, and assertiveness are

costly to bargain over. Some scholars argue that these costs can produce inefficient divorces when divorce is "too easy" (Parkman 1992). ⁷ Divorce reform was typically in response to abuse of the fault-based code by couples desperate to conform their

⁷ Divorce reform was typically in response to abuse of the fault-based code by couples desperate to conform their reasons for divorce to court-recognized grounds. As judge/economist Richard Posner (1992) stated, "confining divorce to grounds...[leads to investing]...resources in manufacturing them. At this point internal goals of the legal system—the goals of economizing on judicial resources and of reducing perjury—become decisive in favor of allowing either consensual divorce or divorce at will." See also Allen (1998).

⁸ "Efficient marriage" means that the total wealth of the couple is higher within than outside the marriage. Wealth should be interpreted here as the net present value of the stream of utility generated by marriage and not a measure of the couple's income.

⁹ Note that divorce in pre-Meiji, agricultural Japan was nearly as common as divorce in the U.S. or Sweden today. In-laws could reject a bride and send her back to her village, where her family would take her back and seek for her another husband. The remarriage rate for these young women was nearly total. (Tsubouchi and Tsubouchi 1970; Goode 1993: 221)

critical assets in the game of life. Emphasis on teaching paternalistic values to girls, however, is more likely to continue in settings with high barriers to divorce. This makes for "tough" female negotiators in the former case, and more docile ones in the latter.

Quite apart from divorce laws--for cross-national evidence on the effects of divorce laws is ambiguous--there nevertheless appears be truth to both arguments, that rising levels of female market participation increase divorce, and that rising divorce levels induce more women into the labor market (Mincer 1985; Johnson and Skinner 1986; Shapiro and Shaw 1983; Bentzen and Smith 2000). An increase in female income, if not female labor force participation by itself, has contributed to an increase in marriage dissolution by giving women more independence from the male bread winner (Becker, Landes, and Michael 1977; Bremming and Kesselring 2003; Andersson, Liu, and Vikat 2003). An increase in women's economic independence, in turn, can cause a greater number of marriages to become "inefficient," in the sense that one or both spouses may be better off outside the marriage, even after any sort of Coaseian compensation that might occur. At the same time, a rise in the divorce rate may induce more women to hedge their marital bets and gain market experience as a way to reduce exposure to the possibility of post-divorce poverty (Greene and Quester 1982; Lombardo 1999). She may choose to better her post-marriage options rather than make more concessions to keep a restless husband happy.

3.1 Empirical Analysis of Divorce and Women's Exit Options

The dependent variable is the number of divorces per 100 marriages as recorded by the OECD's statistical compilation of social indicators, 2001. We have data for 18 countries from 1970 to 1995, with one observation every five years. The maximum feasible number of observations is therefore 108, but 18 is lost because of the inclusion of a lagged dependent variable in the regressions. Another four observations are missing on the divorce variables, and, as we will see below, a few more are lost due to missing data on independent variables.

We use three key explanatory variables. The first is the index of legal barriers to divorce, where higher barriers are expected to reduce the incidence divorce. The second is female labor force participation measured as a percent of the working age population. A necessary condition for women to be able to escape dysfunctional marriages is that they have an independent source of income and that they have access to services that enable them to work as single mothers. We use actual female labor market participation as an indicator for the former and public provision of social services as an indicator for the latter.

The effects of the two variables are likely to interact because at high rates of participation, and little public provision, many daycare and other services will be available through the market. Women in that case essentially service the needs of other women. This is by and large the case in a country like the US. Conversely, when the provision of free public services is very extensive it is much easier for women to establish an independent household even when overall female participation is low. We seek to capture these conditional effects by including a multiplicative term between female labor force participation and government consumption (which is used as a proxy for public service provision).

In line with the discussion in the household division of labor section, however, it can be argued that what matters in terms of women's outside options in the labor market is not mere availability of jobs but relative earnings power of women. Female jobs in the services sector tend to by less well paid in all countries, but there is variance, both across time and space, as a result of differences in collective wage bargaining, equal pay legislation, and so on. We tried to capture through a female relative income variable, which weights female participation by the relative wages of women. We measure relative wages as the average share of female to male wages across the lowest, middle, and top deciles of the earnings distribution. So, for example, if the labor force participation rate of women is 60 percent and female wages as a share of male wages is .8, the variable takes on the value of 48. The wage data are only available for 15 of the 18 countries.

The first two columns of Table 3 show the results for divorce. Note that female labor force participation (first column) and female relative income (second column) both raise the divorce rate, but that the effect depends on the scale of public service provision. When the latter is a very high 20 percent of GDP, there is no effect of female labor force participation or of relative female income on divorce. When public service provision is low, on the other hand, the effect of increasing female labor force participation is very considerable. An increase of 12 percent, which is equivalent to one standard deviation, raises the divorce rate by as much as 16 percent in the long run. The effect is similar if we use relative female income. By the same token, public service provision increases the divorce rate, but only when female labor market participation (or relative earnings) is low. When it is high, the effect of a standard deviation increase in public service provision is to raise divorce by a magnitude that is similar to the female labor market effect.

	1 Divorce	2 Divorce	3 Female LF participation	4 Divorce (instrumental variable regression)
Lagged dependent variable	0.58*** (0.15)	0.22 (0.19)	0.80*** (0.09)	0.61*** (0.18)
Restrictiveness of divorce legislation	-3.85*** (1.06)	-7.62*** (1.62)	-	-4.65* (2.21)
Female labor force participation	0.97*** (0.33)	-	-	1.05** (0.46)
Female relative income	-	1.67*** (0.58)	-	-
Public	4.48***	4.71***	0.32***	5.55***

Table 3: The determinants of divorce rates

services	(0.88)	(1.14)	(0.09)	(1.39)
Female LF part (income)* public services	-0.06*** (0.01)	-0.08*** (0.03)	-	-0.07*** (0.02)
Vocational training	-	-	-0.05*** (0.02)	-
GDP per capita	-	-	0.00 (0.00)	-
Unemployment	-	-	-0.20*** (0.06)	-
Constant	-45.68** (19.00)	-39.21*** (17.79)	9.89*** (2.37)	-52.91* (25.31)
R-squared N	0.75 82	0.72 54	0.92 85	0.74 81

Key: *** p<.01; ** p<.05 ; * p<.10

We need to address two issues concerning the use of female labor force participation (or relative earnings) as an independent variable. The first is that it does not tell us much about the institutional causes of divorce, which are central to our analysis. In particular, we have argued that it is the combination of the skill system, embedded in the structure of production, and public employment and social service policies that determine the position of women in the labor market -- hence their bargaining position in the family. The second issue is that female labor force participation may be at least partly determined by the divorce rate. When couples divorce, non-working woman are forced to seek paid employment.

We can address both issues by first showing the relationships between female labor force participation, on the one hand, and skills and public service provision, on the other, and then use this information to create instrumental variables for female labor force participation. Column 3 therefore shows how female participation increases with public service provision, and how it decreases with the emphasis on vocational skills in the educational system. Since we do not have time series for firm tenure rates we here use the vocational training variable introduced above as a proxy for specific skills. As we have argued, specific skill economies place women in a disadvantage in the labor market because employees' specific skills. The state can however compensate for this disadvantage by providing general skills jobs in the public service sector. These jobs are overwhelming occupied by women.

In model 4 we have used vocational training and public services, along with GDP per capita and unemployment, as instrumental variables for female labor force participation. To instrument the interaction of female labor force participation and public service provision we used the interaction of vocational training and public service provision. While these variables are clearly related to female labor force participation, as demonstrated in column 3, it is difficult to see how





they would be affected by divorce rates. Certainly we know of no argument that would explain the vocational training system as a function of divorce.

With this procedure in mind, it is easy to confirm from model 4 that the use of instrumented variables does not affect the results in any substantive way. Indeed the effects of female labor force participation, and its interaction with public service provision, are somewhat stronger than before (compare to column 1).

The public policy implications of barriers to divorce are interesting to contemplate, highlighting the benefits and potential costs of enforcing long term contracts such as marriage. On the one hand, if a rise in the probability of divorce can generate an increase in opportunism within families, this can lead to a socially undesirable underinvestment in family-specific assets such as children (Becker and Murphy 1988). In response to growing evidence that children benefit from growing up with both parents at home, two U.S. states, Louisiana and Arizona, have adopted "Covenant Marriage" laws that allow couples to voluntarily bind themselves in stronger marriage commitments than the general law allows (Brinig 1998; Spaht 2002). Parents may recognize the value of investing more in their children, but fail to on account of strategic interaction with their

spouse. Public opinion surveys in the U.S. reveal that at least some of the women in full-time jobs would rather be working part time (Waite 1999).

In Italy, where divorce is still more difficult than most elsewhere in the developed world, public policy advocates note that the rise in divorce may be related to an increase in adolescent male suicide. In northern Italy, divorce is more common in the north than in the south: 5 separations and 3 divorces per 1000 couples in northern Italy compared with 2.7 separations and 1.2 divorces in the south in 1997. Policy advocates argue that this difference in divorce might be related to the increase of the suicide rate for adolescent males since the 1960s in the north compared with the south (Mancinelli et al. 2001).

On the other hand, to take the same Italian example, the suicide rate among females in the north decreased over the same period by more than it decreased in the south (Zanatta 1997; Mancinelli et al. 2001). These data are corroborated with evidence from other countries, where female suicide rates tend to decline as divorce increases (Wolfers 2001). While family stability may have some obvious bene fits, particularly in encouraging higher parental investment in children, it can come at a high cost to some women who are trapped in unhappy or even abusive marriages. The fact that low-divorce countries also tend to have low fertility levels is further evidence that binding couples into more permanent unions may be biased against the woman's interest. Low fertility may reflect the woman's effort to gain some measure of economic independence, even at the cost of her maternal role.

The discussion about the pros and cons of various divorce laws may nevertheless be moot, for we can think of no society that combines strong outside options for women with restrictive divorce procedures. Empirically, societies where women have the possibility of being economically independent typically also have permissive divorce rules, presumably because traditional values and eventually even legal systems give way in the face of massive defection.

4. Gender policy preferences

A key issue for any theory of gender preferences over public policy originates is the question of whether the family can be treated as a unitary actor or as separate individuals. In Becker's efficiency model the interests of family members are fully aligned and so, one would imagine, are their political preferences and attitudes. That does not mean that there is no political conflict over family and other social policies; only that these will tend be along class lines rather than along gender lines. In particular, families with incomes below the mean, using a standard Meltzer-Richard argument, will have an incentive in to favor policies that are redistributive.

The possibility of a gender gap in political preferences emerges when marriage contracting is incomplete and termination of the contract is an ever present possibility. In this case spouses will have conflicting preferences over who receives family benefits, and they will differ over any policies that affect their outside options--not merely, or even primarily, because they could be forced one day to take the outside option, but also, as we have argued, because outside options affect the current bargaining power inside the family.

Starting in the late 1970s in the U.S. and Scandinavia, and some years thereafter in many other

European countries, women have in fact began moving out of sync their husbands in their voting behavior, often voting to the left of men in aggregate. Women tend to support activist government across a range of economic policies (Shapiro and Mahajan 1986; Ladd 1997; Greenberg 2000; Alvarez and McCaffery 2000). This move is striking, because in what Inglehart and Norris term the "traditional gender gap," women typically voted to the right of men in these countries, perhaps because their greater longevity put them in greater numbers in the most conservative age bracket; and perhaps because of their social role as protector of family values and perhaps resulting tendency to be more religious (Inglehart and Norris 1999 and 2002; Studlar, McAllister, and Hayes 1998).

There are several competing explanations for "the modern gender gap," where women's preferences and voting patterns appear to be moving to the left. Some scholars argue that women are more altruistic than men, and they therefore favor more welfare spending (Conover 1988; Welch and Hibbing 1992; Gidengil 1995). But this argument is a static one that fails to explain the change in voting behavior over recent decades. Other scholars have pointed out that women are more likely than men to be economically vulnerable (Tedin 1994; Sears and Citrin 1982). But survey research suggests that women throughout the wage distribution are more likely to vote left than their male counterparts (Goertzel 1983; Carroll 1988; Inglehart and Norris 1999; 2002). Edlund and Pande (2001) get around this problem by arguing that high divorce rates leave women at a higher risk of income loss than before, and that they are therefore voting for more redistribution even before they receive it, as a sort of insurance. Using variation in divorce rates across U.S. states and some European countries, they derive a measure of "divorce risk" and find that it corresponds with the likelihood of women voting farther left than their socio-economic status warrants.

If Edlund and Pande are right that women vote left as insurance against post-divorce poverty, we would expect that women staying out of the work force are at the greatest risk and hence most likely to vote left. What the data suggest instead, however, is that women in the work force are more likely to vote left than housewives (Greenberg 2000). This would seem to damage the insurance argument, since these women have already reduced their economic exposure to the possibility of divorce.¹⁰

The data suggest to us an alternative explanation based on household barga ining: working women gain bargaining power at home from the partial socialization of family work such as child care and elderly care, and these are precisely the sorts of policies that parties on the left are more likely to espouse. Here's the logic: with some of her family burden lifted by the public purse, a woman is better able to invest in her marketable skills. By raising her level of economic independence closer to her husband's, a wife reduces her stake in keeping the relationship going closer to his level. We should observe more equal shares of family work in the household, not only because the government is undertaking part of it, but also because a woman is less willing to give up increasing amounts of her time to keep the marriage from dissolving.

As soon as outside options matter for bargaining power, men and women will differ over policies

¹⁰ One could argue, of course, that there is a selection effect here: only the women who feel at the greatest risk will seek outside employment; and that their resulting outside remuneration only partially offsets their perceived risk.

that affect these options. The most obvious matter of disagreement between husbands and wives, perhaps, is over publicly subsidized daycare. Since women are much more likely to end up as primary care givers, their welfare is disproportionately affected by the availability of high quality, low-cost daycare. Men may prefer to spare the public purse and hence their tax bill if their wives are default child care givers. This logic also applies to public care for the elderly and the sick because it helps women escape some of their traditional duties and thereby permit more time to be spent in paid employment. In addition, as we have stressed throughout, the welfare state is an important source of employment for women precisely because so many of the jobs replace caring functions that are otherwise provided "for free" in the family.

Men and women are also likely to disagree about a range of social transfer programs. First, research based on the Luxembourg Income Study has shown that transfers always results in a reduction of inequality (Bradley 2002; Moller forthcoming), and since women are on average paid less than men they tend to have a stronger interest in redistributive spending (assuming again that they care about their outside options).¹¹ Social transfers are also important in so far as they allow women temporary career interruptions without significant loss of income. As argued by Estevez-Abe (1999), social protection for women involves two factors that are not equally relevant for men: (i) protection against dismissal during and after pregnancy, such as maternity, parental and family leave policies; and (ii) income maintenance during leaves and guarantees of reinstatement to the same job at the same wage level upon return to work.

Support for redistribution and social insurance obviously does not come from women alone. In the classic Meltzer-Richard setup, any person with an income below the mean will prefer at least some redistributive spending. And when an insurance motive is added to the model, those exposed to greater risks will also demand more spending. One key source of such risks is the transferability of workers' skills. The harder it is to transport skills from one job to another, the greater the importance of income protection though social insurance programs (guaranteed health care, pensions, unemployment benefits, job security, etc). This argument is referred to as the asset model in Iversen and Soskice (2001).

The skill argument also has implications for understanding gender preferences for social protection. As suggested above, the reason is that women will find it harder to enter into occupations that require extensive specific skills (Estevez-Abe 1999). For a woman to invest in specific skills she has to be assured that potential career interruptions, if temporary, will not lead to dismissal or reduce her wage level in the long run. A high probability of dismissal reduces the incentives to acquire firm-specific skills. Likewise, a high probability of reduction in wages after

¹¹ The gap in income between men and women may be due to "statistical discrimination" where employers pay women less than men because women are on average more likely than men to leave the labor market for purposes of child birth and rearing, and because women are more likely than men to trade off working time for time on domestic duties, including care for sick family members (see Daly 1994; Rubery, Fagan and Maier 1996). There is a vicious circle here because the less well paid women are the weaker their bargaining position in the family and the more time they will spend on household duties to the detriment of their attractiveness to employers.

becoming a mother reduces the incentives to invest in either firm-specific or industry-specific skills (Estevez-Abe 2002).

The key implication of our argument is that women, provided that outside options *do* matter, at any given level of income and skill specificity will prefer higher social protection than men. This gender gap is magnified by an indirect effect through income since women earn less than men. On the other hand, the effect is reduced to the extent that women invest more in general than in specific skills. An interesting corollary of this argument is that women should be more supportive than men of public investment in general education. Inexpensive access to good formal education presumable benefits women disproportionately because they have a comparative advantage in general skills.

An important qualification to our argument is that the gap in gender preferences depends on the extent to which women participate in the labor market, as well as on the probability of divorce. Because non-working women's welfare depend more on the income of men than is the case for working women's, they have a stronger incentive to support policies that raise the take-home pay of males. Non-working women will still care about their outside options, as argued above, but policies that reduce the relative wage of men also reduce the income of families where the woman does not work. The mechanism that makes divorce important is that it raises the importance of outside options, and hence sharpens differences in policy preferences between the sexes. Since both female labor force participation rates and divorce rates vary across countries, the macro-level implication is that the gender gap will vary accordingly.

Using the logic developed in this section we can revisit some claims that are sometimes made about the gender and political preferences. Orloff (1999) and O'Connor et al. (1999), for example, strongly suggests that women are most disadvantaged in countries, such as those in southern Europe and East Asia, where female labor force participation rates are low, stratification on the labor market high, and the distribution of domestic work very unequal. If access to paid work and the ability to form autonomous households are fundamental interests of women, as Orloff and others argue, one would expect gender conflicts to be most intense in these countries. Yet, as we will see below these are countries in which the policy preferences of men and women appear the most *similar*, and where there does not appear to be a strong gender gap in electoral politics. We suggest that the explanation for this puzzle is that the family as an institution is heavily protected through labor market conditions, and reinforced by legislation and norms against divorce. The likelihood of a first marriage ending in divorce in Italy is less than one in 10—even lower than the 1950s US. As we have argued, following Becker, if divorce is a highly unlikely prospect, men and women are much less likely to adopt conflicting policy preferences.

Another recent controversy surrounds the role of the public-private sector division in Scandinavia. According to some, this division--which concerns issues of public sector size, relative pay, and public sector job protection--has emerged as a salient cleavage in electoral politics. The high gender segregation in the public sector also helps explain a widening gender gap. Paul Pierson points out that since men in the private sector tend to be married to women in the public sector, there is no compelling reason that spouses should quibble over issues of relative pay. At the end of the day, the income of both spouses simply adds to family income. But this logic only applies when husband and wife have few reasons to concern themselves with outside options. And since pay in the public sector is financed by taxing the private sector, policies affecting relative pay are a perfect example of an area where gender conflict is likely to be intense.

4.1 Empirical Analysis of Gender Preferences

To test our hypotheses we turn to the 1996 International Social Survey Program on the role of government. The data contain a number of questions about government spending and social policy as well as information on the key independent variables. We have more or less complete data for 11 advanced democracies at the individual level (Australia, Britain, Canada, France, Germany, Ireland, Italy, Norway, New Zealand, Sweden, and United States) and for 13 (adding Japan and Spain) at the macro level.

We use three dependent variables. The first is an additive index intended to tap preferences for social transfers and based on three questions about whether the respondent want more or less government spending on a) unemployment benefits, b) health care, and c) pensions. The variable ranges from 1 to 5, where 5 means a strong preference for more spending. The second variable is an additive index based on three questions about the role of the government in providing employment: a) should the government finance projects to create new jobs?, b) should the government reduce the working week to produce more jobs?, and c) should the government be responsible for providing jobs for all who wants to work? The variable ranges from 1 to 5 where 5 indicates a strong preference for job creation. The final variable is based on a single question that asks whether the respondent wants the government to spend more or less money on public education. Like the other two variables, this one varies between 1 and 5 with the latter indicating strong support for additional spending.

The key independent variables are gender (0=male; 1=female), income (logged), skill specificity, and labor market participation (as defined in the previous section). Skill specificity is based on the ISCO job classifications, the respondent's formal education, and a question about the difficulty the respondent would face if having to find a similar job. Higher values mean that the respondent's specific skills are extensive relative to his or her general skills. The measurement strategy is described in detail in Iversen and Soskice (2001). The regressions also include controls for age and unemployment, and as in the previous section we use pooled regressions with a full set of country dummies (not shown).

4.2 Results

Model 1 in Table 4 shows the results of a simple linear model predicting support for social transfers. All variables have the expected signs and, with the exception of labor force participation, all effects are statistically significant at a .01 level or better. Most importantly, women are more supportive than men of social transfers (i.e., want to increase them more, or decrease them less). On average, the effect is equivalent to 20 percent of a standard deviation on the dependent variable. Unfortunately, it is very hard to give substantive meaning to this number because we do not know how any particular level of agreement with any of the questions map onto actual monetary commitments. We do know, however, that gender is one of the best

predictors of preferences and that there is a statistically significant gender gap in each one of our 11 countries.

	Public en	ployment	Social t	ransfers	Educ	ation
	1	2	3	4	5	6
Female	0.158	0.052	0.131	0.076	0.107	0.088
	(0.019)	(0.041)	(0.015)	(0.032)	(0.020)	(0.043)
LF participation	0.052	-0.025	0.055	0.014	0.016	0.002
	(0.032)	(0.042)	(0.025)	(0.033)	(0.034)	(0.044)
Female*LF part.	-	0.137	-	0.071	-	0.025
		(0.047)		(0.037)		(0.049)
Income (log)	-0.003	-0.003	-0.002	-0.002	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Skill specificity	0.115	0.115	0.124	0.125	-0.001	-0.001
	(0.012)	(0.012)	(0.009)	(0.009)	(0.012)	(0.012)
Age	-0.001	-0.002	0.002	0.002	-0.004	-0.004
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Unemployment	0.177	0.152	0.258	0.246	0.044	0.040
	(0.055)	(0.056)	(0.043)	(0.044)	(0.057)	(0.058)
Adj. R-sq	.188	.189	.196	.197	.068	.068
Ν	7933	7933	8042	8042	8260	8260

Table 4. Social preferences and gender

Note: Regressions included a full set of country dummies

In model 2 we have included an interaction term for gender and labor force participation. Doing so creates problems of collinearity, with 83 percent in the variance in the gender variable (for example) being explained by the other variables. Still, the difference between men and women who work is statistically significant, and the substantive results make perfect sense in terms of the theoretical argument. Thus, when women are not working (the value on the labor force participation variable is zero), their predicted preferences are no different than men's. When a woman is working full time, by contrast, the difference between men and women is .164, which is greater than the direct effect in the non-interactive model. In other words, women vote together with men, and presumably in the collective interest of the family, when they are not working. But when women enter the labor market, they express social policy preferences that are clearly distinct from men's. This is also true for social transfers (model 3 and 4), and the magnitudes of the effects are very similar (but again with the qualification that it is difficult to give substantive meaning to the numbers).

The other two relationships that emerge clearly from the regressions on social policy preferences are the negative effect of income, as predicted by the Meltzer-Richard model, and the positive effect of skill specificity, as predicted by the asset model. These variables, however, do not appear to matter much in explaining support for educational spending (model 5 and 6) where age

and gender are the most important predictors. An explanation for the gender effect that is consistent with our argument is that women have a stronger incentive than men to invest in general skills, hence also a greater interest in public subsidization of education. The alternative, or perhaps complementary, explanation is that women are biologically forced to invest more in their children, and manifest this by spending more resources on them (Hrdy 1999; Schultz 2000).¹²

In Table 5 we examine two predicted *indirect* effects of gender. Model 1 uses income as the dependent variable and shows that women, not surprisingly, earn less than men.¹³ On average they make 652 dollars less than men (in 1996), and this figure roughly doubles if we also take into account that women also participate less in the labor market. Since lower income translates into greater support for social spending, the effect of gender is obviously magnified by income. However, about half of this effect is canceled out by another indirect effect: the greater propensity of women to invest in general skills (model 2). Both effects are, of course, entirely consistent with the theory.

	Income	Skill specificity
Female	-23.59	-0.287
	(0.95)	(0.016)
LF participation	56.53	-0.217
	(1.62)	(0.025)
Skill level	16.71	-
	(0.47)	
Age	0.67	0.004
	(0.04)	(0.001)
Unemployment	11.16	0.193
	(3.32)	(0.048)
Adj. R-sq	.470	.435
Ν	6830	9610

Table 5. Skill specificity, income, and gender

Note: Regressions included a full set of country dummies

Exploring the macro level implications of our argument is constrained by the limited number of cases (13). But there does indeed appear to be a positive relationship between female labor force participation and the size of the gap in gender preferences as illustrated in Figure 3. The figure

¹² The most likely explanation for the effect of age is that the older you are the less you will benefit from spending on education.

¹³ The regression model uses total skills, instead of skill specificity, to capture the effects of past skill investment on income. The variable is derived from the ISCO-88 classification as described in section 2.2. It should be noted, however, that the effect of gender is almost identical (25.5) if we use the skill specificity variable instead of the skill level variable.

shows the difference in male and female preferences across the two welfare state indices (circles are for the employment variable, triangles for the transfer variable, and squares the average of the two). Note that one cluster of countries, consisting of Ireland, Italy and Spain, have low participation and small differences in gender preferences, whereas another, consisting of Canada, Norway and Sweden, have high participation and large gender differences in preferences.



Figure 3. Female labor force participation and the gender gap in preferences

The other independent variable of interest at the macro level is the probability of divorce, which is proxied by actual divorce rates in Figure 4 (data are missing for Ireland). As expected, there appears to be a positive relationship between divorce and the size of the gender gap, although Britain is an outlier. Our interpretation of this pattern is that outside options become more important as the probability of divorce rises, sharpening the conflict of interests between the sexes. The relative importance of divorce and labor force participation rates, however, is impossible to assess because of the strong correlation between the two (.90). Of course, we know from the previous section that this correlation reflects an intimate causal relation between the two variables.

Figure 4. Divorce rates and the gender gap in preferences



5. Conclusions

Explaining cross national variation in income inequality has been one of the greatest preoccupations of modern political economy. But much of this analysis masks, we have argued, inequality within the very unit of analysis that is typically taken for granted: the family. When we abandon the traditional assumption of the family as a welfare maximizing unit, we confront the reality of strategic interaction between spouses. Because a spouse might favor his or her *share* of family welfare even at some expense of the *total* family welfare, it is important to disaggregate the family to understand the effects of labor market institutions and the public policies that govern them.

In this paper we examined three areas where the assumption of family as a unit can lead us astray: the household division of labor, divorce, and political preferences. First, we join a growing chorus of social scientists challenging the idea that the household division of labor reflects an efficient allocation of family resources (Lundberg and Pollak 1996, 2001; Braunstein and Folbre 2001). A husband may resist his wife's outside employment, even if it could increase total family income (or more broadly, family utility including children's well being), because her

accumulation of market skills and experience broadens her exit options to the marriage. By ramping up her bargaining power within the marriage, this greater economic independence can result in the husband contributing more and receiving less in the way of unpaid work in the home.

Economists have already noted, and we have found as well, that female labor force participation and higher female income do in fact shift the burden of household work a bit farther onto men's shoulders. We further found that, as we expected, labor markets that put a premium on the accumulation of specific skills hurt women's ability to gain equality in household work. Because women in specific skills economies typically bear a bigger penalty for career interruptions such as for child rearing, they face more limited work opportunities and may invest less in their market-relevant education as a result. This, in turn, weakens their bargaining power at home, and they get stuck mopping floors more often than their counterparts in general skills economies.

Finally, we found some tentative evidence for the hypothesis that women in specific skills economies will not only do a larger share of housework, but a larger share *over time*. This is because their market skills are not only low, but they deteriorate with time, dragging down their outside options along the way. We will need to examine this proposition further, using panel data.

Given the importance of understanding outside options for gender equality within the home, a second task we set for ourselves was to see if rising divorce rates explain female labor force participation, or if the causality is the other way around. This is econometrically tricky business, and we are left concluding that the causal arrows may flow in both directions. The growth of the service sector increased opportunities for women to work outside the home, which in turn swelled the ranks of "inefficient marriages," increasing the divorce rates across the western world. This simply means that a certain marriages were close to a break-even point from the stand point of the couples' utility functions, and an increase in female economic independence tipped the balance in favor of parting company. Divorce rates appear, then, to be at least partly endogenous to women's labor market opportunities.

Our empirical results seem also to suggest that rising divorce rates have produced a feedback effect back onto female labor force participation. As divorce becomes more common, more women are induced into the labor market as "insurance" against the possibility that they, too, will be left without a male bread winner. We put less stock in divorce legislation, per se, because successive countries have moved in towards easing divorce procedures in response to growing societal demand.

Given the overall trend towards more women in the workforce, we are not surprised to find that women as a group seem to be moving to the left politically. Although women actually vote as a group to the left of men only in a few countries (most dramatically in the US), time series analysis of women's political preferences show a systematic move leftwards in rich democracies. Given that women were starting from a position to the right of men, and given that the percentage of women fully integrated into the labor force still lags in many countries, it may take some years before women are actually positioned to the left of men across the board. In terms of social policy preferences, however, women have already arrived. Our data show unambiguously that women desire more spending on transfers, public employment creation, and education. The reason, we argue, is that partial socialization of family work, even at the cost of higher taxes from the private sector, increases a woman's ability to work outside the home and thereby increases her exit options and her household bargaining position. Public investment in formal education also benefits women disproportionately because they have a comparative advantage in general skills.

Lest we sound too cynical, we hasten to confess that we believe in long term reciprocity, familial altruism, and even, yes, love. We doubt that most couples think explicitly in the terms that we lay out here. But given the human propensity to slip into self-serving behavior, we ignore the strategic dimension of family life at the expense of realism and policy relevance. We urge political economists to focus more attention on the numerous remaining questions in this rich and largely underexplored area of inquiry. A particularly promising area of inquiry, we believe, is changing gender roles in childhood socialization. Political economists rarely venture into this area, yet their models potentially have much to contribute.

References

Allen, Douglas. 1998. "No-fault Divorce in Canada: Its Cause and Effect," *Journal of Economic Behavior and Organization*, 37: 129-49.

Alvarez, R. Michael, and Edward McCaffery. 2000. "Is There a Gender Gap in Fiscal Political Preferences?" Paper presented at the 2000 Annual Meetings of the American Political Science Association.

Anderson, Deborah, Melissa Binder, and Kate Krause. Forthcoming. "The Motherhood Wage Penalty Revisited: Experience, Heterogeneity, Work Effort, and Work Schedule Flexibility" *Industrial and Labor Relations Review*.

Andersson, Gunnar, Guiping Liu, and Andres Vikat. 2003. "Impact of Spouses' Relative Income on Divorce Risk: A Register-Based Study of First Marriages in Sweden." Working Paper, Max Planck Institute for Demographic Research.

Becker, Gary. 1964. Human Capital. New York: Columbia University Press.

Becker, Gary. 1965. "A Theory of the Allocation of Time," *Economic Journal* 75(299): 493-517.

Becker, Gary. 1971. The Economics of Discrimination. Chicago: University of Chicago Press.

Becker, Gary. 1981. A Treatise on the Family. Cambridge: Harvard University Press.

Becker, Gary. 1985. "Human Capital, Effort, and the Sexual Division of Labor," *Journal of Labor Economics* 3(1/2): S33-S58.

Becker, Gary, Elisabeth Landes, and Robert Michael. 1977. "An Economic Analysis of Marital Instability," *Journal of Political Economy*. 85/6: 1141-87.

Becker, Gary, and K. Murphy. 1988. "The Family and the State," *Journal of Law and Economics* 31: 1-18.

Bentzen, Jan, and Valdemar Smith. 2000. "An Empirical Analysis of the Effect of Labour Market Characteristics on Marital Dissolution Rates," Working Paper, Aarhus School of Business.

Bittman, Michael, and Paula England, Nancy Folbre, and George Matheson. 2001. "When Gender Trumps Money: Bargaining and Time in Household Work." Paper presented at the Population Association of America conference, March 2001.

Blau, Francine and Kahn, Lawrence. 1992. "The Gender Earnings Gap: Learning from International Comparisons." *American Economic Review* 80(2): 533-39.

Box-Steffensmeier, Janet, Suzanna DeBoef, and Tse-Min Lin. 1997. "Macroideology, Macropartisanship, and the Gender Gap. Paper presented for presentation at the 1997 Annual Meetings of the American Political Science Association, Washington D.C., August 1997.

Bradley, David, Evelyne Huber, Stephanie Moller, François Nielsen, and John Stephens. Forthcoming. "Distribution and Redistribution in Post-Industrial Democracies." World Politics.

Bremmer, Dale, and Randall Kesselring. 1999. "The Relationship Between Female Labor Force Participation and Divorce: A Test Using Aggregate Data," Paper presented at the International Atlantic Economic Conference, Montreal, Canada, October 1999.

Bremmer, Dale, and Randy Kesselring. 2003. "Divorce and Female Labor Force Participation: Evidence from Time Series Data and Cointegration," Working Paper, Rose-Hulman Institute of Technology.

Burns, Nancy, and P. Schumaker. 1988. "Gender Cleavages and the Resolution of Local Policy Issues," *American Journal of Political Science*. 32/4: 1070-95.

Carroll, Susan. 1988. "Women's Autonomy and the Gender Gap: 1980 and 1982," in Carol Mueller, ed., *The Politics of the Gender Gap: The Social Construction Political Influence*. Sage Press. 236-257.

Chiappori, Pierre-Andre. 2002. "Marriage Market, Divorce Legislation, and Household Labor Supply," *Journal of Political Economy* 110/1: 37ff.

Conover, Pamela Johnston. 1988. "Feminists and the Gender Gap." *Journal of Politics* 50/4: 985-1010.

Conover, Pamela Johnston and Virginia Sapiro. 1993. "Gender, Feminist Consciousness, and War," *American Journal of Political Science* 37: 1079-99.

Cook, Elizabeth Adell, and Clyde Wilcox. 1991. "Feminism and the Gender Gap: A Second Look. *The Journal of Politics*. 53/4: 1111-1122.

Edlund, Lena, and Rohini Pande. 2001. "Why Have Women Become Left-Wing? The Political Gender Gap and the Decline in Marriage." Working Paper, Columbia University Department of Economics.

Esping-Andersen, Gosta. 1990. The Three Worlds of Welfare Capitalism. Polity Press.

Esping-Andersen, Gosta. 1999. Social Foundations of Postindustrial Economies. Oxford University Press.

Estevez-Abe, Margarita. 1999. "Comparative Political Economy of Female Labor Participation," paper prepared for presentation at the annual meetings of the American Political Science Association, Atlanta, September 2-5.

Estevez-Abe, Margarita. 2002. "Gendering Varieties of Capitalism," paper prepared for a conference on The Political Economy of Family and Work, Yale University, July.

Estevez-Abe, Margarita, Torben Iversen, and David Soskice. 2000. "Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State," in Peter Hall and David Soskice, eds., *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford University Press.

Gainous, Jason. 2002. "Is There a "Woman's Perspective?" An Exploration of Gender Differences Along Republican and Conservative Lines," paper presented at the annual meeting of the Southwestern Political Science Association, New Orleans, March 2002.

Glendon, Mary Ann. 1987. Abortion and Divorce in Western Law. Harvard University Press.

Goertzel, Ted George. 1983. "The Gender Gap: Sex, Family Income, and Political Opinions in the Early 1980s. *Journal of Political and Military Sociology*. 11/Fall: 209-222.

Goode, William. 1993. World Changes in Divorce Patterns. Yale University Press.

Greene, William and Aline Quester. 1982. "Divorce Risk and Wives' Labor Supply Behavior," *Social Science Quarterly* 63/1: 16-27.

Greenberg, Anna. 2000. "Deconstructing the Gender Gap," Working Paper, John F. Kennedy School of Government, Harvard University.

Hansen, Jorgen; and Roger Wahlberg. 2000. "Occupational Gender Composition and Wages in Sweden." IZA Institute for the Study of Labor, Discussion Paper No. 217.

Hrdy, Sarah Blaffer. 1999. *Mother Nature: A History of Mothers, Infants, and Natural Selection*. Pantheon Books.

Huber, Evelyne, Leonard Ray, and John Stephens. 1999. "The Welfare State in Hard Times," in Kitschelt et al., *Continuity and Change in Contemporary Capitalism*. Cambridge University Press.

Inglehart, Ronald, and Pippa Norris. 1999. "The Developmental Theory of the Gender Gap: Women and Men's Voting Behavior in Global Perspective," Working Paper, John F. Kennedy School of Government, Harvard University.

Inglehart, Ronald and Pippa Norris. 2002. "The Gender Gap in Voting and Public Opinion," Chapter 4 in *Rising Tide*, book ms.

Johnson, W. R., and J. Skinner. 1986. "Labor Supply and Marital Separation," *American Economic Review* 76: 455-69.

Kitschelt, Herbert, Peter Lange, Gary Marks, and John Stephens, eds. 1999. *Continuity and Change in Contemporary Capitalism.* Cambridge University Press.

Librizzi, Christopher J. 2003. Bargaining and the Division of Household Labor: A Cross-National Analysis of Individual- and National-Level Factors. Honors Thesis, Department of Government, Harvard College.

Lombardo, Karen. 1999. "Women's Rising Market Opportunities and Increased Labor Force Participation." *Economic Inquiry*. 37/2: 195-212.

Mancinelli, I., L. Ceciarelli, A. Comparalli, S. Lazanio, P. Girardi, R. Tatarelli. 2001. "Suicide in Adolescents in Italy," *Canadian Journal of Psychiatry*. November.

Mansbridge, Jane. 1985. "Myth and Reality: The ERA and the Gender Gap in the 1980 Election. *Public Opinion Quarterly*. 49/2: 164-178.

Mincer, Jacob. 1958. "Investment in Human Capital and Personal Income Distribution," *Journal of Political Economy*. 66(4): 281-302.

Mincer, Jacob. 1966. "Labor Force Participation and Unemployment: A Review of Recent Evidence." In *Prosperity and Unemployment*, ed. Robert A Gordon and Margaret S. Gordon. New York: Wiley.

Mincer, Jacob. 1978. "Family Migration Decisions." *Journal of Political Economy*. 86(5): 749-773.

Mincer, Jacob. 1985. "Intercountry Comparisons of Labor Force Trends and Related Developments: An Overview," *Journal of Labor Economics*. 3/1: S1-32.

Nock, Steven and Margaret Brinig. 2002. "Weak Men and Disorderly Women" Divorce and the Division of Labor," in Anthony Dnes and Robert Rowthorn, eds. *Marriage and Divorce: A Law and Economics Approach*. Cambridge University Press.

O'Connor, Julia, Ann Orloff, and Sheila Shaver. 1999. States, Markets, Families: Gender, Liberalism and Social Policy in Australia, Canada, Great Britain, and the United States. Cambridge University Press.

Orloff, Ann Shola. 1999. "Motherhood, Work, and Welfare: Gender Ideologies and State Social Provision in Australia, Britain, Canada and the United States," in George Steinmetz, ed., *State/Culture*. Cornell University Press.

Polachek, Solomon. 1975. "Differences in Expected Post-School Investment as a Determinant of Market Wage Differentials." *International Economic Review* 16(2): 451-470.

Polachek, Solomon. 1978. "Simultaneous Equations Models of Sex Discrimination." In Income

Inequality, ed. John R. Moroney. Lexington: Lexington Books.

Polachek, Solomon. 1981. "Occupational Self-Selection: A Human Capital Approach to Sex Differences in the Occupational Structure," *Review of Economics and Statistics* 63(1): 60-69.

Polachek, Solomon. 1985. "Occupational Segregation: A Defense of Human Capital Predictions," *Journal of Human Resources*. 20(3): 437-40.

Posner, Richard. 1992. Sex and Reason. Harvard University Press.

Schlozman, Kay Lehman, Nancy Burns, Sidney Verba, and Jesse Donahue. 1995. "Gender and Citizen Participation: Is There a Different Voice?" *American Journal of Political Science*. 39: 267-93.

Sears, David, and J. Citrin. 1982. *Tax Revolt: Something for Nothing in California*. Cambridge: Harvard University Press.

Shapiro, David and Lois Shaw. 1985. "Growth in Supply Force Attachment of Married Women: Accounting for Changes in the 1970s," *Southern Economic Journal*. 6/3: 307-29.

Schultz, Paul. 2000. "Using Community Data to Improve Analysis of How Child Well-being is Produced," in Arland Thornton, ed., *The Well Being of Children and Families: Research and Data Needs*. University of Michigan Press.

Smith, Ian. 2002. "European Divorce Laws, Divorce Rates, and Their Consequences," in Anthony Dnes and Robert Rowthorn, eds., *The Law and Economics of Marriage and Divorce*. Cambridge University Press.

Studlar, Donley, Ian McAllister, and Bernadette Hayes. 1998. "Explaining the Gender Gap in Voting: A Cross-National Analysis." *Social Science Quarterly*. 79/4: 779-798.

Sullivan, Oriel, and Jonathan Gerhuny. 2001. "Cross-National Changes in Time-Use: Some Sociological (Hi)stories Re-Examined. *British Journal of Sociology*. 42(2): 331-47.

Tsubouchi, Yoshihiro, and Reiko Tsubouchi. 1970. *Rikon: Hikaku shakaigakuteki kenkyu* [Divorce: A Comparative Sociological Study]. Tokyo: Sobunsha.

Waite, Linda J. and Mark Neilsen. 1999. "The Decision to Allocate Time Between Market and Non-Market Activities." Paper presented at the Workshop on Measurement of and Research on Time Use, National Research Council, May 1999.

Welch, Susan and John Hibbing. 1992. "Financial Conditions, Gender, and Voting in American National Elections," *Journal of Politics* 54: 197-213.

Wolfers, Justin. 2001. "Comment on Edlund and Pande," Wallis Conference on Political Economy. September 29, 2001.

Wolfers, Justin. 2002. "Did Unilateral Divorce Laws Raise Divorce Rates? A Reconciliation and New Results," working paper, Stanford Graduate School of Business.

Zanatta, L. 1997. Le Nuove Famiglie. Bologna: Il Mulino.