Applying a Multiple Equilibrium Framework to Divorce Risks in Germany

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(Paper for International Divorce Conference, Universita Bocconi, October 2011)

Abstract: For many years now, divorce research has focused on the influence of women's new economic role. A number of studies show that divorce risks are associated with women's income. And, yet, there is also mounting evidence that the social gradient of divorce is being reversed. How does one reconcile such findings? In this paper we offer an alternative framework, based on multiple equilibrium models, that predicts that couple instability should be greatest where strong normative consensus is absent – i.e. in unstable equilibria. We should expect significantly lower divorce risks in either the traditional family equilibrium or in a (possibly) emerging gender-egalitarian one. One important upshot is that research on family dynamics should be more sensitive to non-linearities. Using the GSOEP waves 1986-2009, we apply discrete time event history analysis to West German couples and relate partnership durations to couple specialization. We focus particularly on inequity effects related to the division of domestic and market work.

Introduction

Studying demographic change is normally at a snail's pace. But in recent years, demographers are uncovering a remarkable u-turn on key dimensions of family life. The classical negative correlation between female employment and births is turning positive. A similar trend emerges also for couple formation and divorce. These trends seem at odds with the core predictions inherent in two important theoretical frameworks, namely Becker's (1977; 1991) New Home Economics and the 'post-modernism' variant of the Second Demographic Transition (SDT) thesis (van de Kaa, 2001).

Albeit argued very differently, both hypothesize a similar evolutionary scenario: a steady decline in fertility and marriage, and a concomitant rise in cohabitation and divorce. In Becker's framework, the returns to marriage depend on specialization. The opportunity costs of marriage will rise in tandem with gender-convergence in market productivities. At the micro-level we should accordingly expect that high-skilled, high-earning women are less likely to marry and have children (and also be more prone to divorce). ¹At the macro-level, increases in women's employment will induce falling fertility, lower marriage and higher divorce rates.

¹ A note of caution is warranted here since Becker does recognize that specialization is not the sole potential utility. Marriage may also be driven by a preference for consumption maximization.

The postmodernism variant of the SDT thesis predicts pretty much the same trend, but on the basis of a value-change argument. The basic proposition here is that citizens increasingly act on individualistic value preferences (such as self-realization) rather on commonly shared norms and expectations.

We question the validity of the projected secular rise in couple volatility. Instead we believe that the observed rise in divorce, as well as the recent shift towards greater marital stability (at least among the higher educated), both reflect a dynamic inherent in the unfolding revolution of women's roles. As is well-established, women's exit from housewifery and their adoption of a more 'masculine' life course was not paralleled by any serious male adaptation within the domestic sphere (Gershuny et.al., 2005; Bianchi 2000; Bittman et.al., 2003; Esping-Andersen et.al., 2010). The failure of men to adjust fueled concepts such as the 'second-shift' (Hochchild, 1989); a number of studies pointed to the prevalence of 'doing gender' practices (Berk, 1985; Brines, 1994). The upshot is that greater gender parity in terms of paid work failed to carry over to private life. Indeed, 'doing gender' implies that couples reproduce conventional gender roles – especially when they are threatened. Such conditions represent inequity and are therefore likely to provoke marital tensions and conflict.

With the same logic we should, accordingly, expect that marital stability will increase when couples move towards more equitable domestic arrangements. The u-turn we observe in terms of falling divorce rates among the higher educated in countries like the Scandinavian coincides with a sudden burst in men's contribution to domestic tasks. In Denmark, their mean share of housework shot up from around 30 percent in the 1980s to 41 percent in 2001 -- with almost 30 percent of men contributing in excess of 50 percent (Esping-Andersen et.al, 2010). Our study, focusing on (West) Germany, is a first attempt to tease out whether the coincidence has any causal stature.

As we explain below, demographic behaviour in contemporary societies resembles very much a multiple equilibrium logic: the traditional male breadwinner model co-exists with a nascent gender egalitarian one and, as is inherent in multiple equilibrium settings, there is a potential large population situated in a 'normative limbo' (what economists term an unstable equilibrium).

Hence, as a new gender-symmetric equilibrium gains ground we should also expect that marriages become more stable. So far, the declining incidence of divorce is very much concentrated among the highly educated. These are, not incidentally, not only the vanguards of the female revolution but also of gender-egalitarian partnerships. As a new egalitarian equilibrium gains dominance beyond the confines of a narrow social stratum we should see divorce risks declining across the social pyramid.

Our Danish data on trends in couple sharing suggest that Denmark may be poised to enter this scenario. In this study, however, the focus is on (West) Germany where traditional couple specialization still is prevalent, notwithstanding female employment gains (Cooke, 2004; 2011). ² This is why, in line with previous research, one would expect that German divorce risks remain lowest among traditional couples. And yet, as we shall see further on, Germany has experienced a trend towards greater gender-

 $^{^{2}}$ Cooke's (2011: Table 7A.2) estimates suggest that German men's contribution to housework (in 2001) is little more than 20 percent. Miranda (2011), using the same data, arrives at a somewhat higher share.

egalitarianism. The question is whether this has been strong enough to produce any significant effect on divorce propensities, at least within the social strata that have moved furthest in that direction.

The Changing Social Gradient of Divorce

Our concern with the social correlates of divorce echoes William Goode's (1962) classical prediction that modernization will democratize divorce risks. His thesis builds on two key factors: the cost of divorce and the class-specific propensity of marital strain. As long as the costs of divorce are high it will remain an upper-class affair; as they diminish it will increasingly spread to the lower classes – where, besides, marital strains are likely to be more prevalent. In fact, Harkonen and Dronker's (2006) analyses suggest that Goode's scenario is born out in a number of advanced countries. For Scandinavia, see also Hoem (1997) and Lyngstad (2004); for the UK, Chan and Halpin (2005); and for the US, see Raley and Bumpass (2003). The decline in US divorce rates since the 1990s is almost exclusively driven by greater marital stability among the highly educated (Martin, 2006).³

The Harkonen and Dronkers (2006) study, however, does not identify any reversal of the social gradient of divorce in Germany, Italy, the Netherlands, and Spain.⁴ But their data are from the FFS surveys and mainly reflect reality up to the 1990s. In fact, more recent data point to an increasingly negative divorce gradient both in Italy and Spain (Bernardi and Martinez-Pastor, 2010; Salvini and Vignoli, 2011) and in the Netherlands (De Graaf and Kalmijn,2006). We shall see whether Germany, too, is converging with this trend.

A multiple equilibrium approach

How we make choices depends on individual attributes and preferences, on group membership characteristics, and on normative signals (Manski, 1993). An equilibrium exists when expectations and choices are driven by strong normative signals that are endogenously re-confirmed over time (Brock and Durlauf, 2001; Durlauf, 2001; Manski, 1993; Young and Burke, 2001). Consider the traditional male breadwinner model: women invested primarily in homemaker skills (and men in market skills) in anticipation of their future roles and, doing so, they reproduced the self-fulfilling prophesy of comparative advantage.

In theory, an equilibrium can only be stable if it is Pareto-optimal (no alternative arrangement would produce superior efficiency or more equity). Put differently, a normative order that is perceived as yielding unfair and-or inefficient outcomes will likely experience an exodus. What might trigger exodus from a stable equilibrium?

³ My own estimations for Denmark (based on the BFU panel data) show an odds-ratio for divorce among low educated women of 1.27 compared to .76 for high educated (over a ten-year period, 1996-2006).

⁴ For Germany, see also Diekman and Klein (1991) and Blossfeld et.al. (1995). But note that both these studies, once again, use rather old data.

The dynamics of multiple equilibria are driven by exogenous and endogenous forces. Their emergence depends, in the first instance, on exogenous triggers that put into question the old way of doing things (e.g. conventional practices may be viewed as inefficient). But an alternative equilibrium will consolidate only if the external shock is followed by a self-reinforcing endogenous process of normative adaptation. The logic can be identified in the ongoing revolution of women's roles: initially spurred by exogenous factors, in particular birth control, new household technologies, and the growth of white collar jobs, women began to invest in marketable skills (Goldin, 1990). The redefinition of roles became self-reinforcing once lifelong employment gained normative status among women (and especially mothers). The second-order effect was the decline of the male breadwinner family. In Scandinavia the revolution is undoubtedly reaching maturity because it is universally expected that any given woman will, indeed, pursue a lifelong (and full-time) career. Where the revolution is less advanced, there is much more ambiguity about the proper role of women, part-time commitments are more likely to prevail, and lengthy birth-related career interruptions are typical (Esping-Andersen, 2009).⁵

How do multiple equilibria produce a new dominant equilibrium? The key here is that the endogenous momentum begins to accelerate (Fukao and Benabou, 1993). Initially, the embrace of a new normative regime will be hesitant and this is precisely why transition periods are likely to be associated with considerable indeterminacy, i.e. idiosyncrasies rather than commonly shared norms are the principal drivers of choice. But as a new equilibrium gains momentum, one should expect that norms increasingly dictate people's choices, producing in its wake rising behavioural homogeneity. The endogenous accelerator will most likely emerge via diffusion, a logic akin to the 'critical social-mass' effect that Breen and Cooke (2005) describe. The long-run trend that depicts prolonged inertia followed by a sudden burst in men's housework is consistent with the accelerating-momentum hypothesis.

Unstable equilibria will emerge in societies where citizens confront rival normative pulls (in our case, torn between traditional and new gender egalitarian norms). The concept is clearly a misnomer since they cannot be 'in equilibrium'; they lack any endogenously produced self-reinforcement. Their lack of clear normative signals is, in fact, what produces the appearance of heightened individualism.

And here we return to our original theoretical claim: namely that the individualization of choice that 'post-modern' theories depict as a secular trend is based on an incorrect extrapolation; in our framework, instead, it represents a transitory phase of normative flux. And, as will be recalled, a core assumption is that equilibria will only become stable if they are Pareto-optimal. Within unstable equilibria, in contrast, outcomes are likely to be neither equitable nor efficient - - and this is precisely why they fail to be endogenously self-reproducing. The widely recognized instances of women saddled with a 'double shift' (Hochchild, 1989) or of couples 'doing gender' (Berk, 1985; Brines, 1994) exemplify very well the Pareto sub-optimal aspects of unstable equilibria in family life.

⁵ Azariadis (2008) stresses the indeterminacy of expectations in multiple equilibria. ISSP data from 2002 illustrate such nation differences well. The percent women who favour the traditional male breadwinner family is less than 8 percent in Sweden but 23 percent in (West) Germany (Esping-Andersen, 2009: Table 1.6)

And this is where the approach should be relevant for demographic outcomes. Where normative certainty reigns we should expect fertility to match preferences, a stronger inclination to marry, and enhanced partner stability. Where people are uncertain of what to expect, they will hesitate to marry and have children. If couple relations produce Pareto sub-optimalities, conflicts are likely to surface. This is, in our view, why divorce risks are significantly lower among traditional couples – and this should also be the case for gender-symmetric couples if, that is, an egalitarian equilibrium has gained foothold.

References

Ahn, N and Mira, P 2002 'A note on the changing relationship between fertility and female employment rates in developed countries'. *Journal of Population Economics*, 15: 667-82

Amato, P 1996 'Explaining the inter-generational transmission of divorce'. *Journal of Marriage and Family*, 58: 628-40

Azariadis, Costas 2008 'Multiple equilibria in macroeconomics'. In S. Durlauf and L. Blume, eds. *The New Palgrave Dictionary of Economics Online*. London: Palgrave (www.dictionaryofeconomics.com/articleid=pde2008 M00374)

Becker, G. 1991 A Treatise on the Family. Cambridge, Ma: Harvard University Press

Becker, G, Landes, E and Michael, R 1977 'An economic analysis of marital stability'. *Journal of Political Economy*, 85: 1141-87

Berk, Sarah. 1985. *The Gender Factory. The Apportionment of Work in American Households*. New York: Plenum Press

Bernardi, F and Pastor, J 2010 'Female education and marriage dissolution: is it a selection effect?' *European Sociological Review*,

Bianchi, Suzanne., Milkie, Melissa, Sayer, Liana, and Robinson, John. 2000 'Is anyone doing the housework? Trends in the gender division of household labor'. *Social Forces*, 79: 191-228

Bianchi, Suzanne, Robinson, John. and Milkie, Melissa. 2006 Changing Rhythms of American Family Life. New York: Russell Sage

Billari, F and Kohler, H 2004 'Patterns of low and lowest-low fertility in Europe'. *Population Studies*, 58: 161-76

Bittman, Michael., England, Paula., Sayer, Liana, Folbre, Nancy, and Matheson, George 2003 'When does gender trump money? Bargaining and time in household work'. *American Journal of Sociology*, 109: 186-214

Blossfeld, H.P and Muller, R 2002 'Union disruption in comparative perspective: the role of assortative partner choice and careers of couples'. *International Journal of Sociology*, 32: 3-35

Blossfeld, H.P and Muller, R eds 2003 Union disruption in comparative perspective. Special Issue. *International Journal of Sociology*, vol. 33

Brewster, K and Rindfuss, R 2000 'Fertility and women's employment in industrialized countries'. *Annual Review of Sociology*, 26: 271-96

Brines, Julie. 1994 'Economic dependency, gender, and the division of labor at home'. *American Journal of Sociology*, 100: 652-88 Brines, J and Joyner, K 1999 'The ties that bind: principles of cohesion in cohabitation and marriage'. *American Sociological Review*, 64: 333-55

Brock, William and Durlauf, Steven 2001 'Discrete choice with social intercations'. *Review of Economic Studies*, 68: 235-260

Chan, T. And Halpin, B 2005 'The instability of divorce risk factors in the UK'. Working Paper (2005-06), Department of Sociology, Oxford University.

Cooke, L Prince 2004 'The gender division of labor and family outcomes in Germany'. *Journal of Marriage and Family*, 66: 1246-59

Cooke, L Prince 2006 'Doing gender in context: household bargaining and risk of divorce in Germany and the United States'. *American Journal of Sociology*, 112: 442-72

Cooke, L Prince 2011 *Gender-Class Equality in Political Economies*. London: Routledge

De Graaf, P and Kalmijn, M 2006 'Change and stablity in the social determinants of divorce: a comparison of marriage cohorts in the Netherlands'. *European Sociological Review*, 22: 561-72

Durlauf, Steven 2001 'A framework for the study of individual behaviour and social interactions'. Unpublished paper, Department of Economics, University of Wisconsin.

Edin, K and Kefalas, M 2007 *Promises I Can Keep. Why Poor Women Put Motherhood Before Marriage.* Berkeley, Ca: University of California Press

Elwood, D and Jencks, C 2004 'The spread of single-parent families in the United States since 1960'. Pp. 25-65 in D. Moynihan, T. Smeeding and L. Rainwater, eds. *The Future of the Family*. New York: Russell Sage

Ermisch, John 2003 An Economic Analysis of the Family. Princeton: Princeton University Press

Eurostat, 2011 Demography Report 2010. Bruxelles: European Commission

Gershuny, Jonathan, Bittman, Michael, and Brice, J. 2005 'Exit, voice, and suffering: do couples adapt to changing employment patterns?' *Journal of Marriage and Family*, 67: 656-665

Goldin, Claudia 1990 Understanding the Gender Gap. Oxford: Oxford University Press.

Goldin, C 2006 'The quiet revolution that transformed women's employment, education and family'. *American Economic Review*, 96: 1-21

Goldstein, J and Kenney, C 2001 'Marriage delayed or marriage foregone?' *American Sociological Review*, 66: 506-19.

Goode, W 1962 'Marital satisfaction and instability'. Pp. 377-87 in R. Bendix and S. Lipset, eds. *Class, Status and Power*. New York: The Free Press.

Grunow, Daniela, Schulz, F. and Blossfeld, Hans-Peter. 2008 'Gender norms and economic resources: what determines the division of housework in the course of marriage? Unpublished paper, Department of Sociology, Yale University.

Hakim, C 2000 *Work-Life-style Choices in the 21st Century*. Oxford: Oxford University Press.

Harkonen, J and Dronkers, 2006 'Stability and change in the educational gradient of divorce'. *European Sociological Review*, 22: 501-17

Hochchild, Arlie. 1989 The Second Shift. New York: Avon Books.

Hoem, J 1997 'Educational gradients in divorce risk in Sweden in recent decades'. *Population Studies*, 51: 19-27

Hook, Jennifer L. (2006). Care in context: Men's unpaid work in 20 countries, 1965-2003. *American Sociological Review, 71,* 639-660.

Kalmijn, M 1999 'Father involvement in childrearing and the perceived stability of marriage'. *Journal of Marriage and Family*, 61: 409-21

Kalmijn, M 2007 'Explaining cross-national differences in marriage, cohabitation, and divorce in Europe, 1990-2000. *Population Studies*, 61: 243-63

Kraft, K and Neimann, S 2009 'Effect of labor division between wife and husband on the risk of divorce: evidence from German data'. *IZA Discussion Paper*, 4515

Lillard, L, Brien, M and Waite, L 1995 'Premarital cohabitation and subsequent marital dissolution: a matter of self-selection?' *Demography*, 32: 437-57

Lyngstad, T 2004 'The impact of parents' and spouses' education on divorce rates in Norway'. *Demographic Research*, 10: 121-142

Manski, Charles. 1993 'Identification of endogenous social effects: the reflection problem'. *Review of Economic Studies*, 60: 531-542

Martin, S 2006 'Trends in marital dissolution by women's education in the United States'. *Demographic Research*, 15: 537-60.

McDonald, P 2000 'Gender equity in theories of fertility transition'. *Population and Development Review*, 26: 427-39

McLanahan, S 2004 'Diverging destinies: how children fare under the 2nd Demographic Transition'. *Demography*, 41: 607-27

Miranda, V 2011 'Cooking, caring and volunteering: unpaid work around the world'. *OECD Social, Employment andMigration Working Papers*, no.116.

Neyer, G, Lappegaard, T and Vignoli, D 2011 'Gender equality and fertility: which equality matters?' *Stockholm Research Reports in Demography*, 9

Oppenheimer, V 1997 'Women's employment and the gain to marriage: the specialization and trading model'. *Annual Review of Sociology*, 23: 431-53

Raley and Bumpass 2003

Salvini, S and Vignoli, D 2011 'Things change: Marital disruption dynamics in Italy, 1970-2003'. *Demographic Research*, 24: 145-74

Sayer, L and Bianchi, S 2000 'Woemn's economic independence and the probability of divorce'. *Journal of Family Issues*, 21: 906-43

Sleebos, J 2003 'Low fertility rates in the OECD countries'. OECD Social, Migration, and Employment Working Paper, 15

Steele, F, Kallis, C and Joshi, H 2006 'The formation and outcomes of cohabiting and marital partnerships in early adulthood'. *Journal of the Royal Statistical Society (Series A)*, Vol. 169: 757-79

Van De Kaa, D 2001 'Postmodern fertility preferences. From changing value orientations to new behaviour'. *Population and Development Review*, 27 (Supplement): 291-331

	1986	1994	2000
20-30			
Mean	0,47	0,48	0,39
(Std. dev)	(0,09)	(0,10)	(0,11)
31-40			
Mean	0,57	0,55	0,60
(Std. dev)	(0,07)	(0,07)	(0,06)
41-50			
Mean	0,70	0,6	0,59
(Std. dev)	(0,06)	(0,08)	(0,05)

Appendix Table 1. The male share of all with university-level education. West German averages of Lander shares.