

Max-Planck-Institut für demografische Forschung  
Max Planck Institute for Demographic Research  
Doberaner Strasse 114 · D-18057 Rostock · GERMANY  
Tel +49 (0) 3 81 20 81 - 0; Fax +49 (0) 3 81 20 81 - 202;  
<http://www.demogr.mpg.de>

---

MPIDR WORKING PAPER WP 2002-049  
OCTOBER 2002

**Parental gender indifference or  
persistent sex preferences for children  
at the turn to the 21<sup>st</sup> century?  
A reflection on Pollard and Morgan (2002)  
with reference to the Swedish case**

Karsten Hank ([hank@demogr.mpg.de](mailto:hank@demogr.mpg.de))  
Gunnar Andersson ([andersson@demogr.mpg.de](mailto:andersson@demogr.mpg.de))

---

This working paper has been approved for release by: Jan M. Hoem ([hoem@demogr.mpg.de](mailto:hoem@demogr.mpg.de))  
Head of the Laboratory of Contemporary European Fertility and Family Dynamics.

© Copyright is held by the authors.

Working papers of the Max Planck Institute for Demographic Research receive only limited review.  
Views or opinions expressed in working papers are attributable to the authors and do not necessarily  
reflect those of the Institute.

**Parental gender indifference *or* persistent sex preferences for children at the turn to the 21<sup>st</sup> century?  
A reflection on Pollard and Morgan (2002) with reference to the Swedish case**

*Karsten Hank and Gunnar Andersson\**

INTRODUCTION

In their recent *ASR* article on the sex composition of previous offspring and third births in the US, Pollard and Morgan (2002; henceforward P&M) argue that changes in the societal gender system have led to a decreasing effect of children's gender on parents' fertility decisions. In contrast to the longstanding and well-documented observation that US parents with two children of the same sex are clearly more likely to experience a third birth than those with one son and one daughter (e.g., Sloane and Lee 1983; Yamaguchi and Ferguson 1995), the authors detect a significant decline in the pro-natalist effect of the sex of previous children after 1985. P&M (p. 611) conclude that "the observed shifts in fertility patterns could reflect the synergy among cohorts that were primed to be gender indifferent by exposure to social attitudes while growing up,

---

\* Max Planck Institute for Demographic Research, Konrad-Zuse-Str. 1 (as of November 15, 2002), 18057 Rostock, Germany. Email: [hank@demogr.mpg.de](mailto:hank@demogr.mpg.de); [andersson@demogr.mpg.de](mailto:andersson@demogr.mpg.de). We thank Statistics Sweden and the late Britta Hoem for providing us with the data used in this paper.

and the period when structural and other social factors (collectively referred to as the ‘gender system’) enabled such behavior.”

If P&M are right in their assertion that increasing opportunities for women result in parental gender indifference, one should expect to find no sex preferences for children in countries with a high level of gender equality. The *Scandinavian* societies are said to be exemplary in this regard (e.g., Bergqvist 1999). In a comparative study of 17 European countries with Fertility and Family Surveys in the 1990s, Hank and Kohler (2000) find indeed no gender preference in *Finland* and *Norway*. However, the same study provides evidence that parents of same-sex children in *Sweden* exhibit higher parity progression probabilities than those with both male and female offspring.<sup>1</sup> This is consistent with Schullström (1996), whereas Andersson and Woldemicael (2001) find only weak to no effects of the sex composition of children on the propensity of Swedish mothers to enter into and exit from marriage.<sup>2</sup> Finally, Jacobsen et al. (1999) detect a general preference for a balanced composition of sexes in *Denmark*.

In this reflection, we exploit population register data that enable us to examine the Swedish case more closely and across time (see Andersson and Woldemicael [2001] for a description of the data). Using an event-history framework and accounting for the sex

---

<sup>1</sup> In the other countries under consideration, Hank and Kohler (2000) – who focus on the transition from the second to the third child – find no gender preference at all in *France, West Germany, and Poland*, a preference for a mixed sex composition in *Austria, Belgium, East Germany, Hungary, Italy, Latvia, Slovenia, Spain, and Switzerland*, as well as some indication for a girl preference in the *Czech Republic, Lithuania, and Portugal*.

<sup>2</sup> See Morgan et al. (1988) and Morgan and Pollard (2002) for similar analyses of divorce risks in the US context.

of previous children, we analyze second and third birth risks of *all* Swedish mothers in the years 1961 to 1999. During this period, the present-day Swedish welfare state regime – which explicitly promotes gender equality – fully emerged. Our large-scale data source allows us to investigate parallel changes and / or continuities in parental gender preferences with a very high accuracy, even when the actual behavioral differences are small. See Andersson (1999) for a general overview of fertility trends in Sweden from the 1960s onwards.

#### SECOND-BIRTH RISKS OF SWEDISH WOMEN BY SEX OF THE FIRST CHILD

The results of the hazard regression analysis performed here do not display any influence of the sex of the first-born child on women's probability to progress to parity two (see *Figure 1*). This finding is stable across the whole period of observation. While P&M (p. 601) argue that significant gender preferences are unlikely to be present at lower parities anyway, analyses of the *German* case, for example, suggest a modest but behaviorally relevant preference for a son as the first child in the West (Hank and Kohler forthcoming) and a mild preference for a first-born daughter in the East, i.e. the former GDR (Brockmann 2001). Thus, P&M could have strengthened their conclusions, if they had taken into account potential gender preferences of one-child-parents as well. See also the reviews by Marleau and Maheu (1998) and Marleau and Saucier (2002) on this issue.

[Figure 1 about here]

## THIRD-BIRTH RISKS OF SWEDISH WOMEN BY SEX OF PREVIOUS CHILDREN

Consistent with earlier research on Sweden (see above), but in contrast to expectations that one could derive from P&M, we find that mothers of two same-sex children are significantly more likely to continue childbearing than those who have a boy and a girl as their first two children (see *Figure 2*). The pattern itself as well as the magnitude of the excess birth risk due to same-sex previous children (about 25 percent) remains fairly constant across the four decades under study.<sup>3</sup> Thus, societal changes during this period obviously left women's gender preferences (as far as they are manifested in differential parity progression probabilities) unaffected.

[Figure 2 about here]

## CONCLUSION

Our results not only show that (i) parity matters when parental gender preferences are studied, but that (ii) even in the fairly gender equal Swedish society, a clear preference for one child of each sex has continued to exist until today. After all, P&M still find a statistically significant influence of the sex of previous children on third births in the US, too. Hank and Kohler (2000; forthcoming) conclude from their research that the origin of the observed European patterns should be located in the cultural domain. The line of argumentation suggested by P&M, which points to the role of the societal gender

---

<sup>3</sup> From the mid-1980s, a modest divergence in the effect of 'two girls' and 'two boys' on third births can be observed, which indicates a slightly higher childbearing risk of women with two boys. This does not change the general picture, though, and is negligible compared to the difference between 'same sex' and 'mixed sex composition'.

system, clearly fits into such a cultural approach. However, as our comparison with the Swedish case shows, the (changing) perception of women's role in society is far from being a comprehensive explanation of (changing) patterns of sex preferences for children in industrialized countries. Thus, further insights into the probably very context-specific meaning of this 'black box' – including such from other social science disciplines (e.g. psychology; cf. Hammer and McFerran [1988]) – are highly desirable and necessary.

## REFERENCES

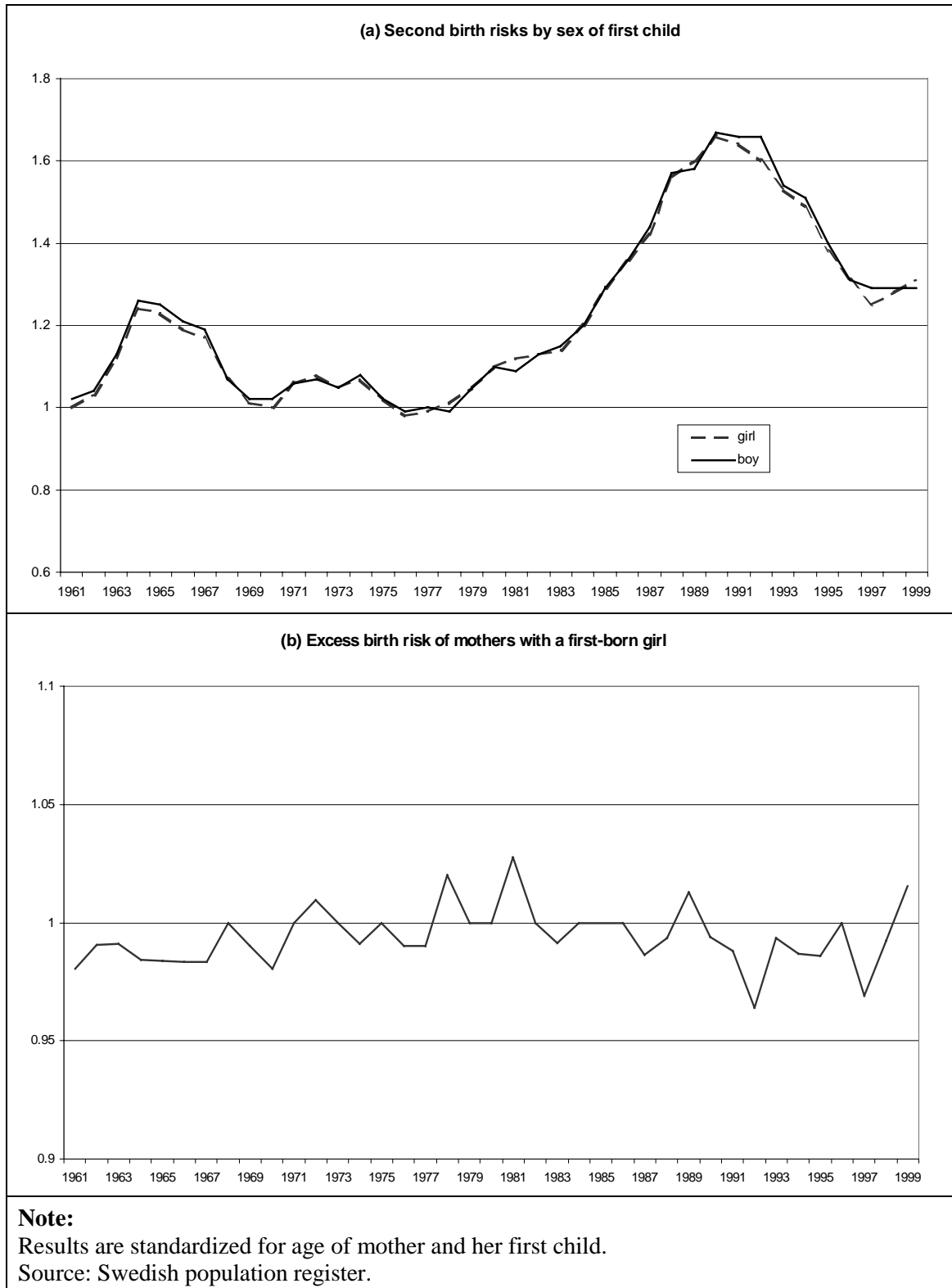
- Andersson, Gunnar. 1999. "Childbearing trends in Sweden, 1961 – 1997." *European Journal of Population* 15: 1-24.
- and Gebremariam Woldemicael. 2001. "Sex composition of children as a determinant of marriage disruption and marriage formation: Evidence from Swedish register data." *Journal of Population Research* 18: 143-153.
- Bergqvist, Christina (Ed.-in-Chief). 1999. *Equal Democracies? Gender and Politics in the Nordic Countries*. Oslo: Scandinavian University Press.
- Brockmann, Hilke. 2001. "Girls preferred? Changing patterns of sex preferences in the two German states." *European Sociological Review* 17: 189-202.
- Hammer, M. and J. McFerran. 1988. "Preference for sex of child: a research update." *Individual Psychology* 44: 481-491.
- Hank, Karsten and Hans-Peter Kohler. 2000. "Gender preferences for children in Europe: Empirical results from 17 FFS countries." *Demographic Research* [Online] 2, available at <http://www.demographic-research.org/Volumes/Vol2/1>.
- and ----- . Forthcoming. "Gender preferences for children revisited: new evidence from Germany." *Population*. (Working paper version available at <http://www.demogr.mpg.de/papers/working/wp-2002-017.pdf>.)
- Jacobsen, Rune, Henrik Møller, and Gerda Engholm. 1999. "Fertility rates in Denmark in relation to the sexes of preceding children in the family." *Human Reproduction* 14: 1127-1130.
- Marleau, Jacques D. and Martine Maheu. 1998. "Un garçon ou une fille? Le choix des femmes et des hommes à l'égard d'un seul enfant." *Population* 53: 1033-1042.

- and Jean-François Saucier. 2002. "Preference for a first-born boy in western societies." *Journal of Biosocial Science* 34: 13-27.
- Morgan, S. Philip, Diane N. Lye, and Gretchen A. Condran. 1988. "Sons, daughters, and the risk of marital disruption." *American Journal of Sociology* 94: 110-129.
- and Michael S. Pollard. 2002. "Do parents of girls really have a higher risk of divorce?" Paper presented at the 2002 Annual Meeting of the Population Association of America, Atlanta.
- Pollard, Michael S. and S. Philip Morgan. 2002. "Emerging parental gender indifference? Sex composition of children and the third birth." *American Sociological Review* 67: 600-613.
- Schullström, Yvonne. 1996. "Garçon ou fille? Les préférences pour le sexe des enfants dans les générations suédoises 1946-1975." *Population* 51: 1243-1245.
- Sloane, Douglas M. and Che-Fu Lee. 1983. "Sex of previous children and intentions for further births in the United States, 1965-1976." *Demography* 20: 353-367.
- Yamaguchi, Kazuo and Linda R. Ferguson. 1995. "The stopping and spacing of childbirths and their birth-history predictors: rational-choice theory and event-history analysis." *American Sociological Review* 60: 272-298.

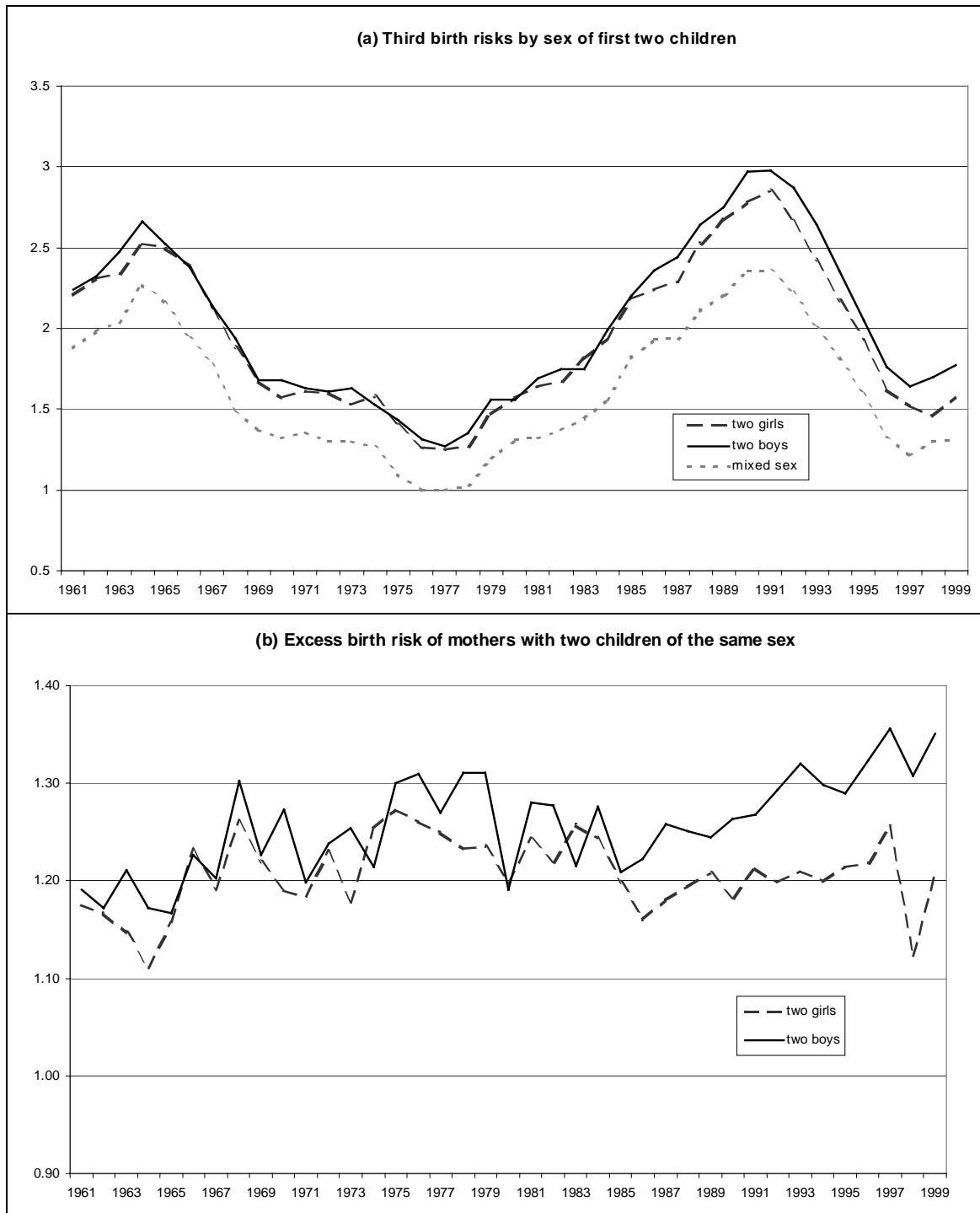


## FIGURES

**Figure 1:** Second-birth risks of Swedish women by sex of the first child, 1961 to 1999



**Figure 2:** Third-birth risks of Swedish women by sex of previous children, 1961 to 1999



**Note:**  
 Results are standardized for age of mother and her second child.  
 Source: Swedish population register.