I want to start by thanking Mikko and the organizers for the invitation and for holding this symposium. I also want to thank everybody in the audience for being here with us. I was given the task of paying tribute to Jan's contributions to social demography and his work in the social sciences. This presentation overlaps somewhat contentwise and also chronologically with the contributions that Niels Keiding just talked about. The first picture of my slides shows a view of Stockholm, where Jan lived about a third of his life.

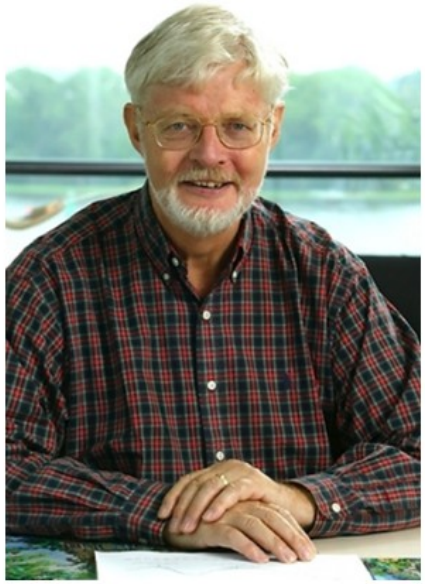
Jan Hoem (1939-2017)
Demography as a Social Science

Gunnar Andersson, Stockholm University Demography Unit

Stockholm University
Demography Unit

I then move on to the next picture, which was taken in his office on the third floor of the very building where we are now; and as you can see Jan looks very happy here. As Jim (Vaupel) already said, this was indeed a golden age of the institute, and Jan liked working here a lot, with all the new developments, positive energy, and all the processes that were going on in this building and in Rostock.

Jan M. Hoem (1939-2017)



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I now take off from where Niels stopped, with Jan's academic career in the field of statistics. Jan received his PhD in mathematical statistics at Oslo University and produced this first early publication in the Blätter der deutschen Gesellschaft für Versicherungsmathematik; this paper is considered a very influential publication in the field of actuarial sciences. After earning his doctorate, he worked a while for the University of Oslo and for Statistics Norway before moving on to Copenhagen to pursue his career in the field of actuarial mathematics together with Niels Keiding and all the other colleagues that we have just heard about. He remained at the University of Copenhagen between 1974 and 1981 – seven years altogether – in a very vivid environment with a strong focus on mathematics and methods development.

Jan M. Hoem: early career in statistics

1969: D. Phil. in mathematical statistics, Oslo University

Hoem (1969): Markov chain models in life insurance.
Blätter, Deutsh. Ges. für Versich.mat. 9(2): 91-107

Statistics Norway (1970-74)

Professor of Actuarial Mathematics, Köbenhavn University (1974-1981)

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Then, in 1981, he got a call from one of the research councils in Sweden, which offered him a professorship in demography, as the research council wanted to promote demography in Sweden. The council asked him whether he was willing to come to Sweden. He, a Norwegian, was married to a Swede, and was raising two small children in Copenhagen. The spouses now wondered whether they really should let their children grow up as Danish speakers. They thought maybe not, and decided to move on to Sweden. He could choose for himself where he wanted to have his professorship, and decided on Stockholm University, which, as I used to say, is one of the “leading universities in central Sweden.” He was appointed professor of demometry, and as I know that many people wonder what demometry is, we can refer to it as demography with a very specific statistical metric touch. He first took up his professorship in the department of statistics in Stockholm, which was very natural because of his background in statistics. He tried out things there for awhile, but apparently the working environment in that department was not entirely convincing. So, after two years, he looked around to see if there was some better environment, and decided to team up with the sociology department, where he moved in 1983. There he established the Stockholm University Demography Unit, SUDA. SUDA was then an independent unit in the sociology department, and was granted a lot of freedom. This relocation also stimulated a change in research direction from very statistical and methods-oriented demography toward the social and applied demography that has ever since been the profile of the demography unit.

Jan M. Hoem at SUDA

1981: Recruited to Sweden and Stockholm as Professor in *Demometry*

1981: Dept. of Statistics at Stockholm University

1983: Founder of the Stockholm University Demography Unit (SUDA), affiliated to the Department of Sociology

Development towards more of applied demography, with focus on fertility and family dynamics

Stockholm University
Demography Unit

There he developed many of the structures that are still in existence today, like the Stockholm Research Reports in Demography working paper series. Many of these structures declined temporarily when Jan relocated to Rostock, but they are now all up and running again. For example, SUDA once again hosts weekly demography colloquiums, just like in the 1980s and 1990s. Jan also initiated a PhD study program at SUDA with a relatively small group of PhD students, all of whom graduated in the late 1990s or the early 2000s. Perhaps more important, he devoted a lot of work to pioneering the development of event history techniques for analyses of longitudinal demographic data. At the time, there was a lot of international exchange at SUDA, with people from all over Europe visiting to learn about event history techniques and event history modelling. Here I display one publication from 1993 as an example of this activity, in which he describes how modern event history techniques build directly on classical demographic methods in the manner of life table methods and indirect standardization. I think this is a really nice article; it is published in a conference volume from an IUSSP meeting, so perhaps it is not the best outsourcing. But it is a really good methods contribution that links classical and modern demography nicely with each other. SUDA of the 1980s and 1990s was thus a lively but not very large research environment; it had about five faculty members and five PhD students in total.

Jan M. Hoem: Director of SUDA, 1983-1999

Stockholm Research Reports in Demography

Weekly Demography Colloqiums

PhD study program

Development of event-history techniques

- Hoem 1993: Classical demographic methods of analysis and modern event-history techniques

International exchange

Stockholm University
Demography Unit

Jan also devoted a lot of time and energy to developing new infrastructures for research. He was involved in organizing a Swedish fertility survey in 1981, and he organized the Swedish FFS in 1992 together with demographers at Statistics Sweden. This produced new survey data on the many emerging family demographic trends of Sweden. He was also pioneering the development of modern register data for demographic research, again together with demographers at Statistics Sweden. Today, a lot of progress is being made in register-based demographic research, and this field of research has developed very fast in the 21st century, but Jan was a pioneer in developing this infrastructure for research and in applying event history methods to these types of data. This led to a lot of new research on topics that are of interest to researchers outside of Sweden as well. For example, in the 1980s there was a lot of international interest in the practice of cohabitation in Sweden, which is a very common family form in this country. People in other countries were sometimes surprised about the fact that one can live together without being married; many of the new surveys were designed to follow these new demographic developments. The 1980s also witnessed a development that I think may be more interesting: the fertility reversal in Sweden. When Jan established the Demography Unit, fertility was declining across most of Europe, but Sweden and the other Nordic countries had increasing fertility levels. At that time, there was a lot of interest in these quite unexpected developments.

Jan M. Hoem: Director of SUDA, 1983-1999

Development of infrastructures for research
- Swedish FFS
- Swedish register data

Development of demographic research
- Cohabitation and marriage
- Fertility reversals

Stockholm University
Demography Unit

I now show two pieces of work: one on cohabitation and one on fertility developments. First, a publication together with Britta Hoem on union dissolution risks in Sweden. This is a book chapter, and it demonstrates that Jan typically combined in his writings educational instruction in event history techniques with the application of these new methods to demographic topics of general interest. This shows a model on union dissolution risk: it is a stepwise model in which parameters are added step by step; and it is a multiplicative model with categorical covariates, which produces a multiplicative model setup that amounts to an improved form of indirect standardization, with a baseline level of every covariate considered. As usual, the model has a set of fixed covariates, a set of time-varying covariates, and a time factor. We have background factors and factors that are intervening in the life course process under study. Thus, this is one example of a study on a topic of broad family demographic interest, and also an example of the development of a new statistical technique: that of event history techniques.

Hoem and Hoem (1992) on union-dissolution risks

TABLE 3.4. *Relative risks of dissolution of a first union in a sequence of nested multiplicative-intensity models.*

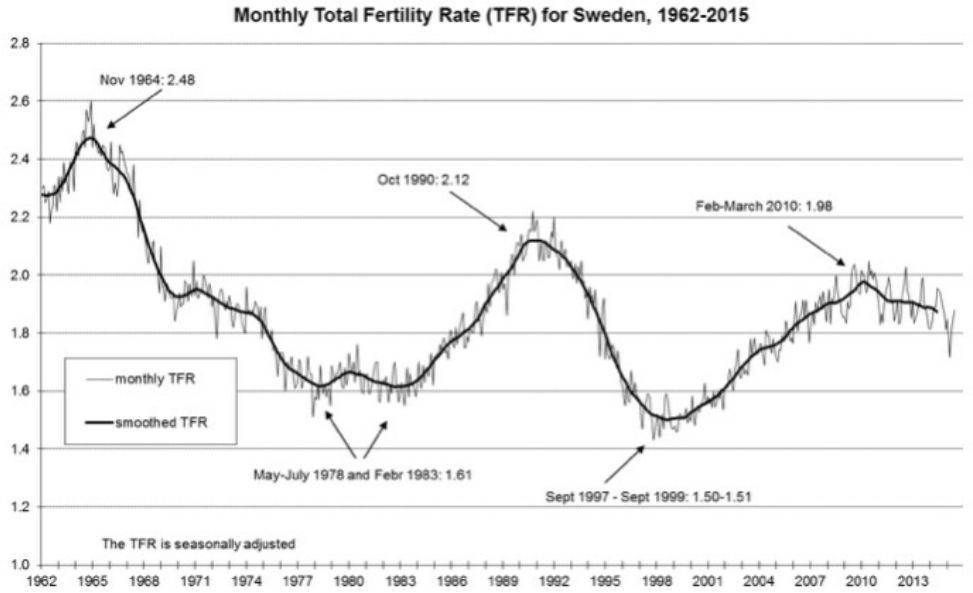
Factor	Levels	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Cohort	1936–45	0.68	0.68	0.69	0.76	0.75	0.73	0.71	0.72	0.73	0.90
	1946–50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1951–5	1.64	1.64	1.62	1.44	1.43	1.43	1.39	1.40	1.41	1.05
Social origin	Up + middle[a]		1.15	1.19	1.32	1.32	1.28	1.32	1.24	1.22	1.33
	Other		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Religiously active?	Yes			0.40	0.44	0.45	0.44	0.45	0.44	0.46	0.57
	No			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Age at start of union	16–19 yrs.				1.80	1.72	1.53	1.53	1.59	1.56	1.51
	20–5				1.00	1.00	1.00	1.00	1.00	1.00	1.00
	26–35				1.03	1.03	1.11	1.09	1.04	1.07	1.96
Months between start of union and first birth	⩽ 7 mths.					1.21	1.04	0.94	0.96	0.97	1.05
	8–35 mths.					1.00	1.00	1.00	1.00	1.00	1.00
	⩾ 36 mths.					0.82	0.92	0.86	0.84	0.85	0.88
First birth planned?	Yes						1.00	1.00	1.00	1.00	1.00
	No						1.93	1.86	1.83	1.76	1.66
No. of children born	1							1.00	1.00	1.00	1.00
	2							0.51	0.51	0.58	0.64
	3							0.65	0.64	0.80	0.87
University-level education	None								1.00	1.00	1.00
	Some								1.28	1.10	1.12
Current work-force status	Full-time job									1.83	1.81
	Part-time job									1.00	1.00
	Housewife									1.12	1.13
	Other									2.72	2.51
	Pregnant									0.33	0.35
	In maternity period									0.65	0.62
Civil status and history	Married, no preceding cohabitation										0.65
	With preceding cohabitation, married since before first birth										1.00
	With preceding cohabitation, married since between first and second birth										1.02
	Currently cohabiting										2.62
−2 *ln* likelihood:		5179.7	5178.7	5165.4	5134.6	5127.6	5099.0	5072.7	5070.3	4996.9	4930.3

Time variable: Mths. since 1st birth (grouped).

[a] Upper- and middle-level white-collar employees.

The other example that I show is on Swedish fertility trends and the fertility reversal that happened in Sweden at that time. This also happens to be an example of the time series smoothing techniques that we heard about previously; here in the manner of monthly total fertility rates. Jan did not really work with crude data such as total fertility rates, but this is just to display the fertility swings in Sweden at that time in terms of monthly total fertility rates and the smoothed version of that time series. Thus, in the 1980s there was a very strong fertility increase in Sweden. The researchers at SUDA were seeking to explain these increases, which were also very much a focus of European policy debate. In the diagram, we can soon see another trend reversal and a decline in Swedish fertility, which happened about the time when Hoem and Hoem published their paper on the rollercoaster fertility of Sweden, and on the factors that might explain fertility developments in developed countries in general. Jan coined the term “bandwagon effects“: it appeared that Swedish people often followed each other in moving in one direction or the other. This produced the many swings in Swedish fertility developments; swings that are also instructive as input when trying to find explanations for fertility patterns and fertility trends. And there are indeed explanations for many of these swings, both in terms of interventions in family policy and the impact of the economic crisis of the 1990s. We have studied in detail the direct effects of these different interventions on Swedish fertility developments. The next slide shows another bandwagon effect.

Sweden’s “roller-coaster fertility”: Hoem and Hoem (1997)

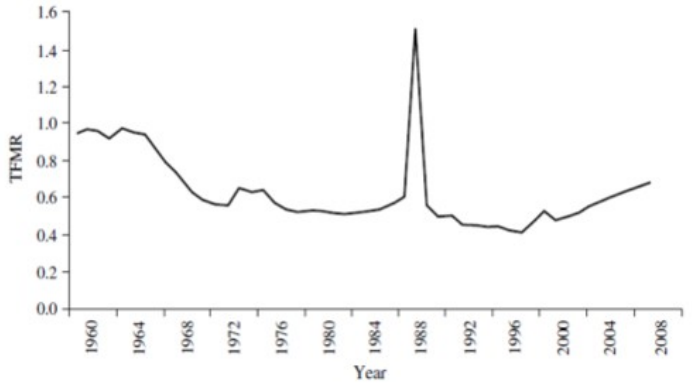


Source: Statistics Sweden and SUDA

This is the marriage boom of 1989. Jan published an article about why a lot of Swedes rushed to marry in the last month of that year, and how this movement was triggered by a reform in pensions for widows in Sweden.

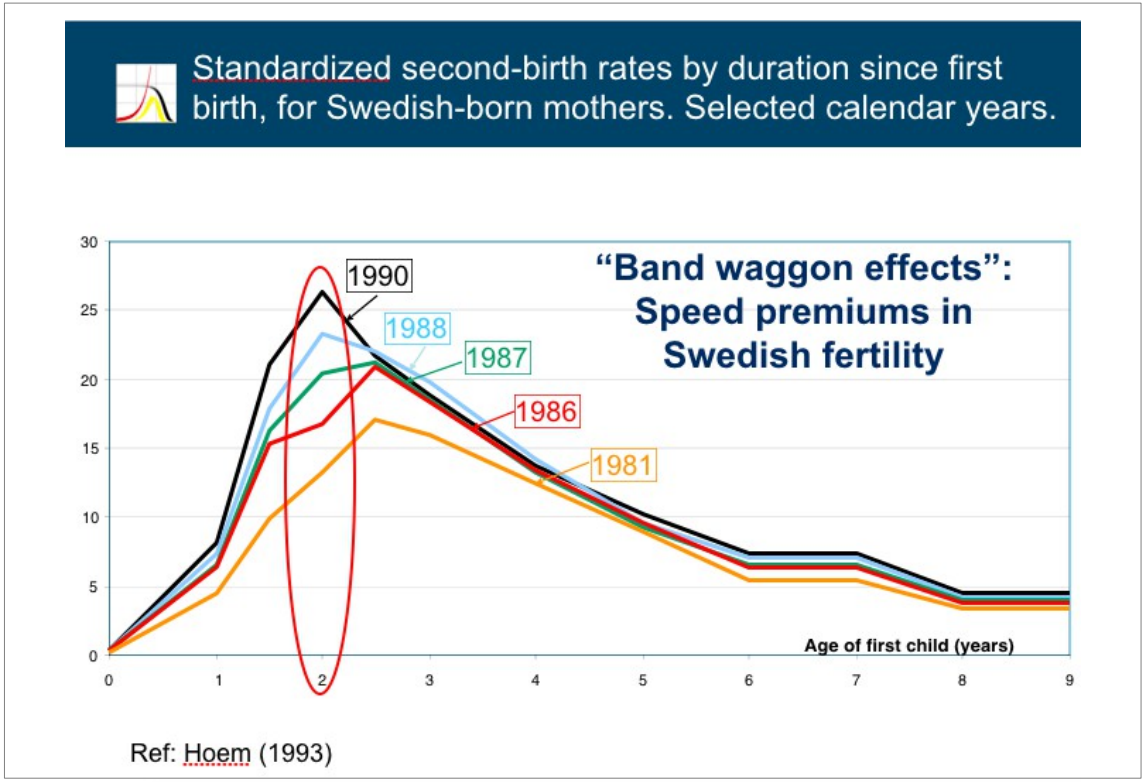
"Band waggon effects": The 1989 Swedish marriage boom

Stockholm University



Ref: Hoem (1991)

Next is another bandwagon effect, which relates to the speed premium of the mid-1980s in Swedish fertility, when new incentives in the parental leave system stimulated a faster tempo of childbearing. Swedish parents reacted very decisively to this policy change, and if you look carefully at the data you can see that it was exactly those who were affected by the policy implementation who adjusted their fertility accordingly.



At this time and later on as well, a lot of research was devoted to studying the fertility and family dynamics of Sweden and the Nordic countries, as this appears to be an interesting context for family demographic research. It also helps that there are very good data for studying these developments, including historical data, modern register data, and data from different surveys. There has been much discussion about the role of the welfare state context and the design of family policy, and how these aspects may be related to changes in fertility and other family-demographic developments in the Nordic countries. There is also the literature on the "second demographic transition," which focused on cohabitation as an emerging family form that first gained prevalence in Sweden and Denmark, and then supposedly spread across Europe. More recently, there has been a renewed focus in the literature on the role of gender and gender change in family demographic developments. The Nordic countries have once again been singled out as forerunners in such changes.

Sweden and the Nordic countries

Stockholm University

Similar societies

Similar demographic data

Forerunners in demographic change?

Welfare state development

Second Demographic Transition

Gender change and gender revolution

So there were still good data and nice topics to study in Sweden, but the demography unit at Stockholm University was still quite small, and the Swedish system was not entirely open to powerful personalities like that of Jan. In Sweden, you had better not have a profile that is too high, and I think that Jan sometimes felt a bit like a big fish in a pond that was too small.

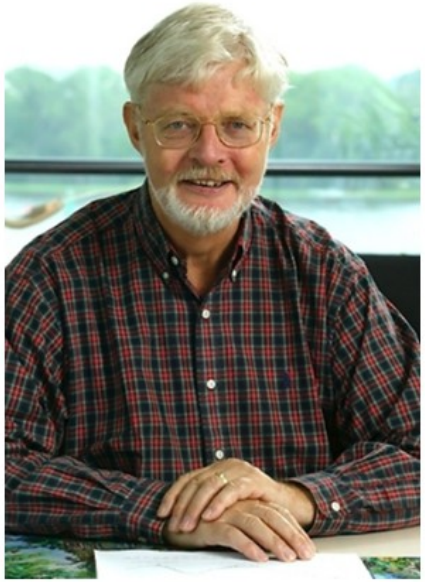
Jan Hoem at SUDA: Big fish in a small pond?

Stockholm University
Demography Unit

Målning av Oscar Wergeland / Foto: Wikimedia Commons

So when he got the offer to move on in his career to serve as director of the Max Planck Institute, he also got the opportunity to embrace a much more rewarding environment in terms of resources and infrastructure for research. This is of course a big institute, and in most countries outside of Denmark and Sweden it is not a problem to have a strong personality – if you use it to do something good. Here he could really spend his energy very fruitfully on developing new resources for research and new demographic research. And he could still continue to pursue Nordic-related research topics and to follow Nordic family-demographic developments.

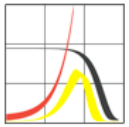
Jan M. Hoem at the MPIDR, 1999-2007



Stockholm University
Demography Unit

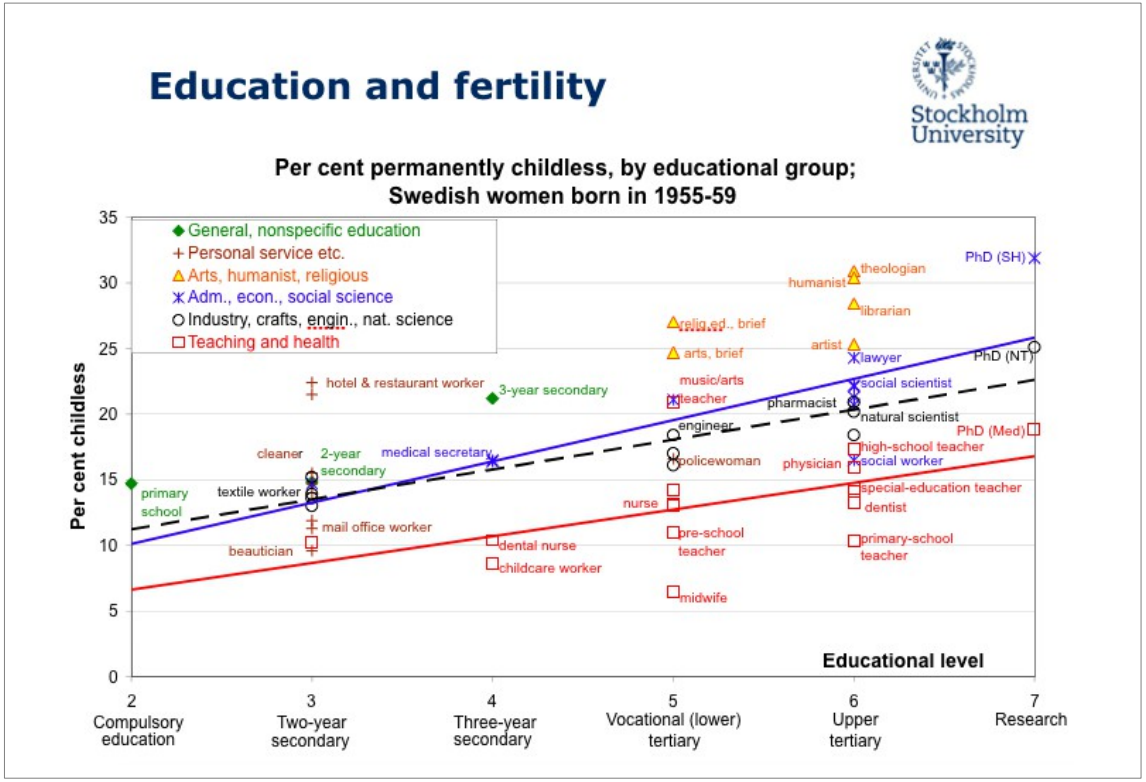
This slide is from a presentation he gave in 2003 in Budapest on the question: “Is the roller coaster still in motion?” And the answer was, of course, “Yes, it’s still very much in motion“ - and it still is today.

Swedish fertility: Is the roller-coaster still in motion?



Gunnar Andersson and Jan M. Hoem (2003)
Max Planck Institute for Demographic Research, Rostock, Germany

Next is another example of research on Sweden that he pursued while in Rostock, a study in which he looked at education and fertility, education, and childlessness. This became a rather influential study because it changed the focus from educational level only, as is standard in most social science and demographic studies, to also include an individual's educational enrollment and educational orientation, or the type of education. He had already initiated this line of research in Sweden in collaboration with his wife Britta Hoem when she was still alive. It was later continued in Rostock together with me and Gerda Neyer. This slide shows a diagram of different types of education, with different educational levels displayed on the x axes, and different colors for different types of education. One of the findings is that people who are educated to work in caring professions, like teaching and health care, have much lower levels of childlessness and higher levels of fertility than others. There are also a few educational groups that have relatively high levels of childlessness, like theologians – though this group is very small in Sweden. And then there is this particular group, the librarians, that he was always hung up on and thought was a very funny category. He often referred to some stories his son had told about the librarians in his school. Every time he was preparing a presentation, Gerda and I tried to tell him not to mention the librarians – but of course he always mentioned those librarians. I still think this is a curious group, and I have continued to follow the marriage and divorce behavior of these librarians. They appear to behave a bit like the people who were living in East Germany after the fall of the wall: all the demographic parameters are frozen. They don't have children, they don't marry, and if they marry they don't even divorce. So, this is a quite special group indeed.



But otherwise Jan's main contribution while working here at the Max Planck Institute was not his work on the Nordic countries, but his focus on developing European demography and his Laboratory for Contemporary European Fertility and Family Dynamics. This was primarily done by recruiting people from different countries in Europe, and also by recruiting people from different scientific disciplines. He was very open to input from different fields of demography, including anthropological, sociological, economic, and statistical approaches to demographic research. The bringing together of researchers from different disciplines and different countries helped stimulate them to think outside of their usual boxes. And this really helped stimulate the field of family demographic research in Europe to become as strong as it is today. I would say European family demography has become much more vibrant than the corresponding American research, where researchers have to rely on one context only, and there is not as much consideration of the role of context in demographic outcomes.

Jan M. Hoem at the MPIDR, 1999-2007

Director and Head of the Division on Contemporary European Fertility and Family Dynamics

Europe as Research Laboratory in Family Demography

MPIDR as a unique cross-national and inter-disciplinary research environment

Stockholm University
Demography Unit

Jan was also very engaged here at the MPI in contributing to education and the development of new infrastructures for demographic research. He was offering courses on event-history techniques at the IMPRSD school: the MP301 on basic event-history techniques and the MP304 on more advanced techniques. With these courses, he helped train entirely new generations of European demographers, who are now active in demographic research all across Europe. He also spent a lot of time and effort developing the initial steps of the European Generations and Gender Survey program. When I was myself newly recruited here at the MPI in 2000, all of the staff in Jan's lab were eagerly working on developing the tools for the Generations and Gender Survey. Jan also helped implement the survey program by supporting the fielding of surveys in different countries in Eastern Europe. After these surveys had been conducted, he continued working with a number of collaborators to pursue empirical research on family demographic processes in Central and Eastern Europe.

Jan M. Hoem at the MPIDR, 1999-2007

Development and teaching event-history techniques

- IMPRSD and MP301/304

Development of infrastructures for research

- Gender and Generations Programme
- Nordic register data

Development of Demographic Research

Stockholm University
Demography Unit

In 2007, Jan retired and became emeritus director of the MPIDR. In 2009, he moved back to Stockholm to serve as emeritus professor at the demography unit at Stockholm University. He regularly went into the office and participated in the daily work of the demography unit until he gradually became less mobile, and was seen in the office less often. He increasingly stayed home when he could no longer walk at normal speed. This picture shows the building where he spent several of the last years of his life: it is the MPG of Stockholm – and this time MPG does not stand for the Max-Planck-Gesellschaft, but for the Maria Prästgårds Gasse, which is the address in Stockholm where he was living. The picture comes from the home page of the housing association where I also happen to have my own apartment. It also shows the little outdoor bench where Jan might be sitting in the afternoon after coming back from a neighborhood tour with his rollator.

Jan M. Hoem as emeritus, 2007-2017

Emeritus at MPIDR (2007) and at SUDA (2009)

Wohnsitz: MPG in Stockholm

Stockholm University

Demography Unit

In the end, he had to move to a nearby care home at Södermalm. At that time, his body had failed him and he could no longer walk, but he was still mentally on top of things, with a psyche that was still very strong. I met him just a few weeks before he passed away. At that meeting I was happy to hear him say that he was indeed very pleased with his achievements in demography in Europe and the demography unit in Stockholm, and with how it had all developed. Normally he would not admit things like that, but this time he did so, and I was happy to hear it.

Jan M. Hoem as emeritus, 2007-2017

Emeritus at MPIDR and at SUDA

Pictured has been removed.

Stockholm University
Demography Unit

Photo: Gerda Neyer

Just a few months before passing away, he also received notes about his very last publication appearing in print. This was on a very suitable topic, as it was a piece about anticipatory analysis and the dangers of such analysis. Over his entire career, he had paid a lot of attention to that topic, as people who work with longitudinal data over and over seem to fall into the trap of doing some version of anticipatory analysis. Jan was very keen on putting a stop to any manifestations of anticipatory analyses. So I think it was very suitable that his last written statement was a publication on the matter in Populations Studies, and that he spent a few of his last months doing Population Studies-style British language editing on a topic that was so dear to him. And I think it makes sense for me to conclude with the message of his final testament: that you should never do any anticipatory analyses.

Jan M. Hoem as emeritus, 2007-2017

Final publication on anticipatory analysis:

Hoem and Nedoluzkho (2016):
The dangers of using 'negative durations' to estimate pre- and post-migration fertility. *Population Studies* 70(3): 359-363

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