



## Research Report

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The Unfolding Story of the  
Second Demographic Transition

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# **The Unfolding Story of the Second Demographic Transition**

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**ABSTRACT**

This paper presents a narrative of the unfolding of the Second Demographic Transition (SDT) since the theory was first formulated in 1986. The first part recapitulates the foundations of the theory, and documents the spread of the SDT to the point that it now covers most European populations. Also for Europe, we focus on the relationship between the SDT and current period fertility levels. It is shown that the positive relationship between these two is not a violation of the SDT-theory, but the outcome of a “split correlation” with different sub-narratives concerning fertility postponement and recuperation respectively for two parts of Europe.

The second part of the paper addresses the issue of whether the SDT has spread or is currently doing so in industrialized Asian countries. Evidence gathered for Japan, South Korea, Hong Kong, Singapore and Taiwan is being presented. That evidence pertains to both the macro-level (national trends in postponement of marriage and parenthood, rise of cohabitation) and the micro-level (connections between individual values orientations and postponement of parenthood). Strong similarities are found with SDT-patterns in Southern Europe, except for the fact that parenthood is still very rare among Asian cohabiting partners.

## INTRODUCTION

The first demographic transition (FDT) refers to the original declines in fertility and mortality, as witnessed in western countries already from the 18<sup>th</sup> and 19<sup>th</sup> Centuries onward, and during the second half of the 20<sup>th</sup> Century in the rest of the world. At present, there are barely a dozen countries left without a beginning of a fertility decline brought by the manifest use of contraception. In the West, the control of fertility within wedlock occurred in tandem with a reduction in final celibacy and a lowering of ages at marriage, signaling a major departure from its old Malthusian marriage system. In the rest of the world, early marriage for women – often the result of arrangements between families or lineages – gave way to much later marriage, partly because of more individual partner choice and partly as a response to economic factors. But on the whole, William Goode's prediction of 1963 forecasting a rise in non-western ages at marriage, has largely been borne out by the record of the last 40 years. This increase in ages at marriage has furthermore been a major component in the overall fertility decline in many such countries.

But even before the FDT started spreading from the West and Japan to the LDCs, western populations were initiating a move that would take them way beyond what classic “demographic transition theory” had forecasted. The fertility decline did not stop in the close vicinity of two children on average, and western marriage would not stay early or attract the vast majority of men and women. The end product does not seem to be a balanced stationary population with zero population growth and little or no need for immigrants. The “second demographic transition” (SDT) brings sustained sub-replacement fertility, a multitude of living arrangements other than marriage, the disconnection between marriage and procreation, and no stationary population. Instead, western populations face declining sizes, and if it were not for immigration, that decline would have started already in many European countries. In addition, extra gains in longevity at older ages in tandem with sustained sub-replacement fertility will produce a major additional ageing effect as well. This ageing cannot be fully compensated by “replacement migration”. Instead, multi-ethnic societies come into existence.

The first signs of the SDT emerge already in the 1950s: divorce rates were rising, especially in the US and Scandinavia, and the departure from a life-long commitment was justified by the logic that a “good divorce is better than a bad marriage”. Later on and from the second half of the 1960s onward, also fertility started falling from its overall “baby boom” high. Moreover, the trend with respect to ages at first marriage was reversed again, and proportions single started rising. Soon thereafter it became evident that premarital cohabitation was on the rise and that divorce and widowhood were followed less by remarriage and more by post-marital cohabitation. By the 1980s even procreation within cohabiting unions had spread from Scandinavia to the rest of Western Europe. Both France and the UK now have more than 40 percent of all births occurring out of wedlock. In 1960 both had 6 percent.

The notion of a second demographic transition, introduced in 1986 by Dick van de Kaa and myself in a short article in the Dutch sociology journal “Mens en Maatschappij”, has been criticized from different angles. First, the SDT would merely be the continuation of the one and only transition (e.g. Cliquet, 1992). Second, according to David Coleman (2003), it would not be a “second transition”, but merely a “secondary feature”. The SDT would, still according to Coleman, not even be demographic in nature, but only a “partial analysis of life style preferences”. Third, a more common argument, particularly in the 1990s, has been that the SDT

is an arch-typical Western European (+ Canadian, Australian) feature which would not spread to the US nor to Southern, Central and Eastern Europe. Instead, the demographic changes in the latter parts of Europe could be accounted for by the economic crisis associated with the transition from Communist to market economies, without involving the operation of a cultural shift at all. In the US, solid Christian values would stem the tide and strengthen American “exceptionalism” as for instance exhibited by the absence of sub-replacement fertility. Fifth, it was suggested that the SDT overemphasized the link between the transformation in family relationships (especially cohabitation) and the prevalence of sub-replacement fertility. Along the same path, the SDT theory could not account for the great variety of levels of fertility from barely below replacement to “lowest low.” And finally, questions inevitably arose about the universality of the SDT: could its features spread further to Asia or other continents as societies grow richer and initiate a Maslowian preference drift? Or is the SDT merely a western idiosyncrasy and bound to remain only that?

These six questions set the agenda for the present paper.

### **Is the SDT Merely the Continuation of the FDT?**

The idea of the *distinctness* of the SDT stems directly from Philippe Ariès’s analysis of the history of childhood (1962) and, as Dick van de Kaa and I have repeatedly pointed out, from his 1980 Bad Homburg paper on the two successive and distinct motivations for parenthood. During the FDT, the decline in fertility was “unleashed by an enormous sentimental and financial investment in the child” (i.e., the “king child era” to use Ariès’s term), whereas the motivation during the SDT is adult self-realization within the role or life style as a parent or more complete and fulfilled adult. This major shift is also propped up by the innovation of hormonal and other forms of highly efficient contraception. During the FDT the issue was to adopt contraception in order to avoid pregnancies; during the SDT the basic decision is to stop contraception in order to start a pregnancy.

The other “root” of the SDT-theory was connected to a reaction of van de Kaa and myself toward the cyclical fertility theory, as formulated by Richard Easterlin (1973). In this theory, small cohorts would have better employment opportunities and hence earlier marriage and higher fertility, whereas large cohorts would have the opposite life chances and inversed demographic responses. The theory accounts very nicely for the marriage and baby boom of the 1960s, and also for the subsequent “baby bust” of the 1970s. But the theory equally predicts further cycles produced by the earlier ones, and hence expects a return of fertility to above replacement levels when smaller cohorts reach the reproductive span. By the middle of the 1980s we had become convinced that sub-replacement fertility was not only going to last much longer, but could even become an “intrinsic” feature of a new demographic regime. Exits the model of an ultimate stationary population with a long-term population equilibrium, and exits the improved version of it with cyclical fertility swings around replacement fertility.

But there was more behind the idea of the SDT than just these two considerations. Further in the background was the concept of a Maslowian preference drift. Stated succinctly, A. Maslow (and others before him) noticed that greater economic development produced a shift in concerns about material needs (subsistence, shelter, physical and economic security) to non-material needs (freedom of expression, participation and emancipation, self-realization and autonomy, recognition). With such a shift in needs, also a shift in the values structure would occur, with

tolerance for diversity and respect for individual choices gradually taking over as prime values from solidarity and social group adherence and cohesion. With this background in mind, the FDT is considered as anchored mainly in the phase of the realization of the basic material needs, whereas the SDT is the expression of the development of the higher order, non-material needs and of expressive values.

Also note that the explicit inclusion of the Maslowian drift sets the SDT-theory apart from both the neo-classic economic interpretation and any neo-Marxist or purely structural sociology and history. The latter see demographic change purely as a response to changes in material circumstance and either fail to incorporate cultural shifts altogether or fail to specify universal mechanisms that link material to non-material driving forces. At this juncture one will notice the close resemblance of the SDT-theory to the one developed by Ron Inglehart in the field of political science (e.g. Inglehart 1970, 1997)

Having pointed out the intellectual origins of the SDT, we shall now turn to a more systematic treatment of the contrasts between the FDT and the SDT. Table 1 gives a summary of the points to be discussed.

**Table 1:** Overview of demographic and societal characteristics respectively related to the FDT and SDT in Western Europe

FDT	SDT
<p><b>A. Marriage</b></p> <ul style="list-style-type: none"> <li>• Rise in proportions marrying, declining age at first marriage</li> <li>• Low or reduced cohabitation</li> <li>• Low divorce</li> <li>• High remarriage</li> </ul> <p><b>B. Fertility</b></p> <ul style="list-style-type: none"> <li>• Decline in marital fertility via reductions at older ages, lowering mean ages at first parenthood</li> <li>• Deficient contraception, parity failures</li> <li>• Declining illegitimate fertility</li> <li>• Low definitive childlessness among married couples.</li> </ul> <p><b>C. Societal background</b></p> <ul style="list-style-type: none"> <li>• Preoccupations with basic material needs: income, work conditions, housing, health, schooling, social security. Solidarity prime value</li> </ul>	<ul style="list-style-type: none"> <li>• Fall in proportions married, rise in age at first marriage</li> <li>• Rise in cohabitation (pre- &amp; post-marital)</li> <li>• Rise in divorce, earlier divorce</li> <li>• Decline of remarriage following both divorce and widowhood</li> <li>• Further decline in fertility via postponement, increasing mean age at first parenthood, structural subreplacement fertility</li> <li>• Efficient contraception (exceptions in specific social groups)</li> <li>• Rising extra-marital fertility, parenthood within cohabitation</li> <li>• Rising definitive childlessness in unions</li> <li>• Rise of "higher order" needs: individual autonomy, self-actualisation, expressive work and socialisation values, grass-roots democracy, recognition. Tolerance</li> </ul>

<ul style="list-style-type: none"> <li>• Rising memberships of political, civic and community oriented networks. Strengthening of social cohesion</li> <li>• Strong normative regulation by State and Churches. First secularisation wave, political and social “pillarisation”</li> <li>• Segregated gender roles, familistic policies, “embourgeoisement”, promotion of breadwinner family model.</li> <li>• Ordered life course transitions, prudent marriage and dominance of one single family model.</li> </ul>	<p>prime value.</p> <ul style="list-style-type: none"> <li>• Disengagement from civic and community oriented networks, social capital shifts to expressive and affective types. Weakening of social cohesion.</li> <li>• Retreat of the State, second secularisation wave, sexual revolution, refusal of authority, political “depillarisation”.</li> <li>• Rising symmetry in gender roles, female economic autonomy.</li> <li>• Flexible life course organisation, multiple lifestyles, open future.</li> </ul>
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**Opposite nuptiality regimes**

As already indicated, a first major contrast between the FDT and SDT is the opposite trend in nuptiality. In Western Europe the Malthusian late marriage pattern weakens, mainly as the result of the growth of wage earning labor, and this basic trend toward earlier and more universal marriage continues all the way till the middle of the 1960s. Hence, the lowest mean ages at first marriage since the Renaissance were reached in the middle of the 20<sup>th</sup> Century. Furthermore, the pockets in Western Europe where cohabitation and out of wedlock fertility had remained high during the 19<sup>th</sup> Century were under siege during the first half of the 20<sup>th</sup> Century. Such behavior was not in line with both the religious and the secular views on what constituted a proper family. Extra-marital fertility rates all decline in Europe after 1900.

By contrast, after 1965, ages at marriage rose again and cohort proportions ever-married started declining (Council of Europe, 2004). This resulted not only from the insertion of an interim period of premarital cohabitation, but also from later home leaving and more and longer single living. The very rapid prolongation of education for both sexes since the 1950s and the ensuing change in educational composition of Western populations contributed to this process. But the unfolding of the nuptiality features of the SDT did not solely stop at a rise in ages at marriage and at a mere insertion of an interim “student” period. Post-marital cohabitation too was on the rise, and so was procreation outside wedlock. And in many instances the latter trend is to some extent a “revenge of history”: cohabitation and procreation by non-married couples is now often highest where the custom prevailed longest during the 19<sup>th</sup> and early 20<sup>th</sup> Centuries.

The next contrast between FDT and SDT pertains to divorce and remarriage. The FDT is preoccupied with strengthening marriage and the family, and divorce legislation remains strict. The State offers little opposition to religious doctrine in this respect. Divorce on the basis of mutual consent is rare, but mostly based on proven adultery. The SDT witnesses the end of a long period of low divorce rates and the principle of a unique, life-long legal partnership is questioned. This takes the form of a rational “utility” evaluation of a marriage in terms of the

welfare of each of the adult partners first and children second. This is accompanied by attacking the hypocrisy of the earlier restrictive divorce legislation that fostered concubinage instead. The outcome in Western Europe, US, Canada, Australia and New Zealand was a succession of legal liberalizations in the wake of a singularly rising demographic trend. And, as pointed out in the introduction, the onset of the rise in divorce was probably the very first manifestation of the accentuation of individual autonomy in opposing the moral order prescribed by Church and State. It should be noted, however, that resistance to divorce was stronger in countries or regions with a Catholic background than in those with a Protestant one. This is not so surprising since divorce versus the indissolubility of marriage was one of the key issues that led to the Reformation in the first place.

And last, but not least, FDT and SDT have also opposite patterns of remarriage. During the former, remarriages were essentially involving widows and widowers, whereas remarriage for divorced persons meant a new beginning and the start of a new family: “new children for a new life-long commitment”. In other words, even if divorce occurred, the institution of marriage was not under serious threat, and remarriage propped up fertility as well. Nothing of this is left in the SDT: remarriages among widowed or divorced persons decline in favor of cohabitation or other looser arrangements such as LAT-relationships or close and intimate friendships. This may not only have tax advantages or protect the inheritance rights of ones own children, but it essentially leaves all further options open and safeguards individual autonomy. In other words, also these arrangements are manifestations of the new individual desire to keep an “*open future*” with a minimal loss in social capital.

### **Fertility contrasts**

The SDT is not merely focusing on changing nuptiality and family patterns as David Coleman pretends, but equally concerned with fertility. We would like to recall that it were Philippe Ariès’s piece on two successive *fertility* motivations and Easterlin’s work on a cyclical *fertility* model that started the ball rolling. And even if that were not the case, how can fertility be studied in isolation, i.e. without regard to the fundamental changes in overall patterns of household formation and without the framework of changing preference structures regarding life styles?

During the FDT fertility becomes increasingly confined to marriage, contraception affects mostly fertility at older ages and higher marriage durations, mean ages at first parenthood decline, and among married couples childlessness is low. There are examples of below-replacement fertility during the FDT, but these correspond to exceptional periods of deep economic crises or war only. Sub-replacement fertility is not an intrinsic characteristic of the FDT. Under better conditions, as for instance after World War II, fertility levels are well above replacement level, and this not only holds for period indicators but also for cohort levels. The “baby boom” and the “marriage” boom of the late 50s and early 60s are the last typical features of the FDT (whereas rising divorce in that period signals the start of the SDT). Another salient characteristic of the FDT fertility regime was its reliance on imperfect contraception. Until the 1960s, *coitus interruptus* was largely the method used by the working classes and rhythm by the higher educated or more religious couples. Both methods led to contraceptive failures and unintended pregnancies, and these also kept fertility above replacement level. Particularly such parity failures at higher ages became increasingly undesirable and fuelled the demand for more efficient contraception.



The SDT starts with a multifaceted revolution, and all aspects of it impact on fertility. Firstly, there was a *contraceptive revolution* with the invention of the pill and the re-invention of IUDs. All of these were perfected very rapidly, and particularly hormonal contraception was suited for postponing and spacing purposes. A.J. Coale's 1974 "learning curve" of contraception, which was monotonically increasing with age and which fitted the FDT experience so well, was no longer applicable in the West. After an interim period with increased incidence of "shotgun marriages" (often 1965-75), the use of highly efficient and reliable contraception starts at young ages and permits postponement of child-bearing as a goal in its own right. Secondly, there was also a *sexual revolution*, and it was a forceful reaction to the notions that sex is confined to marriage and mainly for procreation only. The younger generations sought the value of sex for its own sake and accused the generation of their parents of hypocrisy. Ages at first sexual intercourse decline during the SDT. Thirdly, there was the *gender revolution*. Women were no longer going to be subservient to men and husbands, but seize the right to regulate fertility themselves. They did no longer undergo the "fatalities of nature", and this pressing wish for "biological autonomy" was articulated by subsequent quests for the liberalization of induced abortion. Finally, these "three revolutions" fit within the framework of an overall rejection of authority and of a complete overhaul of the normative structure. Parents, educators, churches, army and much of the entire State apparatus end up in the dock. This entire ideational reorientation, if not revolution, occurs during the peak years of economic growth, and shapes all aspects of the SDT.

The overall outcome with respect to the SDT fertility pattern is its marked degree of postponement. Mean ages at first parenthood for women in sexual unions rise quite rapidly and to unprecedented levels in several Western European populations. The net outcome is sub-replacement fertility: without the ethnic component (such as Hispanics and Blacks in the US or Maoris in New Zealand) all OECD countries have sub-replacement fertility. Admittedly, period measures such as the TFR are extra depressed as a result of continued postponing, but even the end of such postponement is not likely to bring period fertility back to 2.05 children. Most cohorts of the world's white (+ Japanese) national populations born after 1960 will not make it to that level (cf. Frejka and Calot, 2001; Lesthaeghe, 2001, Council of Europe, 2004). However, the degree of heterogeneity is substantial and by no means solely the outcome of ethnic composition factors. In the West, Scandinavian, British and French cohorts born in 1960 still come close to replacement fertility, whereas these cohort levels fall below 1.70 in Austria, the whole of Germany and Italy. In Central and Eastern Europe, the cohort of 1960 will still get to two children on average, but not in the Russian Federation, Slovenia and the three Baltic countries (Council of Europe, 2004). Moreover, in Western and Southern European countries with current total period fertility rates below 1.5, the catching up of fertility at the later childbearing ages, i.e. after age 30, has simply remained too weak to offset the postponement effect. The result of sustained sub-replacement fertility is that another, but originally unanticipated trait of the SDT may be in the making: continued reliance on international migration to partially offset the population decline that would otherwise emerge within a few years.

Evidently, we are very far from the ideal FDT outcome of a new stationary population corresponding to high life expectancies, replacement fertility, and little need for immigration. And we are getting further and further removed from the FDT prop of that demographic model, i.e. the dominance of a single form of living arrangement for couples and children (namely marriage). Finally, the linchpin of the FDT system has totally eroded: collective behavior is no longer kept on track by a strong normative structure based on a familistic ideology supported by

both Church and State. Instead, the new regime is governed by the primacy of individual freedom of choice. Or as van de Kaa (2003) has put it, fertility is now merely a “*derivative*”, meaning that it is the outcome of a prolonged “*process of self-reflection and self-confrontation on the part of prospective parents.... Then the pair will weigh a great many issues, direct and opportunity costs included, but their guiding light is self-confrontation: would a conception and having a child be self-fulfilling?*”

### **Underlying societal contrasts**

So far, we have mainly discussed the differences between the FDT and SDT in terms of their demographic contrasts. But both demographic transitions have of course their roots in two distinct historical periods of societal development. Table 1 again contains a summary.

With the exception of the very early fertility decline in France and a few other smaller areas in Europe, much of the FDT is an integral part of a development phase in which economic growth fosters material aspirations and improvements in material living conditions. The preoccupations of the 1860-1960 period were mainly concerned with increasing household real income, improving working and housing conditions, raising standards of health and life expectancy, improving human capital by investing in education, and providing a safety net for all via the gradual construction of a social security system. In Europe, these social goals were shared and promoted by all ideological, religious or political factions (also known as “pillars” since each of them integrates a political party, a cluster of labor unions, news media, and social services into a closely tied organizational network). And in this endeavor solidarity was a central concept. All pillars also had their views on the desirable evolution of the family. For the religious pillars (Catholic, Protestant and later on Christian-democrat) these views were based on the holiness of matrimony in the first place, but their defense of a closely knit conjugal family also stemmed from fears that the industrial society would lead to immorality, social pathology and to atheism. The secular pillars (i.e. Liberal and Socialist) equally saw the family as a first line of defense against the social ills of the 19<sup>th</sup> Century, and as the foundation for their building of a new social order based on humanistic principles. Hence, although for partially different reasons, all pillars considered the family as the cornerstone of society. Both material and moral uplifting would furthermore be served best by a sharp gender-based division of labor within the family: husbands assume their responsibilities as devoted breadwinners, and wives become the caretakers of all quality related matters. For this to be realized, male incomes needed to be high enough so that women could assume the role of housewives. In other words, all pillars, including the Socialist and even Communist ones, contributed to the *embourgeoisement* of the working class through this propagation of the breadwinner – housewife model.

In short, for all social classes there should be a single family model and it should be served by highly ordered life course transitions: no marriage without solid financial basis or prospects, and procreation strictly within wedlock. The Malthusian preconditions of a “prudent” marriage were readapted to the social aspirations of the new industrial society.

The SDT, on the other hand, is founded on the rise of the “higher order needs” as is defined by Maslow (1954). Once the basic material preoccupations, and particularly that of long term financial security, are satisfied via welfare state provisions, more existential and expressive needs become articulated. These are centered on *self-actualization* in formulating goals, *individual autonomy* in choosing means, and *recognition* for their realization. These features

emerge in a variety of domains, and this is why the SDT can be linked to such a wide variety of empirical indicators of ideational change.

In the political sphere such higher order or “post-materialist” (Inglehart, 1970) needs deal, *inter alia*, with the quest for more direct, grassroots democracy, openness of government, rejection of political patronage, decline of life-long loyalty to political or religious pillars (= “depillarization”), and the rise of ecological and other quality rather than quantity oriented issues on the political agenda. The downturn of it all is rising distrust in politics and institutions and growing political anomy that can fuel right wing extremism. The state is no longer viewed in terms of a benign provider, but again more as an Orwellian “big brother”. A corollary thereof is the disengagement from civic, professional and community oriented networks (e.g. Putnam, 2000). It is likely, however, that they were partially substituted by more expressive (fitness clubs, meditation gatherings ...) or more affective (friendships) types of social capital. Work values and socialization values equally display a profound shift in favor of the expressive traits, and above all, away from respect for authority. In the former sphere, one is no longer satisfied with good material conditions (pay, job security, vacations), but more and more expressive traits are being valued (e.g. interesting work, contact with others, work that meets ones abilities, challenging and innovative work, variation in tasks, flexible time use, etc.). Obviously this “anti-Fordist” orientation is initially the result of rising education and the growth of white-collar employment (e.g. Kohn, 1977), but it has now spread to all social classes and types of employment. A strong parallel can be found in the domain of socialization as well (e.g. Alwin, 1989): all elements typical of conformity (obedience, order and neatness, thrift and hard work, traditional gender roles, religious faith) and those linked to social orientations (loyalty, solidarity, consideration for others) have gradually given way to expressive traits that stress personality (being interested in how and why, capability of thinking for oneself, self-presentation, independence and autonomy). Needless to say that the quest for more symmetrical gender relations fits within this overall framework of articulation of higher order needs and expressive social roles.

### **One or two transitions?**

Evidently the higher order needs can only be articulated if the lower order ones are sufficiently met. Similarly the SDT squarely stands on the shoulders of its predecessor, the FDT. But to consider the SDT features as “secondary” as suggested by David Coleman, or as part and parcel of one sole transition, is another matter. My problem with these views is that they fail to realize both the amplitude of the contrast and the importance of the societal implications for the future.

More specifically, the “One transition only”-view fails to recognize that the FDT and SDT are sufficiently differentiated and even antagonistic in terms of most family formation variables (including fertility motivations!). The “unitarian” view furthermore misses the point that FDT and SDT each correspond to two distinct historical phases, have a distinct “*logique sociale*”, and are buttressed by distinct patterns of political organization as well. In short, the “One transition view” simply blurs history.

Last but not least, the demographic implications of the SDT for the future are fundamentally different from the equilibrium implication of the FDT. The SDT expects much rougher seas ahead: (1) more pronounced aging as a result of sub-replacement fertility, and hence more pressure on the welfare state foundations, (2) more reliance on immigration and consequently a

further expansion of multi-ethnicity and multi-cultural traits in societies, (3) less stress on social cohesion (e.g. Surkyn, 2004), and (4) a greater incidence of family instability and concomitant social problems (e.g. poverty among singles or in one-parent households). As K. Kiernan warned: “*the SDT is not kind to all*”.

So far, we have explained why it makes sense to make distinctions and to number the successive historical moves from one system to the next. In the following section we shall address the issue of the geographical diffusion of the SDT to other parts of Europe.

### **Is the SDT Only a Northern and Western European Idiosyncrasy?**

Towards the end of the 1980s, several features of the SDT seemed to stop at the northern slopes of Alps and Pyrenees: the incidence of cohabitation remained very low, and also the rise in extra-marital fertility was either absent or very modest. Instead, younger adults predominantly remained in or stayed attached to their parental homes. Also until 1990, earlier patterns of both marriage and fertility had been maintained in Central and Eastern Europe. Twenty years ago, one could still argue that the SDT would remain a “parochial” idiosyncrasy, limited to Western and Northern Europe. Admittedly, the SDT features had emerged in European populations across the oceans (Canada, Australia, New Zealand and the US), but they failed to cross two other geopolitical divides on the old continent.

#### ***Central and Eastern Europe***

For Central and Eastern Europe, this picture changed completely after the collapse of the Communist regimes in 1989. All SDT features emerged simultaneously: ages at first marriage, which had remained quite young during the preceding era, started increasing, premarital cohabitation rose, and so did proportions extra-marital births. In tandem with later union formation there was also a dramatic postponement of fertility at all ages and parities, leading to a precipitous drop of period indicators. In Central and Eastern Europe, TFRs fell below 1.5 children and even below 1.3. A new term was coined: “*lowest low fertility*” (Kohler et al., 2001). Evidently, period measures can be dramatically depressed when such systematic postponement occurs. However, the degree to which there could be catching up in cohort fertility is still uncertain, and so is the amount of recovery in prospective period TFR-levels. But the outcome seems to be that fertility will stay well below replacement at any rate. In 2002, all former Communist countries still had TFRs below 1.35, and as low as 1.10 (Ukraine). The sole exceptions were Albania, with a TFR probably around 2.0, and Macedonia together with Serbia-Montenegro with levels around 1.75.

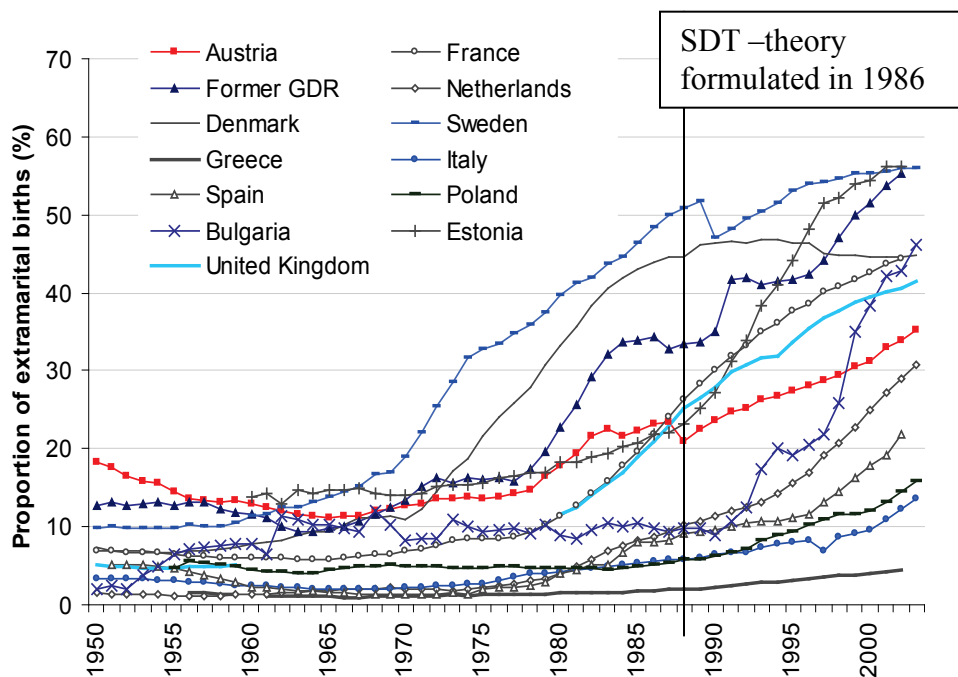
Initially, few observers in the former Communist countries thought that this could be the start of a SDT. Especially the older generation of demographers was highly skeptical about the concept to start with, and remained convinced that these marked marriage and fertility postponements were exclusively the consequence of the economic crisis. Also the UN Economic Commission for Europe initially held this view (2000). And the transition to capitalism was indeed a very painful one: there was the end of guaranteed life-long employment, a reduction in activity rates

for women, a steep drop in the standard of living, a decline in state support for families, a privatization of the housing sector, and in several countries also a highly visible rise in poverty.

But there was also a countercurrent of younger demographers, mainly in Russia (Zakharov and Ivanova, 1996, Zakharov, 1997) and especially the Czech Republic (Zeman et al., 2001, Rabusic, 2001, Sobotka, 2002) who thought that not only the crisis was to be held responsible, but that a SDT could be in the making as well. In fact, after 1997 the economy of several of the former Communist countries was recovering and so were per capita incomes. But there was no return to earlier patterns of marriage, nor an end to fertility postponement. Also the steady rise in extra-marital fertility, which, incidentally, often started *before* 1989, continued and even accelerated (see Figure 1). Of 18 such countries, only 5 still had proportions of extra-marital births below 20% in 2002. At the upper tail of the distribution, 4 had already reached Northern European levels of above 40% (Council of Europe, 2004). Fifteen years earlier, these countries had percentages between 3 and 15 only, and solely the former GDR stood out with 34% extramarital births in 1985. These rapid increases are admittedly also the result of the rise in proportions of first births in the declining total, but they undeniably reflect that procreation outside marriage and in cohabiting unions is rapidly spreading in Central and Eastern Europe as well.

**Figure 1:** Percent of extramarital births, selected countries, 1950-2005

Source: Council of Europe & T. Sobotka



The verdict seems to be that the economic crisis had indeed destabilized the earlier demographic regime, but also that the SDT had been in the making before 1990, and that it is developing further, i.e. also during economic recoveries. In other words, the SDT is emerging in Central and Eastern Europe as a feature that is there to stay, just as in the West. Once more is it emerging as a salient characteristic of capitalist economies and of cultures that recognize the primacy of individual autonomy and that develop the higher order needs.

### **Southern Europe**

As indicated earlier, also the demographic patterns of Southern Europe, from Portugal to Greece, have been considered as an exception to the theory of two successive transitions. In fact, in one crucial respect these countries were not an exception at all, since their marriage and fertility postponements were even more pronounced than in Western and Northern Europe. The postponement started later than in the West, but the intensity was equally striking. Moreover, as was also true for a few Western countries like Austria and to some degree also of Germany (former FRG), cohort fertility patterns in Southern Europe hardly exhibited signs of fertility recuperation after age 30 (Lesthaeghe, 2001; Calot and Frejka, 2001). This means that not only progression to the second or third child are rarer than in Northern and Western Europe, but also that in the younger cohorts larger proportion -- typically in excess of 20% -- will not make it to parenthood at all. All of that together is of course a recipe for prolonged “lowest low” fertility, and not for a temporary dip and swift return to replacement level. Hence, seen from the fertility angle, Southern Europe did follow the overall postponement trends in nuptiality and fertility, and these countries are by no means exceptions to these core SDT-features.

What made the Southern European starting pattern of the SFT so special and so exceptional when compared to their northern neighbors was the absence of home leaving in favor of independent single living or in favor of premarital cohabitation. Furthermore, marriage still remained the predominant precondition for procreation. In other words, a part of the SDT-package was missing. Cohesive explanations for this syndrome have been offered by R. Palomba (1995), G. Micheli (1996, 2000), and G. Dalla Zuanna (2001). The latter author also directly refers to D. Reher’s (1998) distinction between the historically “strong family system” of Southern Europe and the traditionally “weak” one of Western and Northern Europe.

In the “weak system” children can leave the parental household before marriage, and then they fend for themselves in an interim period of celibacy prior to marriage. Historically, they became servants, apprentices, landless and/or seasonal laborers, industrial workers, soldiers, seamen, or clergymen. In contemporary Northern and Western Europe, welfare provisions still stress this earlier independence via sufficient student housing, scholarships, student transportation subsidies, youth unemployment benefits and employment programs, and even guaranteed minimum incomes for single persons older than 18 and no longer living at home. The result is still earlier home leaving for independent living, sharing or cohabiting. Moreover, young adults learn to take on responsibilities and coping strategies, which are all needed later on in life. Even men learn to stand on their own feet, also when typical household tasks are involved. Greater gender symmetry also fosters higher female employment rates, and vice versa. The household standard of living is based on dual incomes, but women can take off spells of time for family reasons (e.g. maternity leave, optional leaves for child-rearing or caring for sick partner or parent, etc). Either or both partners can also opt for part-time employment, and labor market flexibility enhances these options. Furthermore, this system is perfectly compatible with the shift toward expressive values and roles, and it creates less tension between self-fulfillment and parenthood.

In the “strong family” type, familial ties and solidarity – even allegiance to alliances of families as in Southern Italy -- are more persistent throughout life. Men and women only leave the parental family to marry, and sons can even bring their wife into the parental home. Men are looked after by their mother and then immediately thereafter by their wife. The old gender roles persist and men stay away from housework. Furthermore, the family bonds continue to function throughout life, both between siblings (e.g. in business) and between generations. Older people are still taken in by their children. Mediterranean societies furthermore developed their welfare

provisions on the assumption that such strong familial solidarity would continue to hold, and they have very few provisions that allow young adults to become economically more independent. On top of that, housing falls largely within the private sector, and most couples want to become home-owners. The resulting relative high housing costs tend to retard the departure. The overall outcome has been that home leaving is much later than in Western and Northern Europe, and that there is little cohabitation or fertility among unmarried couples. Instead, young adults continue to live in their “guilted nests” provided by caring parents. And for women, motherhood also means dropping out of the labor force, not only because this is to be expected from a “good mother”, but also because child care facilities are scarce and the returning to an earlier job more difficult. Opportunity costs are hence increased as a consequence of the persistence of old role patterns and inflexible labor markets. The ultimate outcome is what Dalla Zuanna calls “a Pyrrhus victory of the strong family system”, because, quite paradoxically, it will disappear for lack of adaptive capacity and lack of children.

But, does history stop here? Will the Mediterranean demographic system maintain this hitherto characteristic lack of alternative household types among younger adults? The presence of such households is not routinely flagged by European registration systems, and hence we have to wait for special surveys (or an occasional census) to monitor changes in household forms. Given that the European Fertility and Family Surveys (FFS) of the early 1990s are outdated by now, and really give the history of the 1970s and 1980s at any rate, we are short of indicators. The major exception is that most European countries still make the distinction between births occurring within marriage and out of wedlock. From this information we cannot infer the respective shares of extra-marital births contributed by single mothers and by cohabiting couples. But, as the record has shown for most continental Western and Northern European countries, the lion’s share has gone to the latter. Hence, extra-marital fertility provides an imperfect, but still very useful early indicator of SDT progression to one of the later phases, i.e. that of procreation within cohabitation.

After a long spell with low levels, also non-marital fertility started a steady upward trend in Southern Europe. Portugal – which historically had a tradition of cohabitation and out-of-wedlock fertility (cf. Livi-Bacci, 1971) in its southern provinces – is the exception. This country had steadily increasing proportions of extra-marital births since the 1970s. And when Portuguese figures are compared to those for Western European countries, then the Portuguese rise precedes that of the corresponding increase in the Netherlands, Belgium, Germany (FRG) and Switzerland. Spain is a more classic example of a late start and from a lower level, but the Spanish curve now runs parallel to Portugal’s, and in 2002, Spain’s extra-marital births share is larger than Switzerland’s. Apparently, the Pyrenees and the “strong family system” were not that formidable an obstacle to the diffusion of the SDT.

There are a few more surprises in Southern Europe. Firstly, there is a very steep and continuing increase in out of wedlock fertility in Malta during the 1990s as the figure jumps from 2 % in 1990 to 15 % in 2002. Secondly, there has been a steady increase in Italian extra-marital fertility as well. It started from very low levels in the 1960s, but the indicator is now equally reaching 15%. Judging from this record, the strong family system in Italy may be just that bit stronger than in Portugal, Spain, or Malta, but it is clearly not completely impermeable to the SDT. In fact, Italy is now catching up with the most “conservative” case in the Western European set, i.e. Switzerland, which has already quite a widespread occurrence of cohabitation, but equally matched to a low level of extra-marital fertility limited to 10 % of all births. And this is further corroborated by results of the latest Italian census: in the 1980s unmarried cohabitation was

restricted to the German speaking district of Alto Adige (also known as Southern Tirol), but in 2000 cohabitation is widespread in many more northern areas, both rural (e.g. in Aosta, Emilia-Romagna) and urban (e.g. Rome, Milan). Thirdly, the percentage of non-marital births has also reached the 10% level in 2000 in the FYR of Macedonia. And finally, the last part of the Mediterranean “strong family belt”, i.e. Greece and Cyprus also have an upward acceleration of the trend, but the levels of extra-marital fertility are still too low to justify any firmer conclusion. But, if Central and Eastern Europe follow suit, and now also the Iberian countries and Malta, one can imagine that there is also a take-off of non-traditional household forms in Italy or even Macedonia. The Eastern Mediterranean then constitutes the last area to be affected. Compared to 10 years ago, history has moved on in the predicted direction in Southern Europe as well.

### **Western and Northern Europe**

To end this section on the European diffusion of the SDT, we would also like to point out that the process is not yet complete in Western and Northern Europe either. As the extra-marital fertility indicator shows, the proportions of births out of wedlock are still increasing in most countries considered on Figure 3, and this includes the ones with the highest incidence of all, namely Iceland, Sweden, Eastern Germany (former GDR), Norway and France. Apparently the figure of 60% of all births being born outside marriage is a possibility for these vanguard countries. Yet, it should also be pointed out that there is a distinctly more conservative version of the Western European SDT in which single living, sharing or cohabitation have become common, but where a marriage is still connected to the transition to parenthood. Then, the parenthood decision often comes first, and the marriage decision follows. In such situations extra-marital fertility is also rising but more slowly and at lower levels. Good examples of this variant are Switzerland, Western Germany (former GFR), Belgium (mainly Flanders) and to some extent also the Netherlands. Ireland, by contrast now seems to make the jump from the latter, more conservative category to the former, more advanced SDT category of countries. In fact, Ireland has already crossed the 30% level, whereas in 1980 it barely had 5% of births out of wedlock.

### **Historical Path Dependency and Growing Heterogeneity in the SDT Patterning**

So far we have documented that the SDT features did not stop at the borders of Northern and Western Europe and that the new pattern survived well beyond the 1990s crisis in former Communist Central and much of Eastern Europe as well. But in the meantime it has become increasingly evident that the mixture of SDT ingredients may vary quite widely depending on context. Substantial within-country and between-country contrasts can be found (e.g. Billari and Kohler, 2004; Neels, 2006; Lesthaeghe and Neidert, 2006; Sobotka, 2008; Lesthaeghe, 2009), and the same holds between educational categories (e.g. Neels, 2006, 2009). Obviously such contextual variations reflect historical path dependency, and these play just as large a role in the unfolding of the SDT as they did in producing leads and lags during the FDT. Hence, the SDT-theory should not be taken as a teleological grand script with a standard scenario. Just the opposite is true: it is a more general narrative that leaves room for many different sub-narratives, each of which to be anchored more directly to case-specific empirical evidence.



***Dissociations between the rise of cohabitation and the postponement of parenthood***

Right from the very beginning of the SDT countries have exhibited striking differences in the timing of the onset of respectively the rise in pre-marital cohabitation and of the postponement of fertility. In Western Europe, for instance, both were timed rather closely, but in Southern Europe there was a major lag of about 20 years, with cohabitation coming in much later.

Spatial dissociations within a single country are equally present. In the USA, both state and county-level characteristics of household formation first split along two dimensions: vulnerability of young households (indicators pertaining to teenage fertility, young lone mothers, grandchildren in household) and an SDT-dimension (Lesthaeghe and Neidert, 2006). The first dimension is a typical American feature associated with low education and poverty (with milder versions found in the UK and Australia as well). But when the analysis of the American SDT-dimension was pushed a step further, two spatial sub-dimensions appeared: the North Atlantic states were most advanced in the postponement of fertility in the age group 20-29 with clear sub-replacement fertility among non-Hispanic whites, whereas the vanguard with respect to cohabitation were the liberal Mountain states (Colorado, Arizona) and the Pacific ones. Furthermore, marriage and fertility postponement was strongly associated with high education levels for both sexes, whereas cohabitation was connected to higher proportions born abroad or out of state. However, at the other end of the distribution, middle and low levels of cohabitation remained closely correlated with earlier fertility schedules in the central childbearing ages and higher non-teenage fertility in the Southern states, the Appalachian ones, the conservative Mountain states (esp. Utah and Idaho), and the Great Plains states. The overall image is that of a first set of states where the SDT has not yet taken off, a second set where both cohabitation and fertility postponement hold the middle ground, and a leading SDT set which splits into two groups depending on whether they are at the vanguard of either postponement of parenthood or of cohabitation.

The Belgian spatial analysis (Neels, 2006; Lesthaeghe, 2009) at the level of arrondissements produced an even clearer picture. The rise of cohabitation and out of wedlock fertility after 1970 simply portrays the spatial continuity of the maps of the marital fertility decline and the rise of contraception during the FDT (1880-1940), and they are an almost perfect correlate of secularization levels from 1860 through 1960. The map of the fertility postponement after 1970, by contrast, bears no resemblance to this long historical secularization dimension, but typically reflects higher education and higher employment levels of women. The latter feature is equally forcefully echoed in the micro-level data analyzed by Neels (2006, 2009) which show that better educated women have been the stronger postponers ever since WW II.

The partial dissociation between the new household forms and fertility postponement in the US and the complete dissociation in the Belgian spatial pattern of the SDT point in the direction of different causes. In both countries cohabitation spreads faster in more secularized areas and bears only a weaker relationship to education levels and female labor force participation.

Postponement of parenthood is more strongly associated to the latter structural factors. Within the framework of Coale's (1973) "Ready, Willing, and Able" paradigm, the limiting factor for the rise in cohabitation seems to be of the "Willingness" type, meaning that it depends more strongly on a moral acceptability and legitimacy rather than on the calculus of advantage. This is understandable since cohabitation initially ran counter to the prevailing moral and legal codes in many countries. The postponement of parenthood, by contrast, is less conditioned by moral

objections but more responsive to material conditions, and hence linked to structural factors associated with the “Readiness” condition.

The strong connection between cohabitation and a set of liberal values not only derives support from spatial analyses such as the ones just cited, but equally from individual level data. That evidence will now be discussed briefly in the next section, but draws on numerous empirical publications (see Lesthaeghe, 2002a, for an overview and citations).

### ***Value orientations and household choices: Micro level evidence***

The initial article on the SDT (Lesthaeghe and van de Kaa, 1986) posited that the new living arrangements and cohabitation in particular were the expressions of secular and anti-authoritarian sentiments of younger cohorts with a more egalitarian world view, and who also put greater emphasis on the expressive values. Equally during the 1980s the correlates of Inglehart’s “post-materialist” orientation were high on the research agenda of the political scientists (Inglehart, 1985, Van Rijsselt, 1989). Both the Eurobarometer surveys in the EU and the three rounds of European Values Studies (EVS) provided data for more detailed empirical research on attitude and value profiles for various social groups, including those based on living arrangements (e.g. Lesthaeghe and Moors, 1995). Particularly the EVS data of the 1999-2000 round proved useful for our purposes since for the first time questions about *ever* experiencing cohabitation spells or divorce were incorporated along with the current household positions. This meant that the large group of currently married respondents could be divided in those with and those without cohabitation or divorce experience. These refinements brought very clear distinctions in values orientations to the surface (see Lesthaeghe and Surkyn, 2002b, 2004).

Also in the US statistical associations between living arrangements and specific value orientations drew attention. Not only was it realized that cohorts were steadily progressing to higher levels of “post-materialism” and secularism, but also that there was a recursive relationship between demographic choices and values orientation. As Thornton and colleagues in Michigan illustrated (1985, 1987, 1992), greater secularism fostered choices in favor of premarital sex and non-traditional household formation patterns, but the latter also reinforced further secularization. In other words, there was a *selection* into various types of behavior based on existing values to start with, and then an *affirmation* or strengthening of these values based on the behavioral choice. Clearly, the statistical associations between value orientations and the various types of households are merely the “*footprints*” of this ongoing life course process of selection followed by affirmation or negation of values. On the basis of successive cross-sections the two directions of causation cannot be disentangled, and clearly panel data with values measurements and transitions in household positions are needed. American social scientist took the lead in organizing panel surveys, and it is mainly on the basis of these that the recursive model of selection/adaptation could be checked (e.g. Waite, Koblin and Witsberger, 1986; Axinn and Thornton, 1993; Barber, 1998; Clarkberg, 2002). More recently, also a few European panels measure various value orientations at successive waves, and they too now lend themselves to disentangling the causal components of the recursive relationship (e.g. Moors, 1997; Jansen and Kalmijn, 2002).

The outcomes of these cross-sectional and panel data can be summarized as follows:

1. Secular, egalitarian, anti-authoritarian orientations, expressive values and values stressing individual autonomy are strong predictors of life courses that include “unconventional” states such as pre-marital cohabitation and parenthood among cohabitators. These effects are net of structural effects linked to education, socio-economic status, employment situation or degree of urbanity.
2. Cohabitants without children tend to exhibit the most non-conformist values profile of all, including greater gender symmetry, less racism, more protest proneness but also greater tolerance for breaches of civil morality;
3. Marriage and parenthood are associated with major readjustments of value orientations in the conventional and conformist direction;
4. Married parents who never cohabited display by far the most conservative attitudes;
5. Any earlier cohabitation experience leaves a more permanent imprint in the non-conformist direction, even after marriage and parenthood had been achieved;
6. And also divorce produces a move away from the stability of conventional opinions held by married parents.

Finally, it should be pointed out that these associations at the micro level are found all over Europe, from Scandinavia to Iberia and from Ireland to Ukraine. *They hold just as well in countries that have progressed very far along the SDT as in those that are recent starters.*

### ***Fertility and the SDT: postponement and recuperation***

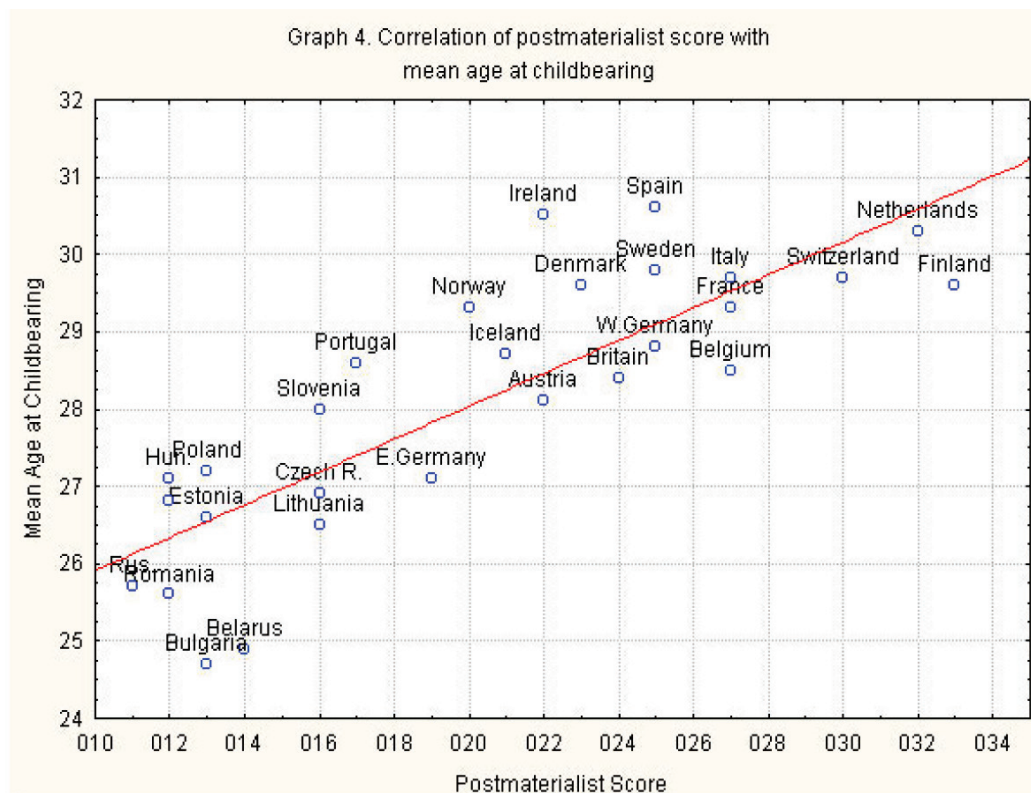
The typical explanation for the fertility decline associated with the SDT is the postponement of parenthood, and the shifting of the entire fertility schedule to older ages. This idea is perfectly reflected in the Bongaarts-Feeney (1998) formula used to upwardly correct the current period total fertility rate (PTFR) for this tempo shift. In this expression, however, the authors have no room for differential subsequent recuperation of postponed births. They use the standard assumption of fixing the current period parity specific TFRs (PTFR<sub>i</sub>) and inflating these by the complement of the annual rate of parity specific postponement observed in the last few years. Reality is a bit more complicated than that. Not only is the rate of postponement variable over time, but the European experience clearly shows that a great deal of heterogeneity exists with respect to the amount of catching up of fertility at later ages. This is most clearly shown in the comparison of cohort fertility profiles, either parity specific or for all parities confined. Such comparisons reveal the existence of cases with very different catching up profiles. At one hand, there are countries where each cohort postpones more than its precursor, but where the ultimate offspring (i.e. the cohort total fertility rate or CTFR) is fairly constant, because of the recuperation at older ages of almost all postponed births. The Netherlands is a typical example of this outcome, but it also holds for the Scandinavian countries, France and Belgium. Also, PTFRs in these countries will bounce back when the tempo shift stops. At the other hand are cases where such recuperation is absent or very modest, and where CTFRs are continuously falling for as long as the postponement trend has not been stopped. Moreover, these CTFRs will remain well below replacement level and hardly bounce back due to such a lack of recuperation. Typical examples of this pattern are the Mediterranean countries, but also the German speaking populations of Western Europe (cf. Lesthaeghe, 2001; Frejka and Sardon, 2004; Sobotka, 2004, 2008). For the former Communist countries, differential recuperation may now be surfacing too. They had their major postponement trend during the 1990s and couples who were then in their early twenties are now old enough to exhibit the presence or absence of such a later age correction. The bottom line here is that initial differences in PTFRs among European populations were indeed

largely due to differential rates of postponement, but that differential recuperation will now increasingly determine the PTFRs during the first two decades of the 21<sup>st</sup> Century (Sowers and Lesthaeghe, 2007). The degree to which this will occur cannot be inferred from a mechanistic formula, but is a matter which needs to be continuously assessed empirically and which ultimately – like so many things in life – will depend on varying historical and current circumstances and policy measures.

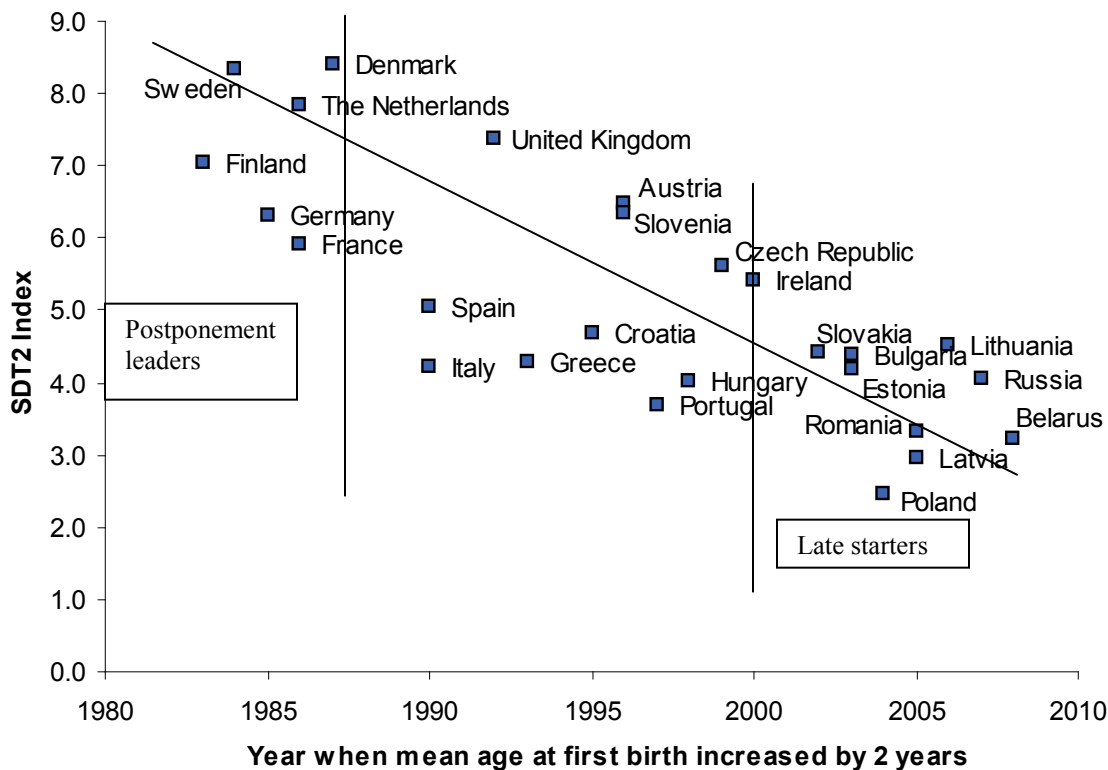
At the time of the original formulation of the SDT-theory, i.e. 1986, the systematic postponement of marriages and first births was already well on its way in western European countries. Both van de Kaa and myself then predicted that the new cultural shifts toward the expressive needs in tandem with increased individual autonomy would further sustain this demographic tempo shift. The outcome then would be “structural” sub-replacement fertility instead of cyclically oscillating fertility around replacement level. At that time, we did not predict the coming of “lowest-low” fertility or PTFRs below 1.3 children, nor were we able to differentiate between strong and weak recuperation. The latter feature would only draw attention more than a decade later (Lesthaeghe and Willems 1999, Lesthaeghe, 2001) and independently from the SDT-theory.

However, also van de Kaa (2002) and later Sobotka (2008) showed that the SDT was indeed a good predictor of postponement, capable of neatly aligning countries along a positive slope: the higher the level of Inglehart Postmaterialism (van de Kaa) or the higher the composite index of SDT-values (Sobotka), the higher the mean age of women at first birth or the earlier the onset of fertility postponement. To elucidate this point, we have reproduced the original graphs of these authors in Figures 2 and 3.

**Figure 2:** Relationship between the mean age at first birth and the Inglehart index of postmaterialism – D.J. van de Kaa, 2002



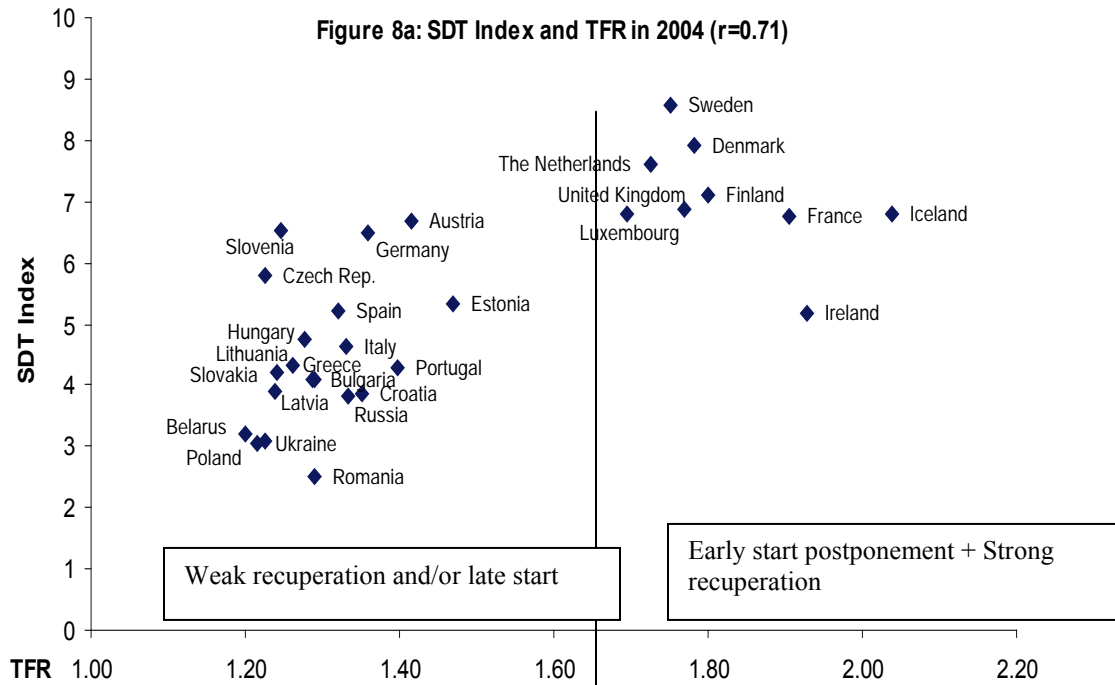
**Figure 3:** Relationship between a composite index of SDT-values and the date of onset of the postponement of first births -- T. Sobotka, 2008



The plot thickens considerably when the same exercise is repeated for the PTFRs. The original SDT-postponement relationship vanishes, and it turns out that a positive correlation emerges when total fertility is connected to the SDT values index, as shown by Sobotka in Figure 4. By 2000 the high SDT-countries had by far the higher period fertility levels in Europe, and some had come very close again to replacement levels. None of them ever fell below a PTFR of 1.50, and by 2007, Belgium, Denmark, Finland, Sweden, Norway, the UK, France and Ireland all had PTFRs in excess of 1.80 (Prioux, 2008). The positive relationship with the SDT values index in Figure 4 is in fact the result of “split correlation” and produced by two distinct essentially neutral scatters. The collection of cases on the right side corresponds to countries with an early start in fertility postponement and a history of good recuperation of fertility foregone at earlier ages. The cases on the left side with much lower PTFRs are either cases with a slightly later postponement start combined with a weak recuperation schedule (German speaking populations and especially Southern European ones) or with a late start of postponement, and inadequate recuperation so far (mainly formerly Communist countries).

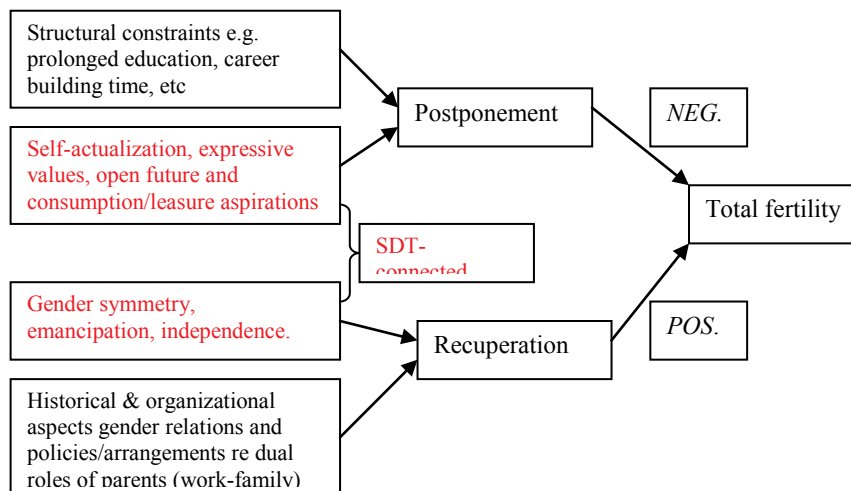
If the SDT-theory wants to be relevant for the 21<sup>st</sup> Century fertility differentials in Europe, it needs to incorporate explanations for differential recuperation as well. And that was lacking so far.

**Figure 4:** Relationship between the composite index of SDT-values and the 2004 Period Total Fertility Rates – T. Sobotka, 2008



With the benefit of hindsight it seems that certain aspects of the SDT have fostered postponement of parenthood and hence tended to lower overall period fertility levels, whereas other SDT aspects have facilitated a more complete recuperation, thereby bringing PTFRs back to higher levels. We shall try to clarify these opposite effects by making use of Figure 5.

**Figure 5:** The double effect of SDT- connected factors on total fertility



On the postponement side we should place social and economic factors associated with prolonged education and longer career building time in deregulated labor markets. However, to these “mechanical” (e.g. prolonged study periods) or structural factors also cultural features can be added such as greater aspirations for self-realization, a greater tendency to keeping an open future, or higher consumption and leisure aspirations. The former are typical structural features of post-industrial societies, whereas the latter are more closely connected to the expressive values orientations. Together these two sets of factors have a negative effect on fertility operating via their postponement effect (top part of Figure 5).

Subsequent recuperation of fertility, on the other hand, may be considerably enhanced by factors that facilitate the combination of work and parenthood for women and men, or that alleviate the opportunity costs of parenthood and family building. A further distinction can be made referring to (i) historical household patterns and gender relations (e.g. the contrast between the “strong” and “weak” family types, existence of neolocal marriage or of three generation co-residence, etc.) and (ii) the type of organization and magnitude of welfare provisions (e.g. children allowances, parenthood leave, work interruptions for family reasons) and other organizational features (e.g. school opening hours and day care provisions). These structural features equally have to be seen in interaction with value orientations connected to self-reliance of young adults (and of men in particular) and to gender symmetry in daily practice (bottom part of Figure 5). The separate impact of each of these factors is not easy to assess, but when taken together substantial differences in fertility recuperation patterns can be created. In fact, the “split correlation” noticed in Figure 4 may in part be due to national contrasts in this respect. Just focusing on western and southern European countries, for instance, Thévenon (2009) notes striking differences in factors that alleviate time pressure on parents of young children. Not surprisingly, all those countries with higher fertility levels due to strong recuperation have better adapted services and much longer opening hours of facilities (*“services de garde”*) for infants and toddlers, for preschool children in kindergarten, and for children in primary school alike. To conclude, the original formulation of the SDT-theory predicted a long period with below-replacement fertility – and apparently correctly so – but it did not specify that any further, nor did the theory predict the current discrepancy between levels close to replacement and levels far below it. The current dichotomy witnessed in Europe is due to differences in the timing of the onset of fertility postponement, but increasingly also the result of differences in the degree of fertility catching up at older ages. The cultural components used in the SDT-theory appear to be operating in opposite directions: some foster postponement and hence lower fertility, but some others are supportive of greater recuperation. The weight of context specific features, both of a historical and organizational nature, is again considerable, and consequently SDT sub-narratives are necessary to catch that diversity.

### **Can the SDT Also Spread to Non-Western Populations?**

At present everyone has come to terms with the fact that the FDT is a worldwide phenomenon. Furthermore, everyone equally realizes that the FDT can take-off at just about any level of economic development, and in strictly rural as well as urban societies. But, will the SDT be equally universal? Or indeed, as David Coleman expects, remain a regional idiosyncrasy? Obviously, if we wish to address this question on a global scale, we can only speculate about the probabilities of such a “universal” diffusion, in the same way that one could only speculate in the 1950s and 1960s about the eventuality of pervasive fertility control emerging in the then developing countries. However, if we are looking for SDT evidence beyond the European

cultural spheres but in countries that are wealthy enough to have undergone some Maslowian drift, we may indeed find suitable testing grounds. Several industrialized and urbanized Asian countries are therefore of direct relevance.

Before considering the detailed evidence, one should be reminded of the fact that the SDT diagnosis requires the presence of several features:

1. Sub-replacement fertility is not enough, but must be linked to postponement;
2. Ages at marriage must rise and reflect a growing prominence of free partner choice and female autonomy;
3. Premarital cohabitation must become more common and more acceptable.
4. Not only evidence at the macro-level must be mustered, but also at the individual level connections between the demographic features and values orientations must exist.

Note, however, that the demographic characteristics of the SDT features are not necessarily occurring simultaneously, but that lags are likely to emerge. Premarital cohabitation and parenthood among cohabitators, for instance, typically constitute lagging features, since they often run counter to existing moral codes (cf. *supra* RWA-model applied to US and Belgium).

### ***Sub-replacement fertility and postponement in Asian Industrialized Countries***

The criterion of a shift toward later parenthood and sub-replacement fertility is the easiest to assess since national demographic statistics provide clear evidence on the course of period and cohort fertility. As far as levels are concerned, Japan, South Korea, Taiwan, Hong Kong and Singapore all have very low PTFRs at present. Hong Kong's PTFR is in the vicinity of 1 child, Singapore's is marginally higher and around 1.1, and Taiwan, South Korea and Japan are in the 1.15- 1.25 range (CIA data base, 2008). In all cases these "lowest-low" fertility levels are indeed the result of vast postponement with very little or no recuperation at later ages of overall fertility. Obviously, there is some recuperation of first births, but this is offset by further declines at higher parities. (see *inter alia* Xia Zhang, 2005; Jones, Straughan and Chan, 2009; Tsuya, 2009; Frejka and Sardon, 2009).

To appreciate the size of the fertility postponement and the weak impact of recuperation in the "lowest-low" East Asian countries, use is made of the trend in cohort cumulated fertility up to age 27, which is illustrative of postponement, and that in cohort cumulated fertility between ages 27 and 40, illustrative of recuperation. All data are provided in Frejka and Sardon, 2009, for 38 low fertility countries. The evolution of cumulated fertility up to age 27 is presented in Figure 6, and that for ages 27 to 40 in Figure 7. In these figures, we have selected three countries with early postponement but good recuperation (France, Netherlands, Sweden), 3 European countries with weak recuperation (Austria, Italy and Spain) and 4 East Asian countries (Japan, Hong Kong, South Korea and Taiwan).



**Figure 6:** Cumulated Cohort Fertility up to Age 27 in Selected Countries

Source: Frejka &amp; Sardon, 2009, Appendix 3

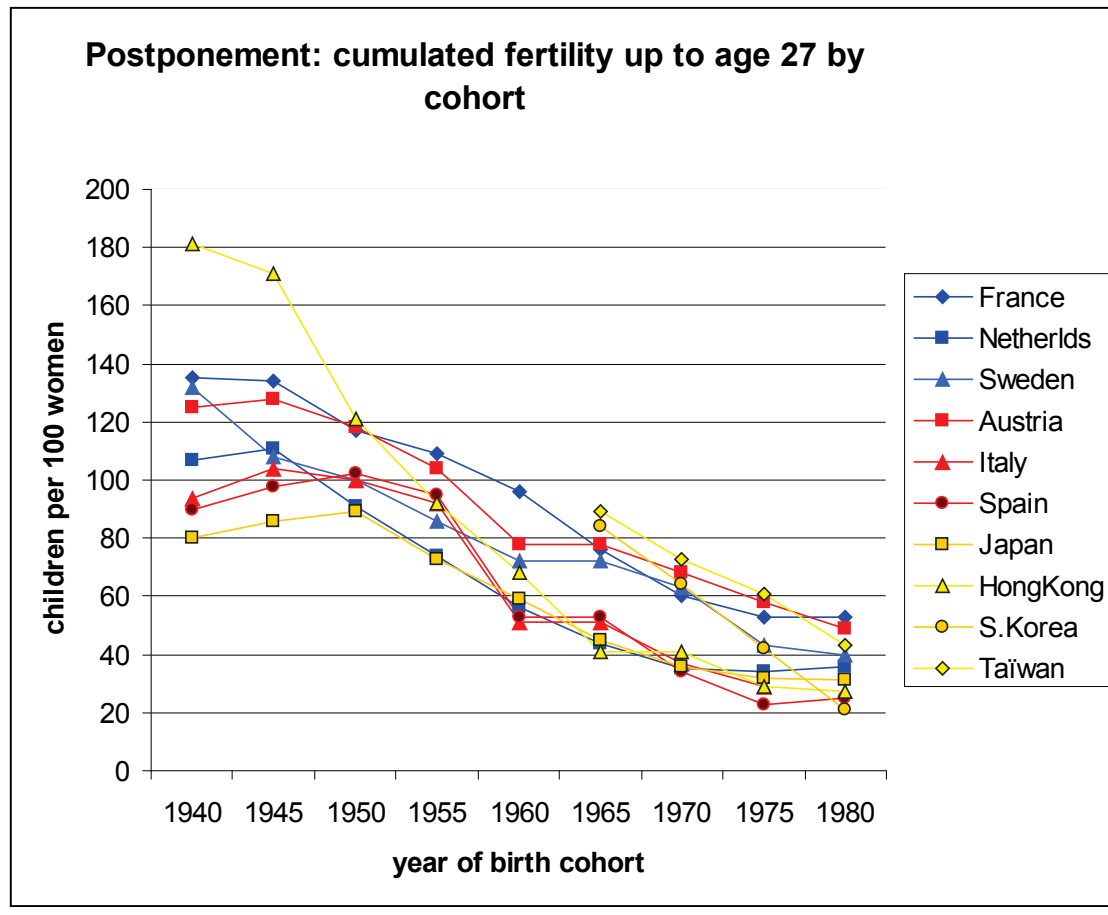
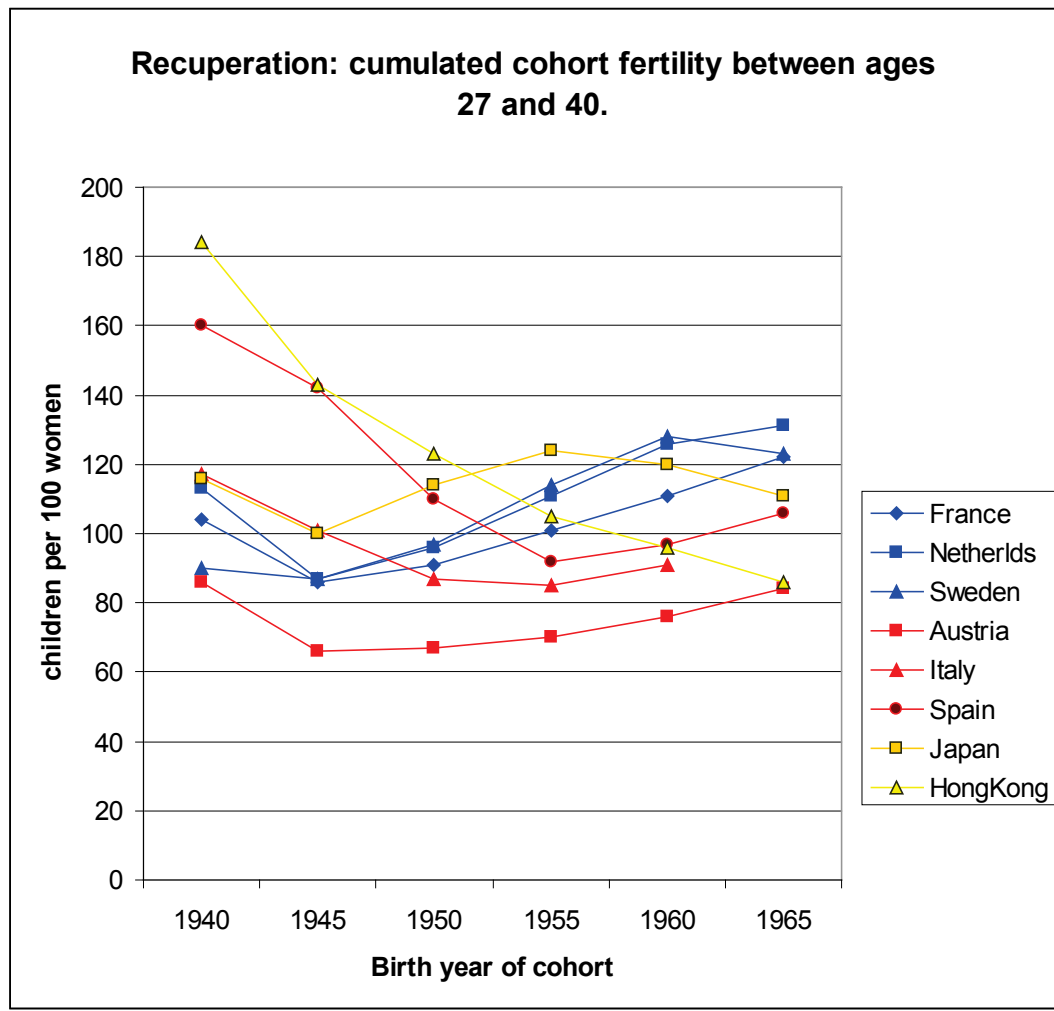


Figure 6 illustrates that the 4 Asian countries are just as much exhibiting the fertility postponement trend as the European. In fact, Hong Kong had massive postponement for the cohorts born between 1945 and 1965, whereas Taiwan and South Korea have a fast postponement tempo for the cohorts born after 1965. Also note that the Hong Kong, Japanese and Korean cohorts born in 1980 have less than 40 children per 100 women born before age 27. With these figures they match the experience of Spain and Italy.

Figure 7 shows the trends in fertility in the age bracket 27-40, i.e. when catching up should occur. Not surprisingly, the clearest increase and the highest levels are encountered among the Northern and Western European examples used here, whereas Hong Kong has a continued fall in its older age fertility, and Japan exhibits a trend reversal from slightly catching up to losing new ground. This lends support to the speculation that the Far Eastern populations are following a “Mediterranean pattern” with rapid postponement and little recuperation at older ages, thereby sustaining a period fertility level that equally falls within the “lowest-low” category (for Taiwan and Hong Kong see: Tu and Zhang, 2004).

**Figure 7:** Cumulated Cohort Fertility in the Age Bracket 27 to 40, Selected Countries  
 Source: Frejka & Sardon, 2009, Appendix 4



**The Asian Marriage Revolution**

Many populations of the Far East, and not only those of industrialized countries, have witnessed a dramatic increase in the mean ages at marriage for both sexes. The “marriage revolution” that W. Goode was forecasting already in the 1960s emerged in full force between 1970 and 2000, as illustrated in Table 2 by the percentages single women at ages 30-34 and 40-44 (Jones, 2004). In 2000 more than a quarter of all women aged 30-34 were still single in Japan and Myanmar, and about a fifth were not yet married among the Chinese in Singapore and Malaysia. Probably more recent figures for Thai women will come close to a fifth as well. Also note that percentages single for men are typically higher than for women. For instance in Japan 2004, a third of the men aged 30-34 were still unmarried. The classic correlates are again larger proportions of men and women with more schooling, larger proportions of them employed outside agriculture and other domestic industries, less employment security, but also much smaller proportions accepting arranged marriages. If, according to G. Jones (2004), current western European figures of proportions single were to be corrected for cohabitation, then several Asian populations would be running ahead in proportions “effectively single”.

**Table 2:** Increases in Percentages of Never-married Women in the Age Groups 30-34 and 40-44 in Selected Asian Populations, 1970 – 2000

Source: G.W. Jones, 2004, Appendix table 1

Population	30-34		40-44	
	1970	2000	1970	2000
Japan	7.2	26.6	5.3	8.6
Myanmar	9.3	25.9	6.2	14.8
Thailand	8.1	16.1	3.9	9.3
Singapore Chinese	11.1	21.6	3.6	15.0
Singapore Malays	3.9	12.2	1.7	8.2
Malaysia Chinese	9.5	18.2	3.4	8.4
Malaysia Malays	3.3	9.7	1.1	4.4
Philippines	8.9	14.8	6.0	7.1
South Korea	1.4	10.7	0.2	2.6
Indonesia	2.2	6.9	1.2	2.4

Source: Jones, 2004, Appendix Table 1.

Equally classic is that the postponement of parenthood follows in the wake of rising ages at marriage, particularly when out-of-wedlock fertility is low. However, shotgun marriages and births in the first 8 months of marriage may become more frequent, as is already true for Japan (Tsuya, 2006, Raymo et al., 2008). More specifically, in 2004 27.5 percent of Japanese married women aged 25-29 had a premarital conception, and the figure was 25.8 percent for women aged 30-34, whereas older generations, now aged 55 and over, had figures in the vicinity of 4 to 7 percent (Tsuya, 2006). Evidently, premarital births are still rare in Far Eastern societies, but premarital conceptions and shotgun marriages are not.

The Japanese shift in the partnership formation pattern during the late 1970s and 1980s can be gleaned from the data already collected in the early 1990s.

In Table 3 we have reproduced the 1992 figures brought together by H. Matsuo (2001) pertaining to the union formation status at various ages for successive cohorts. At any given age percentages married drop. By contrast, the percentages with “no event” increase for younger cohorts showing that more of them experienced a longer period of being “really single”. Equally striking is that the percentages who had met a partner by ages 20 and 25, but were not married or engaged, are also increasing. The 1992 table does not reveal the precise form of behavior of these younger unmarried women who had met a partner, and at that time my Japanese colleagues all assumed that these couples would occasionally meet in hotels or other such places, but would *not* be cohabiting. In fact, in Tokyo seminars as late as 2002 it was believed that premarital cohabitation had simply not come to Japan. That assumption proved to be false as two independently organized surveys in the early years of the 21<sup>st</sup> Century indicated.

**Table 3:** Union Formation Status as of 1992 at Specific Ages for Cohorts of Japanese Women  
*Source:* H. Matsuo, 2001, Appendix table 11

Japanese women by age 20

	No event	Met partner	Engaged	Married	Number of cases
1950-54	64	21	5	10	2137
1955-59	66	22	5	7	1923
1960-64	66	24	3	6	1915
1965-69	72	20	3	5	1962
1970-74	62	34	0	4	1046

Japanese women by age 25

	No event	Met partner	Engaged	Married	Number of cases
1950-54	21	6	5	68	2137
1955-59	24	10	4	62	1923
1960-64	30	11	6	53	1915
1965-69	33	18	3	46	947

Japanese women by age 30

	No event	Met partner	Engaged	Married	Number of cases
1950-54	8	1	1	90	2137
1955-59	10	2	2	86	1923
1960-64	12	6	1	82	961

Japanese women by age 35

	No event	Met partner	Engaged	Married	Number of cases
1950-54	6	1	1	93	2137
1955-59	6	2	1	91	987

**Source:** Japanese National Fertility Survey 1992

Exactly as in the Mediterranean countries, premarital cohabitation in Japan only emerged with a substantial time lag compared to the other hallmarks of the SDT. But initially it went unnoticed because no survey bothered to probe into the matter. In 2004, however, the first round of the Japanese “Gender and Generations Survey” revealed that a fifth of all women and men aged 25-29, irrespective of their current status, had ever experienced a spell of cohabitation. But also 10 year older ones, in the age group 40-44 in 2004, reported figures above 10 percent. Table 4 gives the results in greater detail.

**Table 4:** Percentages of Japanese Men and Women of all Marital Statuses reporting ever having cohabited, GGS 2004

Source: N. Tsuya, 2006, Table 1

Age	Women		Men		Both sexes	
	%	(N)	%	(N)	%	(N)
20-24	11.7	(322)	11.0	(243)	11.4	(565)
25-29	20.2	(352)	20.6	(289)	20.4	(641)
30-34	16.5	(345)	20.6	(296)	18.6	(641)
35-39	15.7	(602)	15.9	(472)	15.8	(1,074)
40-44	11.5	(456)	15.5	(400)	13.5	(856)
45-49	7.5	(504)	10.7	(418)	9.1	(922)
50-54	7.0	(558)	12.1	(523)	9.5	(1,081)
55-59	5.4	(527)	8.3	(492)	6.9	(1,019)
60-64	4.4	(535)	9.5	(498)	6.9	(1,033)
65-69	2.1	(425)	5.0	(489)	3.7	(914)
Total	10.0	(4,626)	12.6	(4,120)	14.6	(8,746)

Notes : Percentages are computed, using sample and response rate weights.

The other Japanese survey, organized by the Mainichi Shimbun Newspaper in 2004, essentially confirms the prevalence of premarital cohabitation, but more crucially, reveals that this is not a short duration ephemeral phenomenon. As Table 5 shows, the mean duration of the premarital cohabitation period is close to two years.

**Table 5:** Percentages of Japanese Women Cohabiting by Cohort, Mean Duration and Percentages followed by Marriage, Mainichi Shimbun Group 2004

Source: Raymo, Iwasawa and Bumpass, 2008

	Prevalence of cohabitation experience (%)	Mean duration of cohabiting unions (months)	Percent of completed cohabiting unions resulting in marriage
Total	15	21	58
<i>Birth cohort</i>			
1954-59	10	22	64
1960-64	10	21	70
1965-69	17	26	62
1970-74	21	20	61
1975-79	21	21	40
1980-84	10	16	44

The conclusion from the data presented so far is that Japan is no longer an exception to the package of SDT characteristics. Add to that the rise in premarital conceptions and the hike in the divorce rate, and it becomes clear that Japan is by now definitely a SDT country, where the whole concept of partnership and marriage are being redefined. The only missing ingredient so far is parenthood among cohabiting couples.

Moreover, Japan is not just a single outlier in the Far East. Checking back into two KAP-surveys held in Taiwan, Li-Shou Yang found the following figures for percentages ever-cohabited (Table 6).

**Table 6:** Percentages of Women 20-49 with Cohabitation Experience, Taiwan KAP Surveys of 1998 and 2004

Source: Li-Shou Yang, personal communication

Current marital status	KAP 1998	KAP 2004
Unmarried	7.8 (731)	15.3 (1200)
Married	12.6 (2262)	21.6 (2752)
Total	11.4 (2993)	19.6 (3952)

Evidently, premarital cohabitation is not only present in Taiwan, but it is equally on the rise. If the figures for the KAP 2004 for married women could have been broken down by smaller age categories, then the incidence of pre-marital cohabitation for married women 25-29 would almost certainly have been in excess of 25 percent, which is even higher than the corresponding Japanese figure.

Finally, to our knowledge there is also evidence on cohabitation for the Philippines (Guerrero, 1995, Jones 2005), but it is not yet clear whether this is a much older form of consensual union or actual pre-marital cohabitation.

The empirical evidence on cohabitation for other industrialized or urban Asian societies is missing, again because it is just a priori taken for granted that its incidence is close to zero. As was the case for Mediterranean and former Communist Europe in the 1990s, this belief lasts until someone really sets out to insert the “ever cohabited” question in a survey. And it appears to us that such an insertion is overdue in the PR of China, South Korea, Hong Kong and Singapore, at the very least.

### ***Value orientations and timing of parenthood: Micro-level evidence for 3 Asian populations***

Several Asian countries participated in one or two rounds of the “World Values Survey” which were shortened versions of their older European counterparts. These surveys are again a major source of information on the secularization dimension, civil and sexual morality, expressive values at work and in educating children, political features such as post-materialism, protest proneness and trust in institutions, and last but not least values regarding gender relations. Unfortunately, information on demographic characteristics is limited to the present number of children in the household and the current official marital status. No questions on currently or ever cohabited or on ever divorced were inserted. This means that these Asian versions can only be used to check whether later parenthood is indeed correlated with the same SDT-values indicators as in the West : more egalitarian gender relations, accentuation of non-material benefits in work, stress on autonomy and imagination in educating children, higher post-materialism scores on the Inglehart scales, greater protest proneness, greater distrust in institutions, less weight of religion, and a greater tolerance for breaches in civil and sexual morality.

The data files of the “World Values Studies” also had to be pooled for Japan 1995 and 2000, and for South Korea 1994 and 2001 to get to more than 600 female respondents aged 18-45. For

Singapore there was only one round. In all countries childlessness was predicted on the basis of age (5 categories), education (3 categories: lower secondary, higher secondary, tertiary), occupational status (5 categories: professional, other white collar, blue collar, student, housewife) and 1 value item per regression. Use is made of binary logistic regression and the results for all value items are given in the 5 appendix tables in the form of exponentiated regression coefficients (expB or odds ratios) after controlling for the other covariates. Table 7, presented below, is made up of tallies of the number of such coefficients with net effects in the expected direction. For instance, in Japan, 15 of the 16 items related to gender issues had the expected net effect (conformist for earlier parenthood, non-conformist for later parenthood).

Table 7 shows that not all items were present in the surveys of the three countries: Japan contributes 70 items, but South Korea only 56. The tallies of coefficients for all three countries show that more than 80 percent of them are in the expected direction. This furthermore means that there is an overwhelming concordance with what is found in the West (cf. Surkyn and Lesthaeghe, 2004): non-conformists or more libertarian attitudes correctly predict postponement of parenthood. The only exception encountered in these analyses pertains to the religion and secularization items in Japan. Here only 4 of the 10 items behave as expected.

**Table 7:** Link between Later Parenthood and sets of Value Orientations: Number of Items with Net Effects in the Expected Direction, Women aged 18-45 (after controls for age, education, and occupational status).

*Source:* computed from World Values Studies Data Files, ISR Michigan

	<b>Japan 1995, 2000</b>	<b>South Korea 1994, 2001</b>	<b>Singapore 2002</b>
a.Family and gender items	15 of 16	15 of 16	13 of 16
b.Socialization traits	7 of 9	9 of 9	7 of 9
c.Work characteristics	5 of 5	na	9 of 10
d.Political orientations	19 of 20	17 of 19	7 of 9
e. Ethics and morality issues	8 of 10	7 of 9	9 of 9
d.Religion	4 of 10	2 of 3	9 of 10
<b>Total</b>	<b>58 of 70</b>	<b>50 of 56</b>	<b>54 of 63</b>
<b>total %</b>	<b>82,9</b>	<b>89,3</b>	<b>85,7</b>

The overall conclusion from this section is that there are indeed individual level data in three advanced Asian economies that show that the demographic dimension of parenthood postponement can be linked to the same value orientations as those associated with the SDT in Europe. Further checks and stronger evidence still would be most welcome, and for a start, this requires the insertion of a few simple questions concerning earlier cohabitation and divorce experience along with the current marital status question. This is a tiny alteration of the World Values Surveys questionnaire which would generate a very considerable return for further empirical work pertaining to the Asian patterns of the SDT.

## CONCLUSIONS

Before formulating an answer to the questions posed at the onset, we would like to make a major preliminary point. We do so to avoid subsequent misunderstanding about the role of culture in the SDT. And this point is that the SDT-theory fully recognizes the effects of macro-level structural changes and of micro-level economic calculus. Only, it does not consider these explanations as “sufficient”, but merely as “necessary” or “non-redundant”. By the same token, also cultural explanations are non-redundant, but equally insufficient. Also, the SDT-theory does not consider cultural change as endogenous to any economic model, but as a necessary additional force with its own exogenous effects on demographic outcomes. Culture is not treated as some form of “addiction”, nor as a fixed script, but as a dynamic set of value orientations. As such these orientations can change at the individual level and they can be linked recursively to the unfolding of the life course. And they can also change at the collective level during particular periods of time, or shift to new configurations with the succession of cohorts. In a general way, the motor of it all, i.e. Maslowian drift to higher order needs, is positively related to economic growth, but other factors reflecting historical path dependency (often in religious and political spheres) modulate this connection.

With these remarks in mind, we shall now turn to the six questions formulated in the introduction.

Questions 1 and 2: Is the SDT merely a continuation of the FDT, and only a description of a “secondary” set of phenomena?

The SDT differs significantly from the FDT both in terms of demographic predictions as well as in terms of the underlying motivations. Since the SDT predicts generalized sub-replacement fertility in tandem with a greater plurality of living arrangements and household structures, it also points at the growing importance of international and global migration. Furthermore, the SDT predictions are departing from the benign equilibrium outcomes of the FDT (such as a stationary population, not much need for migration, and the predominance of the stable conjugal family). By contrast, the SDT sees much rougher seas ahead. Firstly, sustained sub-replacement fertility will cause extra aging and shake all welfare systems. Secondly, such low fertility will stimulate replacement migration, not so much as an antidote to aging but as a means of countering labor force shortages. And thirdly, some of the new living arrangements may be more unstable than the traditional arrangements, or even less adequate as a setting for procreation and especially socialization. Union dissolution will continue to be a major cause of low fertility as well. Such outcomes are evidently not “secondary” phenomena.

Question 3: Did the SDT spread to the rest of Europe?

Here, the answer is definitely positive. The SDT did not stop at the Pyrenees or Alps, and it crossed into Central and Eastern Europe as well. In all these areas we witnessed a rise in the share of extra-marital births, which clearly points in the direction of new contexts of procreation (cohabitation, single parenthood). Equally striking is the finding that the individual value-profiles according to living arrangement turned out to be similar in all parts of Europe.

Question 4: Were the demographic changes since 1990 in Central and Eastern Europe mainly the outcome of the crisis associated with the transition to a market economy?



The crisis of the 1990s in Eastern and Central Europe was definitely propitious for the postponement of marriages and births, and hence for the precipitous dip to very low levels of fertility. But a purely crisis-based explanation is untenable. Firstly, much of the crisis is over in countries such as Slovenia, the Czech Republic and Hungary, where GDP per capita has risen to levels higher than in the 1980s, and there has been no return to earlier marriage or higher fertility. Instead, cohabitation is spreading and so is procreation outside marriage. Hence, something else must have happened in addition to the initial crisis response. Secondly, the SDT seems to advance faster in the countries with the more successful economic and political performance, which is again indicative of the importance of factors other than those associated with the economic crisis. Among these other factors that produce the sustained trend in the direction of the SDT there are again major structural and cultural ones. On the structural side, for instance, the post-Communist era has been characterized by expanding female education in several of these countries, and this has definitely contributed to the postponement of marriages and births (e.g. Kantarova, 2004). And similarly, the rise of individual autonomy and freedom of choice has legitimized the adoption of non-traditional living arrangements in a very short time. These features will not be reversed that easily, and hence the SDT will continue on its course as in the Western and Northern parts of Europe.

Question 5: Are the various demographic ingredients of the SDT performing as a cohesive package?

Here the answer is that multiple variants in the SDT development have come into existence, and that distinct “mixes” of ingredients emerged. For instance, at one end of the scale there are Northern and Western European populations with early development of non-conventional household formation patterns and equally early emergence of parenthood postponement, but which have maintained the higher levels of sub-replacement fertility thanks to greater recuperation at later ages of first and second order births. At the other end, there are later “postponers” but with much weaker recuperation in overall fertility, and hence a history of “lowest low” fertility in its third decade. Similarly, both the timing and the spatial patterns of respectively cohabitation and of fertility postponement can be disjunct. Time lags between these two aspects of the SDT vary quite a bit, and spatial correspondence between them can be weak or even lacking. Finally, the values props of the SDT are a fairly cohesive package when it comes to their effects on parenthood postponement, but not when recuperation is concerned. In fact, at a later stage in the life cycle, greater gender symmetry and more developed services aimed at reducing opportunity costs of working women both seem to be linked to greater catching up of fertility, and consequently to the higher period fertility levels.

Question 6: Can the SDT spread to other continents and non-European societies?

The answer to the question whether the SDT can spread beyond Western societies and cultures is probably positive. At this point, we feel sufficiently secure about the fact that several advanced Asian populations have joined the set of SDT countries, since all characteristics except for one (procreation among cohabitants) have emerged. Moreover, the scarce Asian micro-level data for Japan, South Korea and Singapore are in line with what was repeatedly found in the European examples.

Admittedly it will remain difficult to make a neat separation between the effects of structural factors and ideational ones respectively on marriage postponement and low fertility. But that has

never been easy, not even in the case of the FDT, in the first instance because these sets of factors are often causally interconnected. Furthermore, one should also realize that mass media are producing a “world culture” in which individual autonomy and self-actualization have a very prominent, if not dominant place, and that these provide both motivations and justifications for the onset of the SDT. Political, religious and ideological backlashes are of course always possible (e.g. both Christian and Muslim fundamentalist reactions), but at least up till now the experience has been that such reactions have not been strong enough to cause decisive trend reversals in countries with democratic credentials.

Several decades of experience in countries as distinct as Sweden and Japan have revealed that there are various SDT development paths and that there are obvious numerous historical and cultural reasons for pattern heterogeneity. But despite such distinctions, an important set of SDT predictions still hold, and these are:

1. The normative and institutional props of traditional union formation and household structures will systematically weaken in all societies that move in the direction of egalitarian and democratic systems governed by the respect for individual choice. This implies that other forms of union formation will expand in the wake of such ideational developments. The political evolution of countries is then at least as crucial for the onset of the SDT as their economic futures.
2. Alongside individual autonomy, also self-realization will become a major goal in its own right. This will simultaneously produce a rising demand for higher education, especially among women, stimulate other tastes and life-styles, and result in sub-replacement fertility.
3. Communication technology and mass media are spreading knowledge about all new forms of behavior to the remotest corners of the world. Moreover, new forms of behavior are associated by the public itself with being “more advanced” and “more developed” (Thornton, 2005). Just like the FDT in many developing countries benefited from this communication revolution, so will also the diffusion of the SDT be enhanced by global communication and by the power of “developmental idealism”.
4. Fundamentalist reactions are likely to occur in response to these global ideational shifts, but so far their success has been too limited to stem the overall shift toward “post-materialist” and expressive value orientations. In short, such reactions can slow down SDT trends or produce marked spatial differences, but they cannot stem the tide altogether.

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**APPENDIX**

Relationship between Sets of Values Orientations and Childlessness in 3 Asian Countries: Odds Ratios from Binary Logistic Regressions after Controls for Age, Education and Occupational Status

Data Source: World Values Surveys Data Files

(expB in bold, percentages agreeing with statement in regular )

## Set 1: Values Concerning Ethics and Morality

	<b>Women aged 18-45, World Values Surveys</b>		
	<b>Dep. Var.: postponement of parenthood (0-1 with 1=childless)</b>		
	exp B after controls for age (5 groups), education (3) and job status (5)		
	<b>Japan</b>	<b>South Korea</b>	<b>Singapore</b>
	<b>1995, 2000</b>	<b>1994, 2001</b>	<b>2002</b>
	N=633	N=822	N=585
<b>e. Ethical issues.</b>			
<b>e.1. Civil morality items : never justified</b>			
never cheating on tax	<b>0,56</b> *	<b>1,19</b>	<b>0,75</b>
	77,7	72,8	68,2
never unjustly claiming government benefits	<b>0,96</b>	na	<b>0,61</b> *
	50,4		46,8
never avoiding fare public transportation	<b>0,65</b>	<b>0,77</b>	<b>0,5</b> **
	68,7	39,2	54,2
never accepting bribe	<b>0,71</b>	<b>1,09</b>	<b>0,62</b>
	80,6	83	77,6
never buy stolen goods	<b>0,9</b>	<b>0,49</b> ***	na
	32,2	35,6	
<b>e.2. Sexual morality: never justified</b>			
never prostitution	<b>0,59</b> *	<b>0,48</b> ***	<b>0,38</b> ***
	63,8	<b>63</b>	64,8
never homosexuality	<b>0,89</b>	<b>0,42</b> ***	<b>0,47</b> **
	16	50,4	57,3
<b>e.3. Ethics life and death : never justified</b>			
never abortion	<b>1,23</b>	<b>0,57</b> *	<b>0,89</b>
	11,7	32	49,6
never euthanasia	<b>3,5</b> *	<b>0,63</b>	<b>0,54</b> *
	6	22,8	45,6
never suicide	<b>0,89</b>	<b>0,57</b> *	<b>0,49</b> **
	45,3	45,8	72
<b>Items with effects in expected direction</b>	<b>8 of 10</b>	<b>7 of 9</b>	<b>9 of 9</b>

## Set 2: Political Orientations

<b>Women aged 18-45, World Values Surveys</b>					
<b>Dep. Var : postponement of parenthood (0-1 with 1=childless) (0-1, with 1=childless)</b>					
exp B after controls for age(5), education (3), job status(3)					
	<b>Japan</b>		<b>South Korea</b>		<b>Singapore</b>
	1995, 2000		1994, 2001		2002
	N=633		N=822		N=585
<b>d. Political orientations</b>					
<b>d.1. Protest proneness : has participated or would participate in activity</b>					
signing petition	<b>0,78</b>		<b>0,68</b>		<b>1,93</b> **
	74,5		84,9		53,7
joining boycotts	<b>2,29</b> ***		<b>0,92</b>		<b>2,06</b> *
	53,2		63,5		17,8
attending lawful demonstration	<b>2,13</b> **		<b>1,06</b>		<b>1,49</b> *
	25,7		53,5		28,4
joining unofficial strikes	<b>2,55</b>		<b>1,32</b>		<b>na</b>
	13,4		47,9		
<b>d.2. Distrust in institutions (confidence: not much, none at all)</b>					
distrust police	<b>1,12</b>		<b>1,55</b>		<b>na</b>
	37,6		53,7		
distrust justice system	<b>1,03</b>		<b>2,2</b> ***		<b>na</b>
	11,5		70,8		
distrust political parties	<b>1,49</b>		<b>2,95</b> ***		<b>na</b>
	77,1		81,9		
distrust government	<b>1,12</b>		<b>1,79</b> **		<b>na</b>
	73,8		65,9		
distrust parliament	<b>1,13</b>		<b>3,55</b> ***		<b>na</b>
	75,4		80,8		
distrust civil service	<b>1,29</b>		<b>1,4</b>		<b>na</b>
	67,5		25,3		
distrust major companies	<b>1,52</b>		<b>1,46</b>		<b>na</b>
	59,4		69,8		
distrust labor unions	<b>2,34</b> ***		<b>0,86</b>		<b>na</b>
	35,9		43		
distrust press	<b>1,79</b> *		<b>2,23</b> ***		<b>na</b>
	22,8		43,2		
distrust TV	<b>2,3</b> **		<b>1,86</b>		<b>na</b>
<b>d.3. Other "liberal" political items.</b>					
strong leader : considered bad or very bad	<b>1,49</b>		<b>2,38</b> ***		<b>0,64</b>
or very bad	59,6		72,6		73,7
more/ lots more economic aid to poor countries	<b>1,36</b>		<b>na</b>		<b>na</b>
	61,2				
immigrant policies: anyone can come, as long as jobs (versus restrict,	<b>1,23</b>		<b>1,48</b> *		<b>1,93</b> *
	43,2		52,9		24,8



Not or not very proud own nationality	<b>0,93</b> 56,8	<b>na</b>	<b>1,37</b> 5,7
Inglehart scale: Postmaterialist vs materialist	<b>1,59</b> 8,5	<b>1,34</b> 6,8	<b>1,12</b> 8,2
Inglehart scale: Postmaterialist vs mixed	<b>1,52</b> 8,5	<b>1,02</b> 6,8	<b>0,82</b> 8,2
Jobs scarce: not necessarily priority for nationals	<b>2,77</b> ** 11,2	<b>2,47</b> ** 17,1	<b>1,97</b> * 15,4
<b>Items with effects in expected direction</b>	<b>19 of 21</b>	<b>17 of 19</b>	<b>7 of 9</b>

## Set 3. Socialization Values

**Women aged 18-45, World Values Surveys**  
**Dept. var.: postponement of parenthood (0-1, 1=childless)**  
 exp B after controls for age (5 groups), education (3) and job status (5)

	<b>Japan</b> 1995 & 2000 N=633	<b>South Korea</b> 1994 & 2001 N=822	<b>Singapore</b> 2002 N=585
<b>b. Qualities mentioned as important in educating children</b>			
<b>b.1. Conformist items</b>			
Thrift, saving	<b>0,63</b> * 52,1	<b>0,71</b> 67,6	<b>1,19</b> 34,2
Hard work	<b>0,67</b> 12,3	<b>0,84</b> 59,6	<b>0,92</b> 58,1
Religious faith	<b>0,63</b> 5,2	<b>0,75</b> 20,5	<b>0,54</b> * 47
Obedience	<b>1,08</b>	<b>0,58</b>	<b>0,45</b> **
<b>b.2. Expressive and Social</b>			
Independence	<b>1,25</b> 71,6	<b>1,37</b> 70,6	<b>0,68</b> 73,5
Imagination	<b>1,65</b> * 36	<b>2,2</b> ** 20,8	<b>1,04</b> 14,5
Feeling of responsibility	<b>1,18</b> 88,8	<b>1,09</b> 92,3	<b>1,13</b> 82,9
Tolerance and respect for others	<b>0,99</b> 71,2	<b>1,21</b> 61,2	<b>2,07</b> ** 70,1
Unselfishness	<b>1,06</b>	<b>2,33</b> **	<b>1,69</b> *
<b>Items with effects in expected direction</b>	<b>7 of 9</b>	<b>9 of 9</b>	<b>7 of 9</b>

## Set 4. Work Values

**Women aged 18-45, World Values Surveys**

Dept. var. : postponement of parenthood (0-1, with 1=childless)

exp B after controls for age (5 groups), education (3), job status(5)

	<b>Japan</b> <b>1995, 2000</b> N=633		<b>South Korea</b> <b>1994, 2001</b> N=822		<b>Singapore</b> <b>2002</b> N=585
<b>c. Job characteristics mentioned as desirable</b>					
<b>c.1. conventional, material.</b>					
Good pay	<b>0,67</b> 90		<b>na</b>		<b>0,58</b> 80,3
High job security	<b>0,42</b> ** 82,6		<b>na</b>		<b>0,77</b> 62,4
Good hours	<b>0,36</b> ** 83,2		<b>na</b>		<b>0,79</b> 50,4
Not too much pressure	<b>na</b>		<b>na</b>		<b>0,6</b> 46,3
<b>c.2. Expressive traits</b>					
Responsible job	<b>1,23</b> 62,1		<b>na</b>		<b>1,15</b> 49,9
Interesting job	<b>1,23</b> 72,5		<b>na</b>		<b>1,33</b> 64,8
Respected job	<b>na</b>		<b>na</b>		<b>1,2</b> 47,5
Opportunities for initiative	<b>na</b>		<b>na</b>		<b>1,19</b> 47,2
where you can achieve something	<b>na</b>		<b>na</b>		<b>1,18</b> 64,8
Job that meets ones abilities	<b>na</b>		<b>na</b>		<b>0,98</b> 59,5
<b>Items with effects in expected direction</b>					
	<b>5 of 5</b>		<b>na</b>		<b>9 of 10</b>

## Set 5. Gender and Family Values

**Women aged 18-45, World Values Surveys**  
**Dept var : postponement of parenthood ( 0-1, with**  
**1=childless)**

exp B after controls for age (5groups), education  
 (3) and job status (5)

	<b>Japan 1995 &amp; 2000</b>	<b>South Korea 1994 &amp; 2001</b>	<b>Singapore 2002</b>
	N=633	N=822	N=585
<b>a. Family and gender attitudes</b>			
<b>a.1. Conventional items</b>			
Child needs home with both mother & father	<b>0,76</b> 87,2	<b>0,7</b> 92,2	<b>0,46</b> 90,8
Very important in life: family	<b>0,28</b> *** 90	<b>0,53</b> 90,6	<b>0,22</b> ** 94,7
Housewife just as fulfilling for women	<b>0,83</b> 86,5	<b>0,79</b> 92,6	<b>0,58</b> * 64,8
Children always have to love & respect parents (vs respect (versus respect has to be earned)	<b>1,01</b> 54,8	<b>0,55</b> 91,7	<b>0,93</b> 94,5
Parents always have to do best for children 9 vs parents (versus parents have life on their own)	<b>0,32</b> *** 34,3	<b>0,69</b> 37,8	<b>0,34</b> *** 81,2
Women need children to be fulfilled	na	<b>0,65</b> * 62,5	<b>0,53</b> * 60,3
Men better political leaders than women	<b>0,65</b> 64,1	<b>0,63</b> 38,6	<b>0,79</b> 43,9
University more important for boys than girls	<b>0,41</b> * 13,9	<b>0,47</b> * 18,7	<b>0,95</b> 11,6
If jobs scarce: men more rights to job than women	<b>0,65</b> 21,2	<b>0,28</b> *** 23,8	<b>0,67</b> 27,9
Divorce never justifiable	<b>0,59</b> 3,5	<b>0,57</b> * 17,6	<b>0,57</b> * 32,1

**a.2. Non-conventional items**

Working mother can have as good a relationship with child	<b>1,23</b> 66,7	<b>1,84</b> 88,7	<b>0,98</b> 73,4
Both husband and wife should contribute to hhld income	<b>1,19</b> 38,9	<b>0,97</b> 78,3	<b>1,13</b> 86
Very important in life: leisure	<b>1,64</b> * 52,3	<b>1,64</b> * 24,6	<b>0,88</b> 30,1
Confidence in women's movement	<b>1,06</b> 40,7	<b>1,05</b> 78,9	na
Very important in life: work	<b>1,25</b> 40	<b>1,71</b> 56,1	<b>0,93</b> 53,8
Approve of women as a single parent	<b>1,18</b> 31,9	na	1,78 18,1
Marriage is outdated institution	<b>1,46</b> 7,7	<b>1,17</b> 21,8	<b>1,26</b> 15,6
<b>Items with effects in expected direction</b>	<b>15/16</b>	<b>15/16</b>	<b>13/16</b>

## Set 6: Religious Values

**Women aged 18-45,  
Values Surveys**

**Dep. Var.: postponement of parenthood (0-1 with 1=childless)**  
exp B after controls for age (5 groups), education (3) and job status (5)

	<b>Japan</b> <b>1995, 2000</b> n=633	<b>South Korea</b> <b>1994, 2001</b> N=822	<b>Singapore</b> <b>2002</b> N=585
<b>f. Religion</b>			
<b>f.1. Religious practice and beliefs</b>			
Believes in God	<b>1,33</b> 44,9	na	<b>0,51</b> 91,5
Believes in life after death	<b>0,99</b> 47,6	na	<b>0,71</b> 79,1
Believes in soul	<b>1,47</b> 64,9	na	<b>1,41</b> 93,8
Believes in Hell	<b>1,38</b> 21,8	na	<b>0,94</b> 83,9

God very important in life (scores 7-10 on 10 pt scale)	<b>0,88</b> 22,1	<b>na</b>	<b>0,65</b> 77,2
Derives comfort and strength from religion	<b>1,43</b> 19,3	<b>na</b>	<b>1,29</b> 83,4
<b>f.2. Secular attributes.</b>			
Not belonging to any religious denomination	<b>0,92</b> 71,2	<b>0,83</b> 36,2	<b>2,4</b> * 12
No clear guidelines good and evil, depends on circumstance	<b>1,11</b> 71,4	<b>na</b>	<b>1,21</b> 54,5
God not or not very important in life (scores 1- 4 on 10 pt scale)	<b>0,74</b> 40	<b>na</b>	<b>1,13</b> 8,8
Never/almost never attend religious services	<b>1,89</b> ** 27,3	<b>1,3</b> 44,1	<b>1,24</b> 24,6
Distrust churches	<b>na</b>	<b>1,41</b> 20,1	<b>na</b>
<b>Items with effects in expected direction</b>	<b>4 of 10</b>	<b>2 of 3</b>	<b>9 of 10</b>



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