

# The “Second Demographic Transition” in the US : Exception or Textbook Example ?

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(contains maps in color)

## 1. Background.

The notion of two distinct phases in the overall demographic transition in the West was originally suggested by Lesthaeghe and van de Kaa (1986) and by van de Kaa (1987), and these authors are responsible for the terminology of a first (FDT) and a second (SDT) demographic transition. The initial 1986 article on the SDT posited that new living arrangements, and cohabitation (pre-marital or post-marital) in particular, were not solely the outcomes of changing socio-economic conditions or rising female employment, but equally the expression of secular and anti-authoritarian sentiments of better educated cohorts, men and women alike, with an egalitarian world view, a greater emphasis on Maslow’s (1954) “higher order needs” (i.e. self-actualization, individualistic and expressive orientations, need for recognition) and, to use Inglehart’s term (1970, 1990), with stronger “post-materialist” political orientations. Furthermore, the SDT would also be characterized by substantial postponement of both marriage and parenthood, and by an increase in the share of births born to unmarried couples. If fertility control during the FDT was a matter of avoiding births of higher parities and occurring at older ages in order to safeguard the opportunities of the already born children, during the SDT it is a matter of postponing parenthood in function of more pressing competing goals such as prolonging education, achieving more stable income positions, increased consumerism associated with self-expressive orientations, finding a suitable companion and realizing a more fulfilled partnership, keeping an open future, etc.(see also Ph. Ariès, 1980). At the aggregate level postponement of fertility would not only lead to a temporary dip of fertility below replacement level, but to structural, long term sub-replacement cohort fertility as well. This in its turn creates a growing need for “replacement migration”, so that the SDT will be directly connected to the further development of western societies in a multi-ethnic and multi-cultural direction (D. van de Kaa, 2002, R. Lesthaeghe and J. Surkyn, 2006).

Twenty years after the first SDT publication, the term of a “Second Demographic Transition” may still be contested, but the relevance of what it predicted is not: by now, every single SDT characteristic has spread to the majority of industrialized western populations, including Mediterranean and Central European ones (1). And, judging from the latest data on extraordinary degrees of marriage and fertility postponement in the Far East (e.g. G.W. Jones, 2006, R. Retherford and N. Ogawa, 2005), and from very recent information on cohabitation in Japan (J. Raymo and M. Iwasawa, 2006, N. Tsuya, 2005),

also non-western industrialized or industrializing populations could be following. In that instance, the SDT would be more than what David Coleman (2003) called a “*parochial northwestern European ideosyncrasy*”.

But, is the US an exception to all of this? The US total fertility rate rose from 1.81 children in 1981 to just over replacement level in 2001. And as such the American TFR now towers high above that of all its industrial competitors, and especially above that of the EU-25 and Japan. Add to this that the US is still taking in many more immigrants, and the conclusion is clear: the US population will continue to grow, its ageing will be less pronounced, and the country will easily avoid the negative population growth momentum that many other industrialized countries are about to face as a result of 25 years of “lowest-low” fertility (i.e. TFRs below 1.5 children)

The social historian and conservative publicist Allan C. Carlson has the following to say about “American demographic exceptionalism” (Family Research Council, Dec. 2005):

*“Europe is dying; and so may be Japan, also done in by a broad rejection of children. However, unlike the 1960s and 1970s, when America was leading the global retreat from marriage and children, something different is now happening here: Americans are breaking free from Malthusian darkness.”*

Carlson offers explanations:

*“This was not, as some suggest, a function of a rising number of births out of wedlock. Between 1995 and 2000, even marital fertility rose by 11 percent, the first sustained increase in that number since the mid-1950s. Nor was this a function of America’s greater ethnic diversity. The increase in fertility among Americans of European descent actually climbed by 19 percent, to a total fertility rate of 2.065 ....The best explanation for America’s greater fecundity is the higher degree of religious identification and behavior shown by Americans, when compared to Europeans. In the year 2000, 45 percent of Americans reported attending religious services during the prior week; in Europe, under 10 percent.”*

The notion of American demographic “exceptionalism” and its international significance is echoed in influential publications (e.g. N. Eberstadt in American Enterprise Institute, 2004). Also the British magazine *The Economist* (2002) projected a US population of half a billion in 2050 and a declining EU population to just over half its current size. And Phillip Longman echoes the same views in *Foreign Policy* magazine (2006) and in an editorial in *USA Today* (13.03.2006). And, as the editorial’s title indicates, “*The Liberal Baby Bust*”, the core issue is again differential fertility between the religious and the secular. But in this piece, Longman clearly recognizes the duality in this respect within the US, and links it directly to what is now often referred to as the contemporary US version of the late 19<sup>th</sup> Century German *Kulturkampf*, or “American Culture War” (cf. J.D. Hunter, 1991):

*“Tomorrow’s children, therefore, unlike members of the postwar baby boom generation, will be for the most part descendants of a comparatively narrow and culturally conservative segment of society. To be sure, some members of the rising generation may reject their parents’ values, as often happens. But when they look for fellow secularists with whom to make common cause, they will find that most of their would-be travelers were quite literally never born. Many will celebrate these developments. Others will view them as the death of Enlightenment. Either way, they will find themselves living through another great cycle of history.”*

Obviously a “great story” around the SDT is unfolding in the US as well. But is it indeed a story of American “exceptionalism” with the US population being overwhelmingly immune to the SDT features largely as a result of higher spiritual values and social conservatism? Or is it a sub-narrative of the presumed “Culture War” between the “red” and the “blue” parts of America, with the “red” outbreeding the “blue”? Or is it a more complex story where ethnic differentials in fertility do make an appreciable difference, and where older, equally typical American features such as high teenager and poverty related single mother fertility still play a major role?

Time to take stock. In what follows, we shall first give a summary of the most important US trends in patterns of fertility and household formation. But the lion’s share of the analysis will be devoted to the description of the US spatial patterns in these respects and to the detection of their correlates. We will do so first at the level of the 50 states and subsequently for the 3141 counties. From this it will be abundantly clear that the US is a very heterogeneous country, with perhaps even more variation within its borders than the EU-25, and that many of its features come closer to being “SDT textbook examples” than “demographically exceptional”. Finally, in what follows we shall often introduce the ethnic distinctions in the US since large parts of the Hispanic population are still in the process of completing their “first demographic transition” and therefore statistically distort the SDT picture for most of the others.

## 2. Major SDT – components in the US.

In this section we shall document that marriage and fertility postponement, premarital cohabitation and even fertility within cohabitation follow similar trends as in Western Europe, but also that the current spatial variation in the US remains very important.

First of all, ages at first marriage for both non-Hispanic white and black populations alike have been rising since the 1970s and that occurred in tandem with a rise in both single living and especially cohabitation. As can be seen in Table 1 with data from the US National Survey of Family Growth (R.K. Raley, 2000, p. 27), the majority (62%) of the cohort of white women born in 1950-55, and reaching age 25 in the late seventies, was married by age 25 and they had done so without premarital cohabitation. In that cohort, a further 12% was already married by that age, but had started a cohabiting union prior to their marriage. Another 6% of white women was still in cohabitation by age 25, and only 20% had not yet started a union at all. The contrast with the cohort born in the years

1965-69, and reaching age 25 in the early nineties, is striking. For the latter the proportion directly moving into marriage was almost halved, from 62 to 32%, and the shares of those married after cohabitation and of those still in cohabitation by age 25 both doubled, from 12 to 25 and from 6 to 14% respectively. Also, the proportion still single rose from 20 to 29 %. Note the shift among the black population as well: by age 25, the percentage directly married without prior cohabitation declined from 44 to barely 18% in the same period, whereas the proportion still cohabiting by age 25 increased from 12 to 23%.

**Table 1: Changes in patterns of union formation among US white and black women: positions at age 25 for 4 birth cohorts.**

At age 25 :	1. No union	2. Cohabiting and not married	3. Married after cohab	4. Married without cohab
White women, cohort of:				
1950-54	20%	6	12	62
1955-59	22	11	18	49
1960-64	25	14	21	40
1965-69	29	14	25	32
Black women, cohort of:				
1950-54	31%	12	13	44
1955-59	47	16	10	27
1960-64	44	22	12	22
1965-69	46	23	14	18

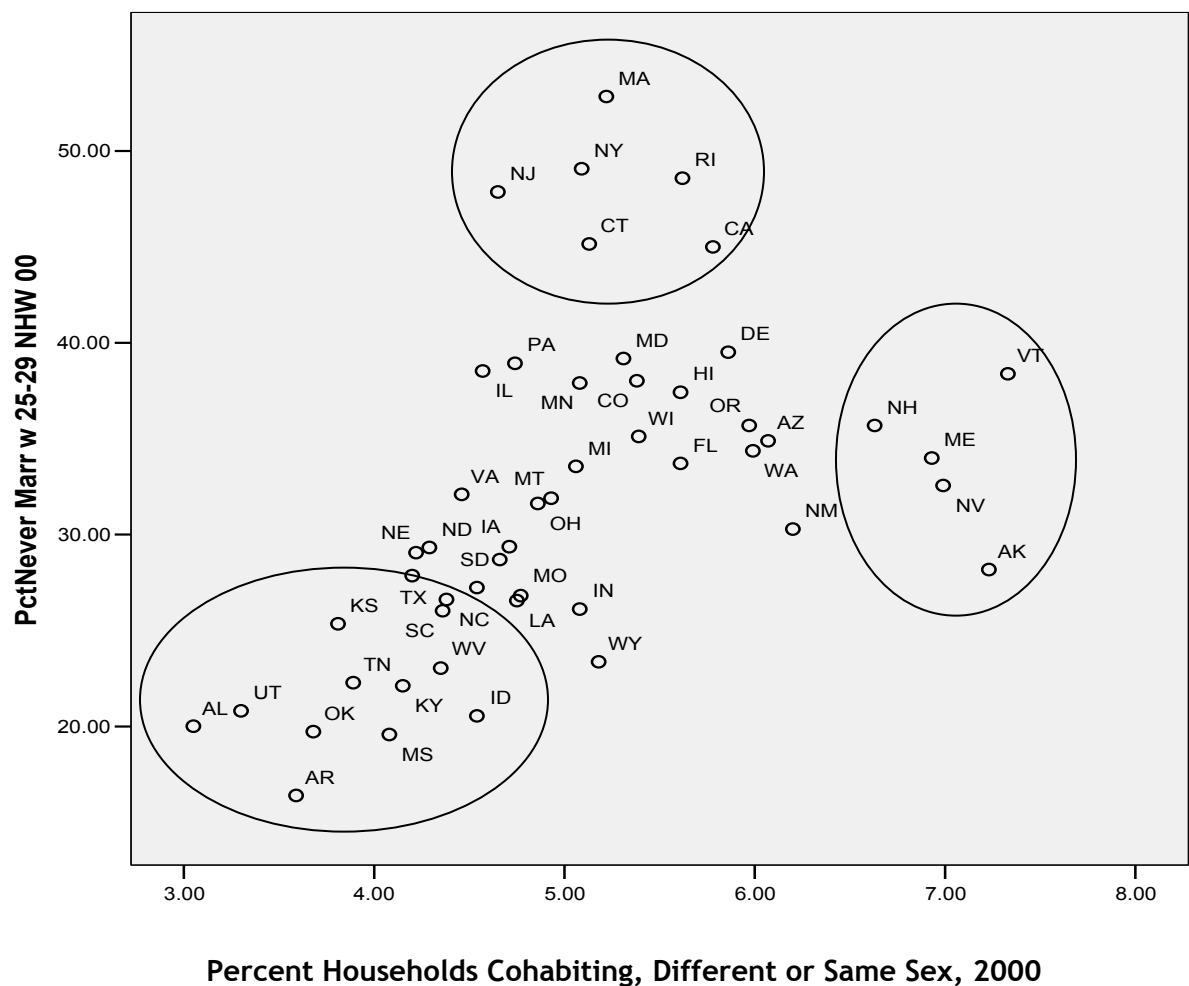
Source: US National Survey of Family Growth, 1995 as reported by R.K. Raley, 2000, p.27, fig 2.5.

From these figures it is clear that not only the age at first marriage was rising, but also that the spread of cohabitation was largely responsible for this. In other words, the US is hardly an exception in this respect and exhibits a trend similar to Europe's since the 1970s.

However, as in the EU (from Sweden to Greece), the US overall pattern hides very large spatial differentials. The degree of heterogeneity can be appreciated from Figure 1, where a plot is presented of the 50 states according to an indicator of marriage postponement and an indicator of the incidence of cohabitation (2). More precisely, marriage postponement is measured via the proportion of women aged 25-29 never married as recorded in the US Census of 2000, and cohabitation as the percentage of all households headed by unrelated adults of the same or of a different sex. Obviously, the positive relationship between the two indicators shows up ( $r = .51$ ), but the main purpose of the figure is to highlight the position of the various states in this typical SDT two-dimensional space of marriage being postponed or declining in favor of cohabitation. The plot reveals the existence of several clusters with more distinct patterns:

1. There is a *pattern of early marriage and little cohabitation*. A large part of the South fits this picture, with states ranging from West Virginia, Tennessee, Kentucky and the Carolinas to Alabama, Mississippi, Oklahoma, Arkansas and Texas. But also Utah and Idaho have less than a quarter of non-Hispanic white women never married in the age group considered, in combination with less than 5 % of households headed by cohabitants.
2. At the other end, a first contrasting group is characterized by *very late first marriage and medium levels of cohabitation*, and it is made up of several northeastern states (New York, Massachusetts, Rhode Island, New Jersey, Connecticut) and California.
3. And a second contrasting one combines *a high incidence of cohabitation with intermediate proportions never married women 25-29*. This group contains the rest of New England, but also Nevada and Alaska. Evidently, the states in group 3 have a higher proportion of younger adults in a union (either marriage or cohabitation) than group 2.

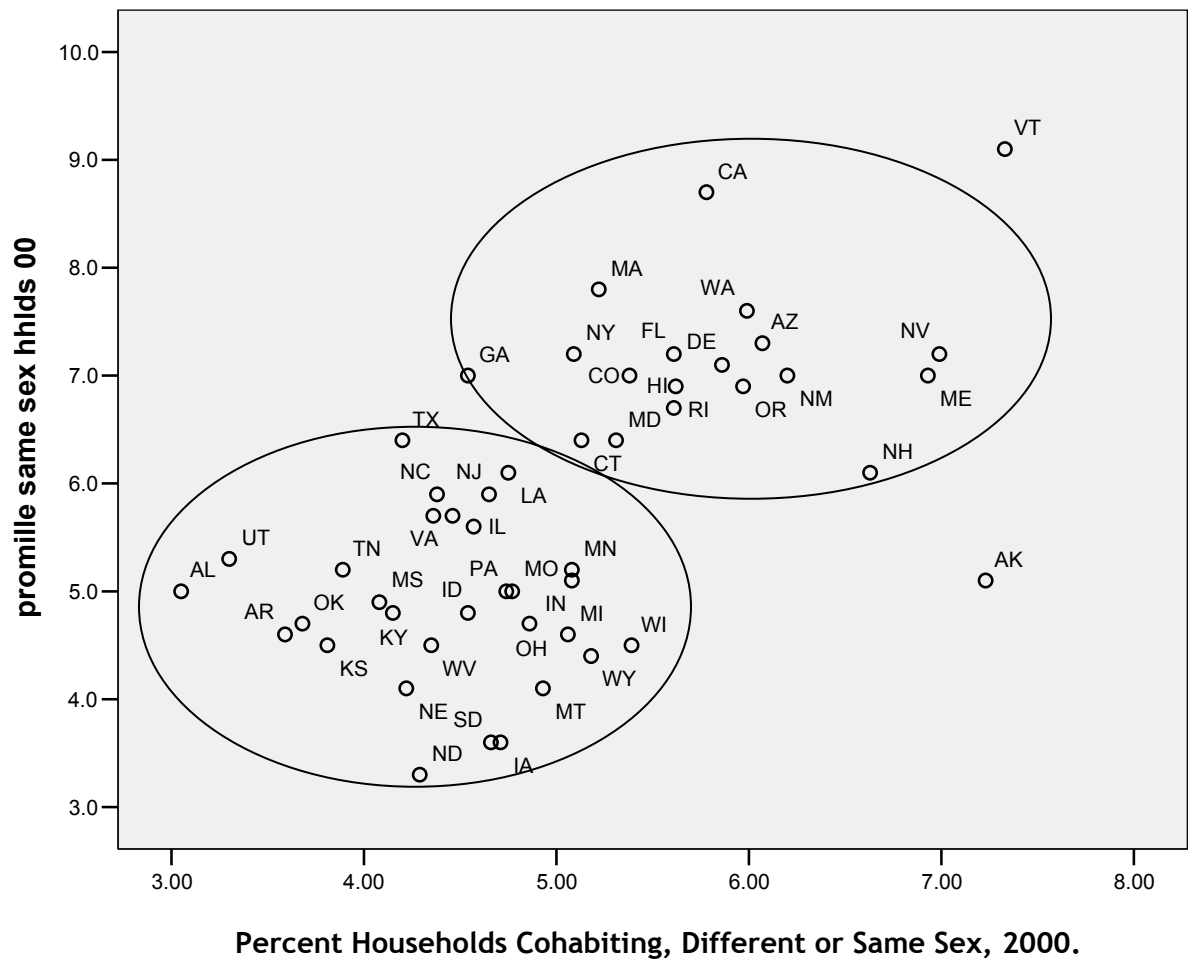
**Figure 1: Location of states with respect to the postponement of marriage (Y-axis) and the incidence of cohabitation (X-axis): 2000**



Source: Census of Population and Housing, SF1 files: 2000.

A similar picture can also be presented with respect to same sex households. This is done in Figure 2. Note, however that the incidence of cohabitation in general is expressed as a percentage of all households, whereas that of same sex cohabitation in pro mille: needless to say, same sex cohabitation is still a very exceptional feature, and taking it as the cause of low fertility, as some conservative publicists suggest (e.g. M. Gallagher, Universal Press Syndicate, 06.03.2006), is of course totally unfounded.

**Figure 2: Location of states with respect to the incidence of same sex cohabitation (Y-axis) and all forms of cohabitation (X-axis): 2000**



Source: Census of Population and Housing, SF1 files: 2000.

The plot in Figure 2 clearly indicates that there is again a correlation ( $r = .60$ ) between the incidence of same sex and of overall cohabitation. But, as in the previous figure, there is still quite a bit of variation left. The striking feature of the plot is the existence of two clusters of states that are more differentiated by the incidence of single sex

households than by that of overall cohabitation. Also, among the states that have higher percentages cohabiting (e.g. more than 5 percent), some have considerably higher shares (e.g. above 7 per thousand) of same sex households than others. The “most tolerant” states with respect to both cohabitation in general and same sex cohabitation are clearly Vermont and California, followed by Massachusetts, Washington, New York, Delaware, Florida and Maine. They are very closely followed by a few others such as Colorado, Oregon, New Mexico and Hawaii. At the other extreme are states with a low incidence of both same sex and overall cohabitation, but there is no systematic southern cluster. Instead, the low cohabitation states on both accounts are often mid-western and include the Dakotas, Iowa, Kansas, Nebraska, Montana, and Idaho, along with Ohio, West Virginia, Kentucky, Oklahoma and Arkansas.

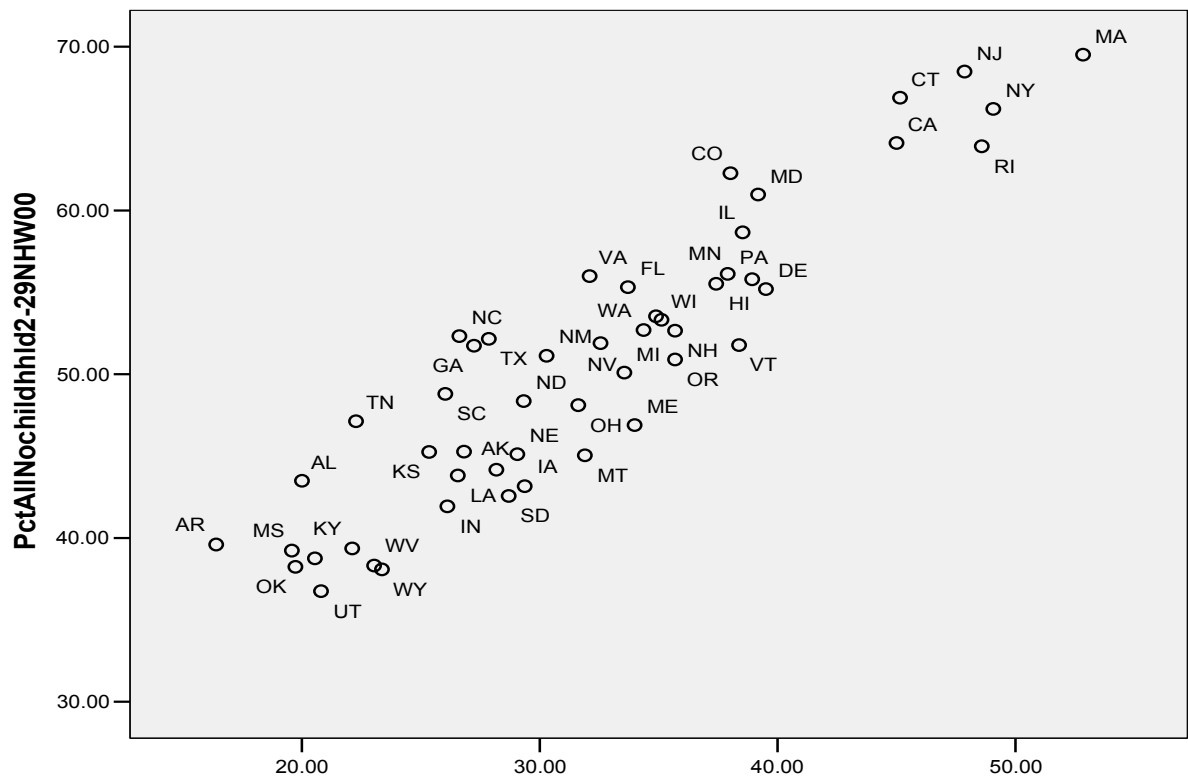
In Europe and Canada the steady expansion of the proportions cohabiting was soon followed by the emergence of a new feature: procreation within cohabitation or parenthood without converting the cohabiting union into a marriage. In countries with low teenage non-marital fertility, the trend of within cohabitation fertility can fairly well be documented by the overall increase in out of wedlock fertility, but in the US the matter is much more complicated and does not permit such a straightforward interpretation. The main reason for this is that the unmarried birth rate has a number of contributing components which cannot easily be separated via the current background information. For our purposes we would ideally need to know whether the birth occurred to a single mother or a cohabiting one, but there is to our knowledge no information in the vital registration on the presence of a partner. Hence, in order to get an idea about a possible trend in cohabitation fertility, we have to work via indirect indications, such as the age and the ethnic affiliation of the mother. But none of that comes remotely close to a direct measurement based on information about the presence of a partner at the time of the birth.

The basic facts (see S. Ventura and C. Bachrach, 2000) are that non-marital fertility rose uninterruptedly from a low level of about 90,000 in 1940 to 1.47 million in 2003 (Medical News Today, Oct. 31, 2005). In terms of the share of all births, non-marital births accounted for 3.8 % in 1940 and for 35.7% in 2003. The birth rate per 1000 unmarried women aged 15-44 rose from 7 to 46 in 2004 (NCHS, 2005). But since the number of unmarried women has been growing rapidly (expansion of the population at risk), the non-marital birth rate 15-44 has tended to stabilize since the early 1990s. In terms of absolute numbers, a decline is found among teenagers but not in the older age groups. Also in terms of non-marital birth rates per 5-year age groups, there is that sustained decline since 1991 among teenagers, but not so much among the older women, including those in their thirties (S.Ventura and C. Bachrach, p. 24, NCHS, 2005, figure 1). In fact, women in the age groups 20-24 and 25-29 are the main contributors to the overall rise in numbers of non-marital births after 1994. Moreover, the decline in the share of teenagers occurs both among black and white populations, but the rises after age 20 are predominantly a white contribution (see S.Ventura and C. Bachrach, p. 19-20). This fuels the speculation that there has been a gradual shift in terms of relative contributions from teenagers remaining single to women in their twenties proceeding with reproduction within cohabitation. This is corroborated by

survey data (Natl. Survey of Families and Households 1988, and Natl. Survey of Family Growth 1995 – see R.K. Raley, 2001: table 4) which show that the share of all births contributed by cohabiting women 15-29 rose from about 5 % in the period 1970-74 to 12 % in 1990-94, and that of single women 15-29 rose from 13 to 23 %. Evidently the share of births among married women then declined from 82% to 65% over the same period. Also an *increasing* proportion of singles decided to cohabit before the child's birth, and a *decreasing* proportion of cohabiters converted their union into marriage before that birth (J.A. Seltzer, 2000, R.K. Raley, 2001). These survey figures document the trend prior to 1995, and no such a clear decomposition is available for subsequent years. But the bottom line is that, despite the lack of such a finer decomposition, all indications point in the direction of both a greater incidence and a greater acceptability of procreation within cohabitation in the US as well.

A third, and major component of the SDT is the postponement of parenthood and the development of a late fertility schedule. The degree of postponement can be documented easily via the proportions of women never married in the age group 25-29 or 30-34 and via the proportions that are still childless by these ages. In Figure 3 those percentages found in the census of 2000 by state are shown for non-Hispanic white women aged 25-29.

**Figure 3: Location of states with respect to percentages never married (X-axis) and childless (Y-axis) among non-Hispanic white women 25 to 29: 2000**





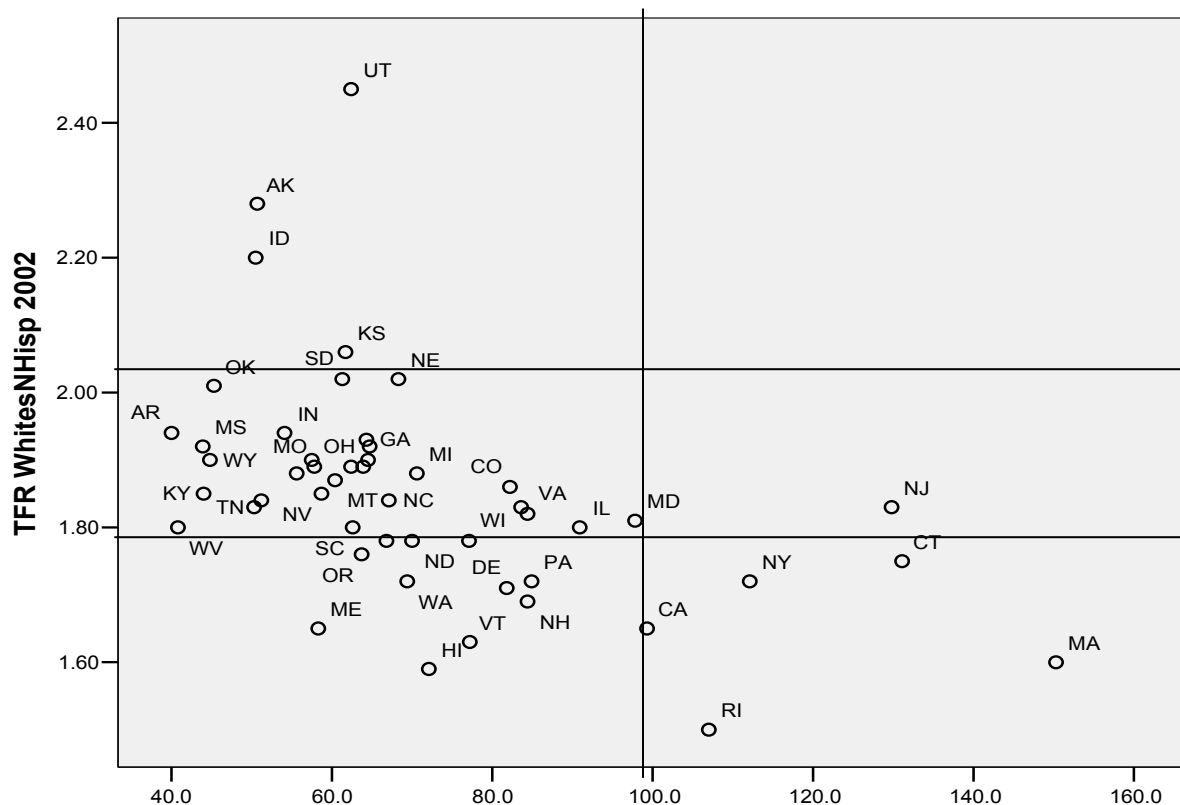
### Percent never-married non-Hispanic white women, 2000

Source: Census of Population and Housing, SF1 and PUMS files: 2000

There is of course a strong positive correlation between these postponement indicators ( $r = .92$ ), but the scatterplot mainly shows the spatial pattern of the unfolding of the SDT. The vanguard in the US with respect to postponement is once again made up of Massachusetts, New Jersey, New York, Connecticut, Rhode Island and California. In these six states, about half of the non-Hispanic white women are not yet married, and more than 60 percent have not made it yet to parenthood. At the other extreme, there is a group of states where less than a quarter of non-Hispanic white women are still single and less than 40 percent still childless. This group is composed of West Virginia, Kentucky, Oklahoma, Mississippi, Arkansas, Utah and Wyoming.

The postponement of fertility is also associated with well below replacement fertility, as is shown in Figure 4. Here we have made use of the non-Hispanic white total fertility rate for 2002 and an index of fertility postponement for these women at the same date (data in Sutton and Mathews, National Vital Statistics Report, 2004, vol. 52, no. 9). The latter index is the ratio of the sum of the age specific fertility rates above age 30 over the sum of these rates between 20 and 29. In this index, teenage fertility is left out since this constitutes an entirely different issue and a variable with another sociological connotation.

**Figure 4: Location of states with respect to the total fertility rate (TFR) in 2002 and the index of fertility postponement in 2002: non-Hispanic white women**



**Postponement index: Fertility above age 30 to Fertility between 20-29 among non-Hispanic white women: 2002.**

Source: NCHS, 2004, vol. 52, no. 9).

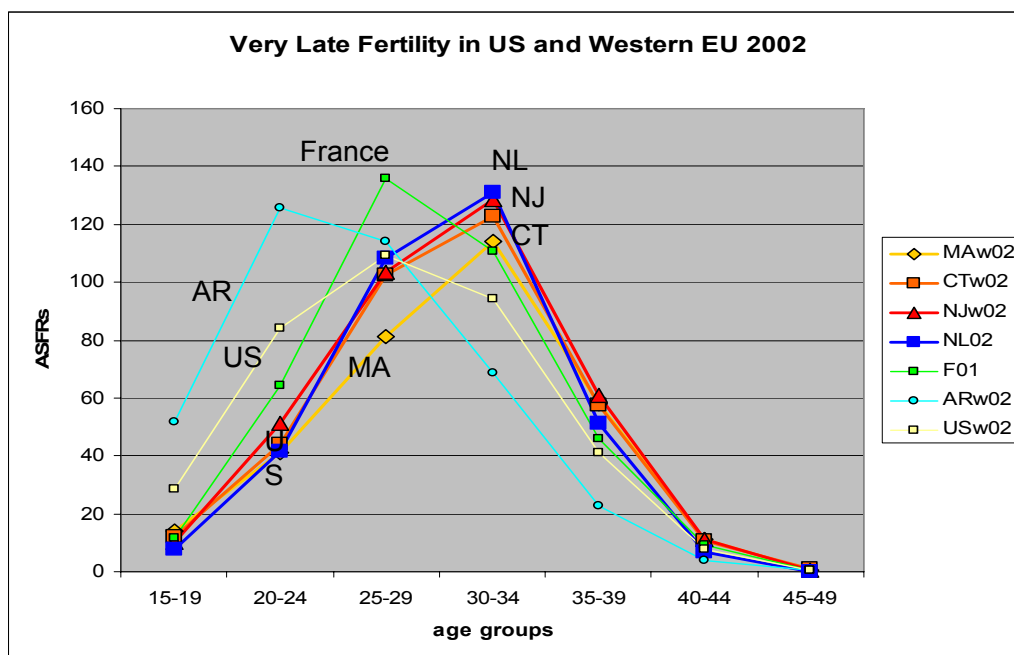
First of all the figure reveals that for the non-Hispanic white population of the US, only 4 states have above replacement fertility (i.e. higher than 2.05 children): Utah and Idaho, Alaska and Kansas. Three come very close: Oklahoma, South Dakota and Nebraska. All of these states have early fertility schedules for non-Hispanic white women. But in many other states, an early fertility schedule (not counting teenage fertility) is not a guarantee for preventing sub-replacement fertility. For instance, Arkansas, Kentucky, West Virginia, Mississippi and Wyoming have the youngest fertility schedules in the US, but all have sub-replacement fertility among non-Hispanic white women.

Obviously, at the other end of the distribution the leading states with respect to postponement typically dip below a TFR of 1.80 (California, New York, Connecticut) and even below 1.60 (Rhode Island and Massachusetts). Evidently, these states have patterns of fertility that are completely similar to those of the western European countries. In fact, in the EU the Netherlands have for a long time held the record of fertility postponement, and as shown in figure 5, the non-Hispanic white population of Connecticut and New Jersey are just as late, and Massachusetts even beats the Dutch in this respect. For comparison also the schedules for France and the US as a whole (non-

Hisp. whites) are added to the figure, together with the earliest age schedule of all US states, i.e. that of Arkansas.

If we take a typical western European or Scandinavian postponement index of about 0.80 as a benchmark and compare the US non-Hispanic white populations with the European SDT countries, then we should add a number of other states to the American trio of Massachusetts (postponement index = 150 as against 126 for the Netherlands or 107 for Sweden), Connecticut (131) and New Jersey (130). These extra states would be: New York (112), Rhode Island (107), California (99), Maryland (98), Illinois (91) Minnesota (84), New Hampshire (84), and Delaware (81). In these instances fertility after age 30 would be 80% or more of that between ages 20 and 29. At the other end of the distribution the lowest postponement indices in the non-Hispanic white populations of the US are for Arkansas (40), Mississippi (41), West Virginia (41), Kentucky (45), Wyoming (45), Oklahoma (45), Tennessee (50), Alaska (51), Idaho (51) and Alabama (51).

**Figure 5: Age specific fertility schedules in the Netherlands and France and in selected non-Hispanic white populations of the US, 2002.**



In Europe the Dutch (NL) had the latest age schedule of fertility, with a typical peak in the age group 30-34. The non-hisp. white populations of New Jersey and Connecticut now have a schedule that is just as late, and non-hisp. whites of Massachusetts even have a later one. Arkansas has the youngest age pattern among non-hisp. whites of all 50 states, with white teenage fertility being higher than that of all women after age 35.

From this section it is evident that the demographic map of the US with respect to patterns of family formation exhibits very strong contrasts. A very sizable portion of the US non-Hispanic white population exhibits all the typical SDT characteristics, whereas another major segment of it shows few signs of this new demographic pattern.

#### 4. Spatial patterns of family formation: dimensions and correlates at the state level.

In this section we intend to give a more complete analysis of the spatial dimensions of the US patterns of reproduction and their socio-economic and cultural or political correlates. For this purpose we have enlarged the set of demographic indicators to include other variables pertaining to teenage and non-marital fertility, incidence of abortion, divorce rates, and household composition indicators measured at the level of the 50 states. As a rule of thumb, we have also chosen two different indicators to capture a particular phenomenon in order to minimize idiosyncratic indicator effects. For instance, the incidence of abortion is measured once per 1000 live births and once per 1000 women aged 15-44. Similarly, fertility postponement is indicated by the vital statistics based postponement ratio (see above) and by the census based percentage of women still being childless at ages 25-29 or 30-34. In the current analysis, 19 such demographic indicators are used, and they essentially contain two distinct dimensions in the patterning of US family formation. These two dimensions emerged very clearly from a classic Principle Component Analysis (PCA), followed by a Varimax orthogonal factor rotation. Together the two factors explain 67.3 percent of the total variance contained in the 19 indicators. The definitions of the variables and the respective factor loadings are presented in Table 2 below. The variables are ordered by absolute value of factor loadings on factor 1.

**Table 2: Demographic indicators and their two underlying dimensions: definitions and factor loadings (50 states).**

<i>Loading = correlation with:</i>	<i>Factor1 SDT</i>	<i>Factor 2</i>
• % non-Hisp white women 25-29 without children in household, 2000	<b>.933</b>	-.186
• % non-Hisp white women never married, 2000	<b>.905</b>	-.370
• % non-Hisp white ever married women without own children in household, 2000	<b>.902</b>	-.097
• Abortions per 1000 live births, 1992	<b>.887</b>	.057
• % non-Hisp white women 30-34 never married, 2000	<b>.882</b>	-.326
• Abortion rate per 1000 women 15-44, 1996	<b>.836</b>	.136
• Fertility postponement ratio (fert.30+ / fert.20-29), 2002	<b>.794</b>	-.411
• Same sex households per 1000 households, 2000	<b>.754</b>	.191
• Non-Hisp white total fertility rate, 2002	<b>-.725</b>	.009
• Non-Hisp. white fertility rate 15-19, 2002	<b>-.675</b>	<b>.633</b>
• % households that are “families”, 1990	<b>-.642</b>	.328
• % households with same or different sex cohabitators, 2000	<b>.517</b>	-.148
• Divorce rate per 1000 population, 1990	-.457	<b>.548</b>
• Total fertility rate, all races, 2002	.338	-.155
• % non-marital births, 1990	.329	<b>.803</b>
• % teen births, 1986	-.303	<b>.875</b>
• Divorce rate per 1000 population, 1962	-.277	.462
• % population 30+ living with and responsible for grandchildren, 2000	-.189	<b>.886</b>
• % non-marital births, 2000	.182	<b>.851</b>

Factor loadings > .50 in bold.

The first principle component is mainly identified by all the postponement indicators of both marriage and parenthood among non-Hispanic whites, the higher incidence of abortion, the non-conventional household types based on cohabitation, and by lower overall fertility levels. In other words, the first principle component clearly identifies the emergence of the SDT in the 50 states. A typical American feature compared to the western European pattern, however, is that the maps of the divorce rates in the US are not positively correlated with this SDT dimension, but negatively so. Apparently, the very early rises in American divorce rates from the late 1940s onward created a different spatial pattern, which is not related to that of the current SDT. This feature is also related to the fact that Catholic states rather than Protestant ones kept low divorce rates in the US. But the bottom line here is that the early divorce maps do not predict the later SDT ones in the US, whereas they do in several EU countries (R. Lesthaeghe and K. Neels, 2002).

The other principle component (uncorrelated to the first one) is identified by high teenage fertility, including that of non-Hispanic whites, high fertility out of wedlock, and households where not the parents but the grandparents have become the caretakers of children. This is evidently an older dimension of early family formation in the US with unmarried teenagers or young women, black or white or Hispanic, becoming mothers, ending up as single parent households, or needing their own parents to look after their children.

The location of the states with respect to these two dimensions of American family formation is shown in figure 6. The four quadrants in the figure identify 4 contrasting types of family formation. At the bottom left are states that are resisting the SDT-features so far, but that are also conservative in the sense that they have few teenage mothers, low non-marital fertility, and hence few grandparents needing to look after grandchildren. The typical states in this cluster are the Dakotas, Nebraska, Iowa, Wyoming, Idaho and Utah. The other cluster that is resistant to the SDT so far, but has high proportions of teenage mothers, lone mothers and reliance on grandparents is located in the lower right hand corner of figure 6. It contains typically southern states, such as South Carolina, Alabama, Mississippi, Louisiana, Tennessee, Oklahoma and Arkansas.

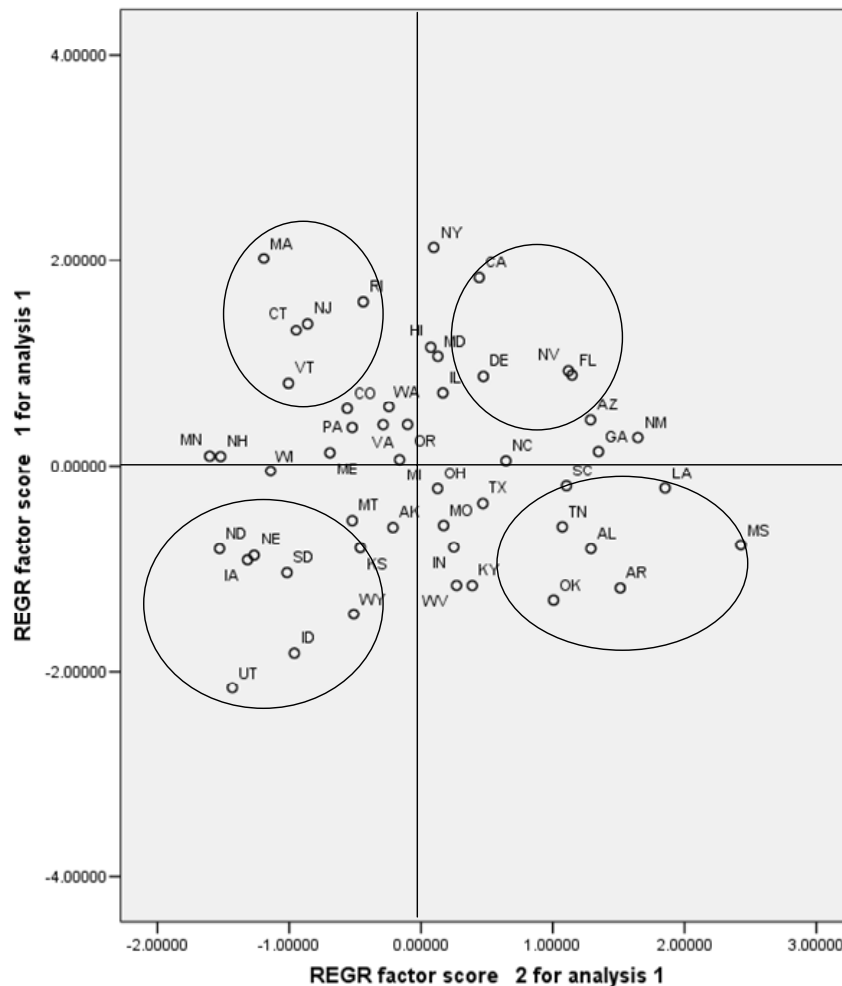
The states that are leading with respect to the SDT are found in the upper half of Figure 6, but they too are differentiated with respect to what happens with their children. High on SDT, but conservative re teenage motherhood are several northeastern states: Massachusetts, Vermont, Rhode Island, Connecticut and New Jersey. Also high on SDT but experiencing more early teenage fertility and lone or needy parents are California and Nevada, but also Delaware and Florida. Aside from the four “corner” types in Figure 6, there is of course the middle of the road America with average scores on both dimensions. Typical examples thereof are Michigan, Ohio, Virginia or Oregon which are all located near the center of the graph.



Figure 6: Location of states with respect to two principle components of US family formation (scales in standard deviations).

**SDT –dimension:**

NHWites marriage  
+ fertility  
postponement,  
subreplacement  
fertility, low  
teenage fertility,  
abortion,  
cohabitation, same  
sex hhlds.



**Older dimension :**  
high teenage and  
non marital  
fertility (also for  
NHWs),  
grandparents  
resp. for  
grandchildren,  
higher divorce.

These two basic dimensions of US family formation can be related to a series of economic (income, poverty), socio-economic (education, urbanity), political (voting) and cultural (ethnicity, religion) variables. The correlates of the two dimensions are presented in Tables 3 and 4. The left hand column repeats the correlation or factor loadings of each of the demographic indicators and the principle component, whereas the left hand column reports the best predictors of each principle components together with the correlation coefficients. These tables permit a further interpretation of the regional demographic picture of the US.

**Table 3: Best indicators and correlates of the SDT-dimension**

US 50 states: First demographic dimension (SDT)  
Factor loadings (left) and Best correlates (right)  
PCA with Varimax rotation

• % No own child NHW women 25-29, 2000	+ .93	• % Vote Bush, 2000	-.88
• % Never married, NHW women 25-29, 2000	+ .91	• % Vote Bush, 2004	-.87
• % No own child NHW ever married 25-29	+ .90	• Disposable Personal Income, 2001	+ .70
• Abortions per 1000 live births 1992	+ .89	• % Metropolitan, 2000	+ .68
• % Never married NHW women 30-34, 2000	+ .88	• % Metropolitan, 1970	+ .65
• Abortion rate per 1000 women 15-44, 1996	+ .84	• % Catholic, 1990	+ .62
• NHW fertility postponement index, 2002	+ .79	• % Evangelical*, 2000	-.62
• % Same sex households, 2000	+ .75	• % Population 25+ with BA, 1990	+ .62
• NHW total fertility rate, 2002	-.73	• % Workers unionized, 2001	+ .50
• NHW 15-19 total fertility rate, 2002	-.68	• Disposable personal income, 1980	+ .49
• % Households "families" 1990	-.64	• % Vote Nixon 1972 (vs McGovern)	-.46
• % Cohabiting households, 2000	+ .52	• % Vote Goldwater 1964 (vs Johnson)	-.43
• Divorce rate per 1000 population, 2000	-.46		

\*NHW = Non-Hispanic whites

\*Includes Mormons in Utah

**Table 4: Best indicators and correlates of the teenage and non-marital fertility dimension**

US 50 states: Second demographic dimension (Vulnerable children)  
Factor loadings (left) and Best correlates (right)  
PCA with Varimax rotation

• % grandparents responsible for grandchildren in households, 2000	+ .89	• % Population 25+ HS graduates, 1990	-.69
• % births to teenagers, 1986	+ .88	• % population in poverty 1998-2000	+ .66
• % births to unmarried women, 2000	+ .85	• % population black, 2000	+ .66
• % births to unmarried women, 1990	+ .80	• % population non-Hispanic white, 2000	-.61
• NHW 15-19 total fertility rate, 2002	+ .63	• % Evangelical/Mormon	+ .57
• Divorce per 1000, 1990	+ .55	• % vote Goldwater 1964 (vs Johnson)	+ .54
• Divorce per 1000, 1962	+ .46	• % vote Nixon 1972 (vs McGovern)	+ .54
• NHW Fertility postponement index, 2002	-.41	• % Population 25+ with BA, 1990	-.45
		• Disposable person income, 2001	-.43

Table 3 shows that the SDT- dimension is strongly correlated with being a wealthier state, with disposable household incomes above the US average, and with being highly urbanized and high percentages of the population living in metropolitan areas. Moreover, the SDT map also correlates positively with high proportions of Catholic populations (many not practicing) and higher proportions of adults having college degrees (BA and higher). Finally, also states with high proportions of unionized workers tend to score higher on the SDT dimension.



The SDT is clearly negatively correlated with high proportions being Evangelical Christian and with conservative Republican voting in the past, i.e. in favor of Goldwater (as opposed to Johnson) and in favor of Nixon (against McGovern). But the most striking feature of all in Table 3 is undoubtedly the very strong negative correlation between the SDT pattern and the percentage vote for G.W. Bush (-.88 and -.87) in 2000 and 2004 respectively. The so called “blue states” are high on SDT and the “red ones” low. We shall return to this point later on in greater detail, since it is the most striking finding in this analysis.

The correlates of the teenage and unmarried mothers dimension are all too well known. These demographic features are correlated with lower average disposable incomes, lower proportions finishing high school, with higher proportions in poverty, higher proportions black or Hispanic, but also with high proportions Evangelical Christians or Mormons. America’s “Bible belt” that reacts strongly against the manifestations of the SDT also tends to be the home of poverty and low education based teenage childbearing, young lone mother families, and higher divorce rates.

##### 5. The SDT- Bush connection.

On occasion demographers have been quite successful in predicting election results, although their preoccupation goes in the opposite direction: linking demographic outcomes to cultural and political indicators. Examples are the strong relations between voting for secular parties and the speed of the fertility decline during the first demographic transition (e.g. R. Lesthaeghe and C. Wilson, 1986) or the prediction of the regional outcomes in the Italian divorce referendum of the 1970s on the basis of the timing of the same historical fertility transition 40 years earlier (M. Livi Bacci, 1977). But the very strong negative correlation found here between the SDT dimension (i.e. factor 1 in Table 2) and the percentage votes for G.W. Bush is to our knowledge one of the highest spatial correlations between demographic and voting behavior on record.

While some may have expected these correlations to be stronger in 2004 than in 2000 because the electorate seems to have been far more divided and polarized on issues in 2004, an examination of selected results from the exit polls for both elections shows that most of the ‘cultural divide’ was well-established in 2000. Of course, the controversy over the Florida vote in 2000 cemented already existing divisions. Events between 2000 and 2004 (9/11, war on terror, war in Iraq, same sex marriage amendments, etc.) and the increasingly right and left leaning news sources further contributed to the perception of a more polarized public in 2004.

Table 5 shows the percentage voting for Bush in 2000 and 2004 according to their exit poll answers. The percentages voting for Bush in the exit polls according to demographic, ethical and cultural characteristics are remarkably similar across the two elections. For instance, 74 percent of those who felt abortion was always illegal voted for Bush in 2000 and 77 percent with these views voted for him in 2004. The religious right went strongly for Bush in both elections (80 and 78 percent).

**Table 5. Percentage Voting for Bush in 2000 and 2004 according to Responses to Election Day Exit Polls**

<b>Vote for Bush in Election Year:</b>	<b>2000</b>	<b>2004</b>
<b><i>Demographic Characteristic</i></b>		
Women	43	48
White	54	58
African American	9	11
Hispanic		44
Married	53	57
Married, with kids	56	59
Gay	25	25
Union Member	34	38
<b><i>Political Identity</i></b>		
Democrat	11	11
Liberal	13	13
Conservative	81	84
<b><i>Religion/Religiosity</i></b>		
Protestant	56	59
White Protestant	63	68
White religious right*	80	78
Church, more than weekly	63	64
Church, weekly	57	58
Church, monthly	46	50
Church, a few times a year	42	45
Church, never	32	36
<b><i>Values</i></b>		
Abortion always legal	25	25
Abortion mostly legal	38	38
Abortion mostly illegal	69	73
Abortion always illegal	74	77
Clinton scandals were very important	80	-
Lieberman's religion makes him a worse V.P.	72	
Moral values are most important issue	-	80
Terrorism is most important issue	-	86
Same sex couples should be allowed to legally marry	-	22
Things are going well in Iraq	-	90

\*Choice was white religious right in 2000 and born again white in 2004

Of course, some issues like terrorism, the war in Iraq, and same sex marriage were not on the radar in 2000. Voters' feelings on these issues were strongly associated with their vote in 2004. Some comparable items available in 2000 and not in 2004 were questions about the importance of the Clinton scandals and Lieberman's religion. Clinton's liaison with Lewinsky was viewed very unfavorably by Bush voters; likewise, Lieberman's religion was a negative (or perhaps a question mark).

It is useful to reproduce the scatterplot between the SDT values and the vote for Bush across the 50 states. Because the correlation between a state's vote for Bush in 2000 and 2004 is .97, we will only show the results for 2004. This is presented in Figure 7. Obviously also strong correlations hold with respect to the various components of the SDT dimension. For instance, the percentage voting for Bush correlates strongly with the percentage of non-Hispanic white women never married at ages 25-29 (postponement of first marriages) ( $r = -.84$ ) or with the percentage of non-Hispanic white women 25-29 without children (fertility postponement) ( $r = -.78$ ), and even with the non-Hispanic white TFR in 2002 ( $r = +.78$ ). ( $r = +.77$ ). The scatterplots for these relationships are also reproduced here in Figures 8 through 10.

**Figure 7**

**Relationship between the "Second Demographic Transition" Dimension in the US 50 states and the Vote for Bush, 2004 ( $r = -.87$ )**

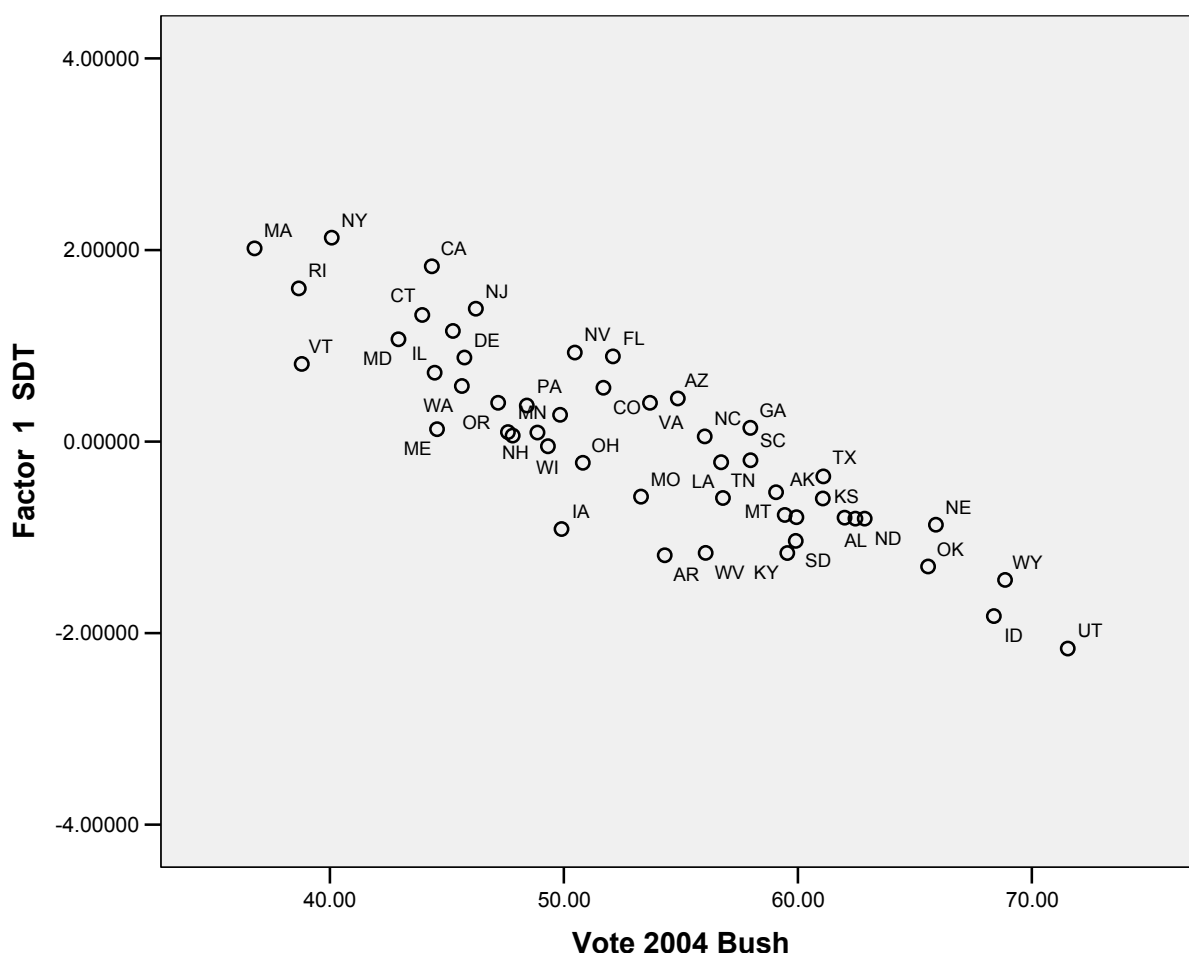


Figure 8

Relationship between Postponement of First Marriages among Non-Hispanic White Women in 2000 and the Percent Voting for Bush in 2004 ( $r = -.84$ )

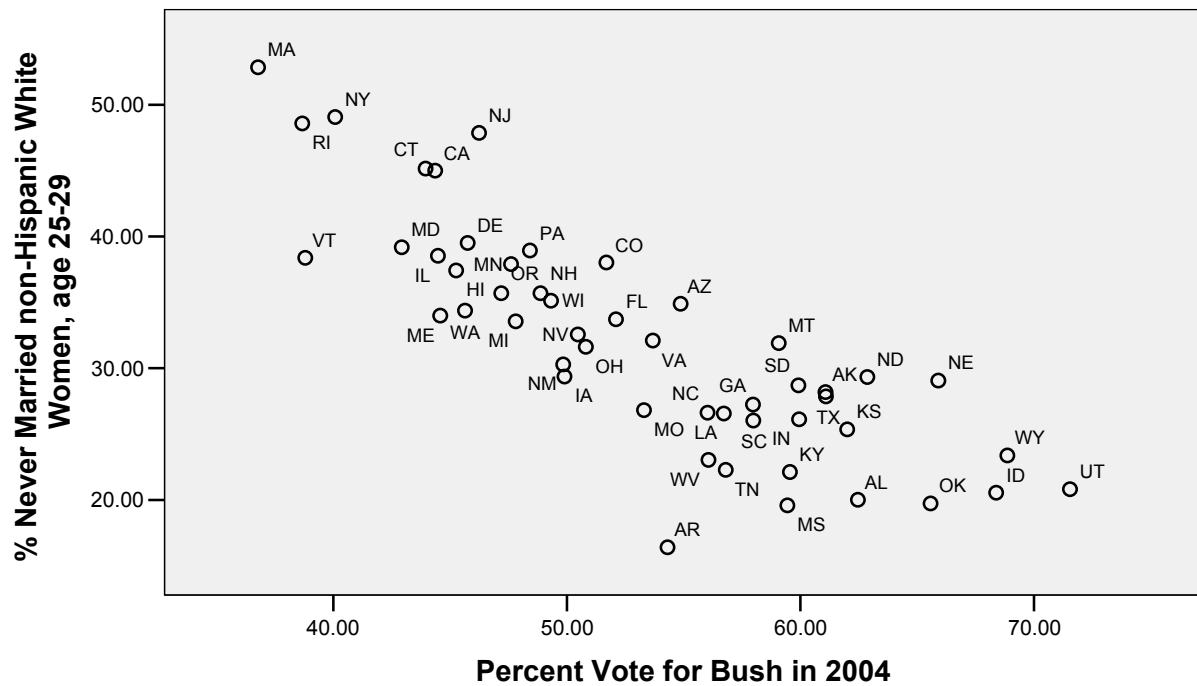


Figure 9

Relationship between Postponement of First Births among Non-Hispanic White Women in 2000 and the Percent Voting for Bush in 2004 ( $r = -.78$ )

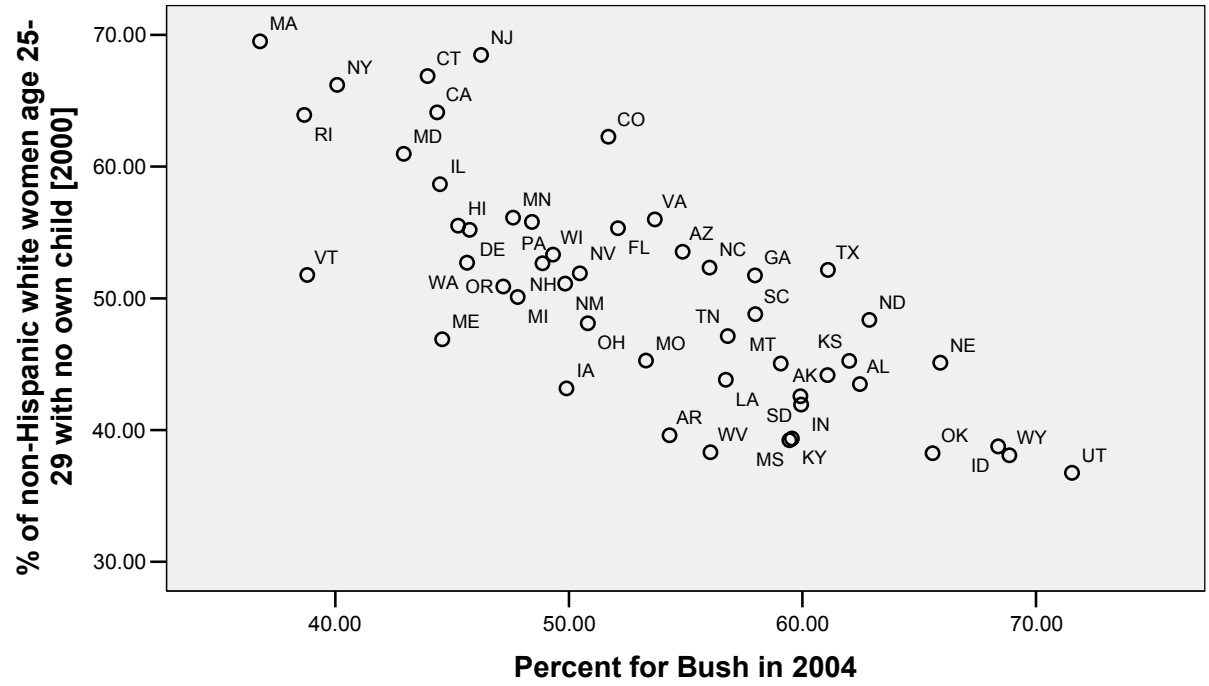
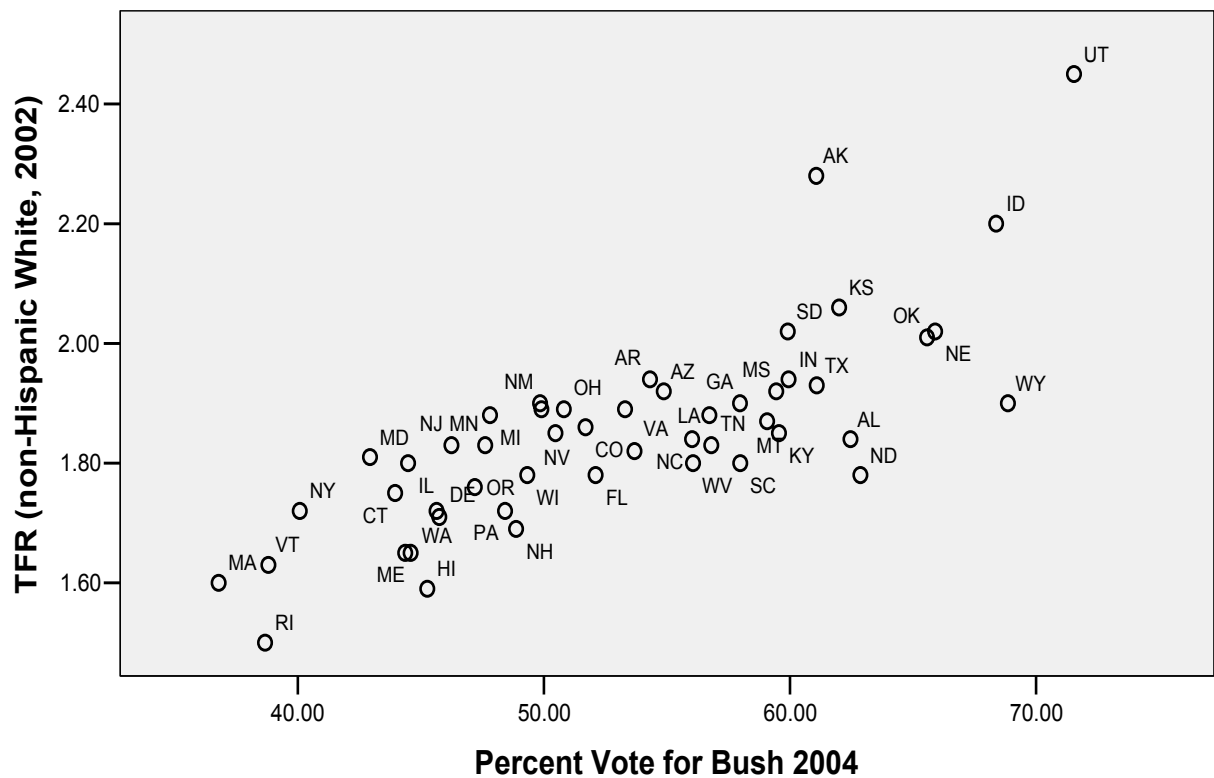


Figure 10

Relationship between the non-Hispanic White Total Fertility Rate in 2002 and the Percent Vote for Bush in 2004 ( $r = +.78$ )



These findings beg the question of whether the zero-order correlations are spurious or not. More specifically, it would be dangerous to give them a direct causal interpretation, since they could be the product of the action of a common set of other variables that causally influence both demographic behavior and voting pattern. In other words, two variables that are themselves causal results of the same determinants must of necessity be correlated. In order to check this hypothesis, a number of partial correlation tests were performed. The zero-order correlation between voting and SDT will be spurious if the partial correlations are zero or are drastically reduced. The outcomes of the test are reported in Table 6 for the correlation between the votes for Bush and the Non-Hispanic white TFR and the SDT factor as identified in Table 2.

**Table 6. Partial Correlations: Are the zero order correlations between the non-Hispanic white TFR or the SDT dimension and the vote for Bush in the 50 US States resistant to controls?**

ZERO/PARTIAL CORRELATIONS:	NHW TFR 2002		SDT factor	
	2000	2004	2000	2004
Vote for Bush in				
No controls	.771	.782	-.880	-.871
After controls for:				
A. Three structural variables: Disposable personal income 2001 % population 25+ with BA, 1990 % population metropolitan, 2000	.755	.761	-.787	-.812
B. Three structural variables + Ethnicity % black, 2000 % Hispanic, 2000	.755	.761	-.840	-.853
C. Three structural variables + Religion % Evangelical/Mormon % Catholic	.686	.686	-.734	-.742
D. Religion alone % Evangelical/Mormon % Catholic	.654	.667	-.788	-.755

The first partial correlation test is performed starting from the idea that the common causal factors producing a high zero order correlation between the demographic and the voting variables are of a structural nature, and are related to the states' average disposable household incomes, educational levels or degrees of urbanization. If the three best correlates of these independent dimensions are controlled for, then the partial correlation is barely reduced, and still stands well above .70. Evidently, the regional patterns related to income, education and urbanity fail to account for the Bush-SDT or the Bush-TFR correlation. We hardly do better if we add two more variables related to the ethnic composition of a state. The percentages black or percentages Hispanic in the

total population in tandem with the three structural variables fail to reduce the partial correlation. A third try consists of adding two variables related to religion to the structural ones. These are the percentages Evangelical + Mormon and the percentages Catholic. The result is better, but the partial correlations are still in the neighborhood of .70, and hence far from zero. In fact, if we omit the three structural variables and only make use of the two religious predictors, the results are even better in reducing the Bush-white TFR partial correlation to around .65. For the Bush-SDT correlation, the best result is achieved by leaving in the three structural predictors (-.73 or -.74).

The outcome of these tests is that the zero order correlation between the SDT variables and the voting for Bush cannot be considered as spurious or as the mere outcome of the operation of the common causal determinants used here. The control variables simply fail to reduce the zero order correlation coefficients to a significant extent to warrant such a conclusion. And since the demographic picture was unfolding well before the 2000 and 2004 elections, this leaves us with no alternative other than temporarily accepting the hypothesis that the spatial pattern of the SDT in the US was a non-redundant co-determinant of the red, purple and blue voting outcomes at the level of states. But states are very heterogeneous too. And hence we need to check the outcomes at the level of counties before we formulate more final conclusions.

#### 6. Does it all hold at the county level ?

Obviously, correlations coefficients can turn out to be considerably weaker if we examine relationships among all 3141 counties in the US. Political scientists may only be interested in the relationship at the state level as only the state vote is important for presidential elections. However, our earlier findings will be far more robust if we can show that the relationships hold across counties in the US and within its regions too. To this effect, a much larger data file was constructed, with multiple indicators for degree of urbanity, material wealth and poverty, overall and female education, ethnic composition, and religious affinity. In addition, the demographic variables were constructed for non-Hispanic whites wherever possible, and in a number of instances also data for 1988 were added in order to capture the geographic pattern of a feature as it was unfolding at earlier stages.

Just as in the analysis with the 50 states, very similar factors emerge as underlying demographic dimensions for the 3141 counties. As can be appreciated from the results presented in Table 7, there is a clear SDT factor which strongly correlates with the indicators of marriage and parenthood postponement and with the indicators of households formed on the basis of unmarried cohabitation. Note that *negative* correlates of the SDT factor are teenage fertility and the TFR, which of course incorporates this early fertility level in its calculation. On the other hand, there is an uncorrelated second factor which again loads strongly on teenage fertility, divorce, female headed households, children growing up with grandparents and in households other than that of a married couple. The second factor is again indicative of the degree of vulnerability of young women and children.



**Table 7: Demographic indicators and their two underlying dimensions: 3141 counties \***

Item	factor 1 (SDT)	factor 2
% never married females, 25-29 [WNH]	<b>.837</b>	-.018
% age at first birth= 28+ in 1988 [WNH]	<b>.812</b>	-.293
Mean age at first birth in 1988 [WNH]	<b>.792</b>	-.410
% childless women, 25-29 [WNH]	<b>.787</b>	-.091
% never married females, 30-34 [WNH]	<b>.780</b>	.074
Fertility postponement ratio, 1988 - 30+/20-29 [WNH]	<b>.733</b>	-.329
% cohabiting households [WNH]	<b>.652</b>	.284
% cohabiting households [Total]	<b>.606</b>	.461
% teen births, 1988 [WNH]	<b>-.556</b>	<b>.613</b>
% same sex cohabiting households [Total]	<b>.517</b>	.364
Total Fertility Rate, 1999 [WNH]	<b>-.503</b>	-.143
% same sex cohabiting households [WNH]	.495	.263
% pop 30+ living with and responsible for grandchildren [WNH]	-.449	<b>.646</b>
% pop 30+ living with grandchildren [WNH]	-.318	<b>.699</b>
% children living in married couple family [WNH]	-.273	<b>-.609</b>
% children living in married couple family [Total]	-.245	<b>-.746</b>
% pop 30+ living with and responsible for grandchildren [Total]	-.227	<b>.641</b>
% unmarried births, 1988 [WNH]	.164	<b>.479</b>
% currently divorced women, 35-44 [WNH]	.127	<b>.530</b>
% pop 30+ living with grandchildren [Total]	-.101	<b>.657</b>
% female-headed families/households [Total]	.069	<b>.706</b>
% female-headed families/households [WNH]	.031	<b>.649</b>

\* WNH= white non-Hispanic; date is 2000 unless otherwise specified.

It should also be noted that the overall SDT-factor itself can be decomposed in (i) a “postponement” component, indicative of late marriage and especially late fertility, and (ii) a “cohabitation” component. However if the two separate components are constructed for the 3141 counties, they still correlate at the 0.69 level. This is worth mentioning, since in several European countries these two SDT components, postponement and cohabitation respectively, do not correlate that strongly, either over time or spatially (3). In this respect, the stronger spatial correlation between these SDT components in the US makes the country more of a textbook example than an exception.

Obviously the results of the factor analysis performed for the demographic indicators and all 3141 counties can be presented in the forms of maps. All maps are based on the Jenks algorithm of class boundaries determination. This algorithm ensures maximal homogeneity within classes and maximal heterogeneity between them.

Four such maps are particularly interesting:

\* Map 1 represents the overall SDT factor scores, with blue shades typical for counties that are further advanced on the SDT and red shades for those with low SDT scores. Obviously we have chosen the color scheme in function of the blue (Democrat) and red (Republican) codes widely used in the mapping of the US election results.

\* Map 2 represents the second factor, i.e. the overall degree of vulnerability of young women and children, with red indicating high values and blue ones indicative of low factor scores.

\* Map 3 gives the SDT-component of nuptiality and fertility postponement (blue = late schedules);

\* Map 4 depicts the SDT-component of household formation on the basis of unmarried cohabitation (blue = less married couples, more cohabitation).

All four maps are being reproduced in the Appendix.

But at this point, we return to the link between the spatial SDT pattern and the 2004 election result, and to the question to what extent there is again a significant and robust negative correlation between the SDT-dimension and the latest vote for Bush.

**Table 8: Zero order correlation between the Percent voting for Bush 2004 and the SDT dimension, and partial correlations after controls for structural and cultural variables (all counties and counties with at least 25,000 inhabitants).**

	All counties	No small counties
<b>Zero order correlation Vote Bush – SDT factor</b>	-.568	-.667
<b>Partial correlations after controls for:</b>		
<b>3 structural variables:</b>		
<i>Log population density, %families with incomes of \$75,000+, and %women 25+ with professional degrees</i>	-.453	-.552
<b>Same 3 structural + 2 ethnicity variables</b>		
<i>%black, %Hispanic</i>	-.541	-.618
<b>Same 3 structural + 2 religion variables</b>		
<i>% Evangelical (+Mormon), % Catholic</i>	-.346	-.398
<b>2 religion variables alone</b>	-.468	-.532

As expected, the negative correlation between the SDT factor and the Bush vote weakens as one moves from the 50 states to the 3141 counties, i.e. from -.88 to -.57. But there are various reasons for this reduction in the strength of association. The classic one is that many counties have very small populations so that there is increased volatility in the measurements, and in the demographic ones in particular. Hence, we checked what

would happen if the analysis were rerun only for counties with at least 25,000 inhabitants. In that instance, the zero order correlation between the SDT and the vote for Bush changes in the expected direction and is restored to  $-.67$ . This is again indicative of a strong correspondence between a detailed voting map and a SDT map.

What happens if controls are introduced for variables that are commonly considered as causal antecedents of both voting pattern and of demographic household formation patterns? If the original correlation is reduced to levels close to zero after such controls, then there will be no longer a basis for considering any spatial causal relationship between SDT and voting (in either direction). If the partial is reduced but still substantially larger than zero, then the control variables are partially responsible for the original correlation, but not entirely. In that instance, there is still room for a direct causal interpretation between SDT and voting outcomes, but the effect is smaller than what a full causal interpretation of the zero order correlation would imply.

As was also done for the earlier 50 states analysis (see Table 6), the best predictor of voting in each set of structural groups of determinants was entered as a control variable in Table 8. For the degree of urbanity this turned out to be the logarithm of population density, for material wealth the percentage of households with an annual income over \$ 75,000, and for education the percentage of women aged 25+ with professional degrees. The other structural indicators are strongly correlated with one of these three entered here, and any additional use of multicollinear information is largely redundant and will not improve the results.

In addition to the three best structural controls also two variables are introduced that capture ethnic heterogeneity at the county level: the percentage black and the percentage Hispanic in 2000. And the same was also done to capture the religious factor: the two variables are the percentage Catholic and the percentage Evangelical or Mormon among church adherents (Glenmary files).

The results in Table 8 indicate that the control for 5 variables (capturing urbanity, material wealth, female education, Evangelical/Mormon, and Catholic adherence) is the most powerful in reducing the zero order correlation between the SDT and the Bush vote. The combination with the ethnic composition added to the three structural indicators is less successful. But in either column of Table 8, the smallest partial correlation is still far from zero and the best combination of control variables cannot reduce the original correlation by half. Evidently, these results still mean that we cannot discard the possibility of a direct causal effect of the county demographic pattern on the latest Presidential election outcome.

The objection to this causal inference as it stands now is of course that there can always be an unused control variable or set of such variables for which the partial correlation will be close to zero. But such new control variable must be a good correlate of both the voting and the demographic patterns and weakly correlated with the controls already used in Tables 6 and 8. The hunting season is open ....

But aside from the effect of volatility of several measures for counties with small populations, there is another reason for the reduction of the SDT-Voting correlation when 3141 counties are considered instead of the 50 states. This reason emerges in Table 9, where the analysis has been run separately for the counties within 4 regions and 9 divisions. It appears that the national correlations, both zero order and partials, are pulled down by weak relations for the South, and particularly for the two South Central divisions. By contrast, the zero order and partials remain very high for the counties in New England and the Mid Atlantic states and in the Mountains and Pacific ones. Hence, it appears that the southern voting patterns may still be conditioned by powerful determinants other than those connected to the unfolding of the SDT, such as the persistence of older ethnically or social class based political antagonisms.

**Table 9: Zero-order and Partial Correlations between the SDT factor and the vote for Bush according to different aggregations (county is unit of analysis)**

*Aggregations are US Regions, Divisions*  
[http://www.census.gov/geo/www/us\\_regdiv.pdf](http://www.census.gov/geo/www/us_regdiv.pdf)

March 22, 2006

Geography	N counties	Zero	3 Struct	3 Str + 2 Ethn	3 Str + 2 Relig	2 Ethn	2 Relig
United States	3141	-.568	-.453	-.541	-.346	-.600	-.468
<b>Region</b>							
NorthEast	217	-.803	-.729	-.725	-.635	-.739	-.684
Midwest	1055	-.605	-.518	-.506	-.454	-.557	-.570
South	1424	-.415	-.365	-.380	-.243	-.364	-.288
West	445	-.773	-.639	-.646	-.513	-.760	-.681
<b>Division</b>							
NwEngland	67	-.700	-.482	-.461	-.414	-.629	-.665
Mid Atlant	150	-.790	-.552	-.494	-.442	-.601	-.680
ENCentr	437	-.606	-.616	-.608	-.525	-.537	-.523
WNCentr	618	-.572	-.462	-.442	-.395	-.542	-.549
South Atl	590	-.510	-.406	-.500	-.339	-.569	-.455
ESCentr	364	-.252	-.287	-.347	-.247	-.168	-.185
WSCentr	470	-.284	-.286	-.234	-.162	-.167	-.147
Mountns	280	-.750	-.592	-.598	-.469	-.740	-.661
Pacific	165	-.733	-.636	-.625	-.582	-.700	-.742

## 7. Conclusions

Let us briefly recall that the Carlson argument for US demographic “exceptionalism” starts from the observation that the overall US TFR is so much higher than that of the EU or Japan, or for that matter much higher than in the rest of the industrialized world. That is clearly true. But the author continues to argue that this would not be due to the contribution of ethnic minorities, black or Hispanic, but to white fertility itself. This, in its turn, is caused by the fact that the US retained religious ethics to a much higher degree than any other industrialized country. Furthermore all of this is rooted in the ideology of the nation’s founding fathers, and this American demographic vitality could possibly be the cause of the US political and economic, not to mention military, supremacy today (Carlson, 2005: 8-10).

Is there such an “American exceptionalism”? Firstly, the fact that the American TFR is so close to 2 children is the result of two things: non-Hispanic white fertility did drop below replacement, but stayed in the vicinity of 1.80, and that was high enough for the contribution of the black and especially of the Hispanic populations, which together form about a quarter of the total US population, to raise the TFR for the US as a whole to replacement level. Hence, the contribution of especially the Hispanic group and immigrants has been important, and non-Hispanic white fertility has *not* recovered to replacement level. Moreover, the contribution of the black TFR is of lesser importance since it has been so close to replacement fertility during the last decade, whereas that of the Hispanic population has remained consistently high around 2.7 to 2.9 since 1990. The TFR of Asians, Pacific Islanders and American Indians has been almost exactly that of non-Hispanic whites. (Sutton and Mathews, 2004: 31). Hence, the ethnic factor is important in maintaining the overall US TFR around replacement level, and it basically corresponds to the effect of a large segment of the Hispanic population still being in the process of completing its first demographic transition. The bottom line here is that the US is a very typical SDT example where immigration and higher immigrant fertility compensate for sub-replacement fertility of much of the receiving population.

Is there “American exceptionalism” among the non-Hispanic white population? If judging solely on the basis of TFRs, the answer is negative since only 4 states with small populations have fertility levels above replacement. But if we take a more balanced view based on multiple indicators, the answer is a double one.

Yes, there is an “American exceptionalism” among a non-negligible section of the population. That section is mainly located in the mid-west, the great plains and the south. It is on average much more rural than metropolitan, lower educated, adheres more to Evangelical Christianity or Mormonism, and it tends to have more divorce as well. On the subject of teenage fertility and young lone mothers, there is a split between the northwestern and the southeastern states, with the latter still having high to very high levels of unmarried fertility among young mothers (also among whites!). Despite improvements in this respect, several American states still have teenage fertility levels that are the highest in the industrialized world.

And “No” there is no or little “American exceptionalism” in the remainder of the US, mainly residing along the northern Atlantic, the Pacific, the great lakes and the less religious west (Arizona, New Mexico, Colorado). This is America where the SDT features such as lower and later fertility and tolerance for cohabitation have been emerging in very much the same way as in western Europe and Canada (see Juby and Le Bourdais, 2005, for recent Canadian figures, and Bernier and Roy, 2006, for a detailed analysis of Canadian patterns). This is the America with higher education and higher incomes, more concentrated in metropolitan areas, with high abortion figures but also lower teenage fertility and lower divorce.

Hence the American picture would be described better by the term “American bipolarity” than by “American exceptionalism”. Furthermore, the strong correlation between this demographic duality and the current political one is more typical for “textbook transitions” than for an exceptional case. As indicated before, the French, Swiss, Belgian, German, Portuguese or Italian historical “first demographic transitions” all exhibited clear connections with the political maps (e.g. M. Livi-Bacci, 1977, R. Lesthaeghe and C. Wilson, 1987), and this has continued to be the case for the regional SDT patterns as well (R. Lesthaeghe and K. Neels, 2002). Seen from this international perspective, the patterning of the SDT in the US is not exceptional at all. Moreover, the two SDT sub-dimensions of respectively “postponement” and “cohabitation” are more strongly correlated in the US both in time and space than in the EU-25, and also from that perspective the American SDT fits that of a “textbook example”.

The resistance of the spatial correlation between the Presidential election results and the SDT dimension for controls definitely warrants further attention. From what is found here, it appears that this relationship cannot be totally explained by the effects of common structural causal antecedents such as urbanity, material wealth or education. Also the addition of a religious trichotomy (Catholic, Evangelical/Mormon, other) or an ethnic one (Black, Hispanic, other) is largely inadequate to account for the correlation between voting results and the SDT dimension. As already indicated, this is not proof of direct causality from SDT to election outcomes, since theoretically there is always a possibility of finding a better performing set of control variables. But unless such better controls are identified and tested – and mere correlates of those already used will not do – the hypothesis that the US spatial SDT pattern influenced the last presidential elections cannot be refuted. The only qualification to this statement that we can make so far is that this is not a strong pattern in the South Central counties, where voting outcomes may still be determined by older ethnic or social contrasts.

These results also shed some additional light on the “Culture War” debate. The reference to the 19<sup>th</sup> Century *Kulturkampf* in Germany is probably an appropriate one, but the translation of *Kampf* (strife, struggle) as “war” (= *Krieg*) has led to confusion and is definitely an exaggeration. But on the other hand, the refusal of the existence of that cultural bipolarity among the public at large rather than just among elites (e.g. M.P. Fiorina et al., 2005) seems exaggerated as well. The SDT dimension as measured here is based on actual behavior and so is voting behavior, and all of that pertains to the entire American population rather than much more volatile samples. What we find here suggests that not

just the rhetoric of media, politicians and community leaders on abortion, euthanasia, same sex marriage etc., but also the regional population variations in actual demographic behavior have been contributing more directly to the “ethical” polarizations witnessed in the last two Presidential elections.

#### 8. Endnotes.

1. The only areas where cohabitation and out of wedlock fertility have remained very modest in Europe are located in the East and the Eastern Mediterranean.
2. The data for Washington DC are not entered among those of states, but among those of counties.

#### 9. References

Ariès, Ph., 1980: “Two Successive Motivations for Declining Birth Rates in the West.” *Population and Development Review* 6, 4: 645-650.

Bernier, J., Roy, L. 2006: *La politique familiale, les tendances sociales et la fécondité au Québec: une expérience quasi nordique ?* Rapport, Québec : Ministère de la Famille, des Aînés et de la Condition féminine, March 2006.

Bumpass, L., Sweet, J., Cherlin, A., 1991: “The Role of Cohabitation in Declining Rates of Marriage”. *Journal of Marriage and the Family*, 53: 913-927.

Carlson, A.C., 2005: “The Fertility Gap: Recrafting American Population.” *Family Policy Lectures*, Family Research Council website, December 14, 2005: 1-14.

Coleman, D., 2003: “Why we don’t have to believe without doubting in the Second Demographic Transition – Some Agnostic Comments.” *Conference of the European Association for Population Studies (EAPS)*, Warsaw. Unpublished powerpoint slides.

Eberstadt, N., 2004: “Population Power: another Transatlantic Divergence.” *AEI on line*, American Enterprise Institute, Nov. 12, 2004

M.P. Fiorina, S. J. Abrams, J.C. Pope., 2005: *Culture War ? The Myth of a Polarized America*. New York: Longman and Pearson Education.

J.D. Hunter (1991): *Culture Wars – The Struggle to define America*. New York : Basic Books.

Inglehart, R., 1970: *The Silent Revolution*. Princeton N.J.: Princeton University Press.

Inglehart, R., 1990: *Culture Shift in Advanced Industrial Society*. Princeton N.J.: Princeton University Press.

Inglehart, R., Welzel, Ch., 2005: *Modernization, Cultural Change and Democracy. The Human Development Sequence*. Cambridge UK: Cambridge University Press.

Jones G.W., 2006: "Delayed Marriage in Pacific Asia, Gender Relations and the Fertility Crisis." *Asia Research Institute Working Papers series*, nr 61. Singapore: National University of Singapore.

Juby, H., Le Bourdais, C., 2005: "Families in Transformation – Implications for Family Research and Policy." *Unpublished paper for Social Development Canada*, Knowledge and Research Directorate, November 2005.

Lehrer, E., 2000: "Religion as a Determinant of Entry into Cohabitation and Marriage." In L. Waite et al. (eds): *The Ties that Bind – Perspectives on Marriage and Cohabitation*. New York: Aldine de Gruyter, 227- 249.

Lesthaeghe, R., Wilson, C. (1987): "Modes of Production, Secularization and the Pace of the Fertility Decline in Western Europe, 1870-1930." In A.J. Coale, S.C. Watkins (eds): *The Decline of Fertility in Europe*. Princeton: Princeton University Press: 290.

Lesthaeghe, R., vande Kaa, D.J., 1986: "Twee Demografische Transitities ?" In Lesthaeghe and vande Kaa (eds) : *Groei of Krimp*. Book volume of "Mens en Maatschappij", Deventer (Netherlands): Van Loghum-Slaterus: 9-24.

Lesthaeghe, R., Neels, K., 2002: "From the First to a Second Demographic Transition : An Interpretation of the Spatial Continuity of Demographic Innovation in France, Belgium and Switzerland." *European Journal of Population*, 18: 325-360.

Lesthaeghe, R., Surkyn, J., 2006: "When History moves on: Foundations and Diffusion of a Second Demographic Transition." In R. Jayakody, A. Thornton, W. Axinn (eds) : *International Family Change: Ideational Perspectives*. Forthcoming. Mahwah N.J.: Lawrence Earlbaum and Associates.

Livi Bacci, M. 1977: *A history of Italian Fertility during the last two Centuries*. Princeton N.J.: Princeton University Press.

Maslow, A., 1954: *Motivation and Personality*. New York: Harper and Row.

National Center for Health Statistics, 2005: *Preliminary Births for 2004*. Web site: [http://www.cdc.gov/nchs/products/pubs/pubd/hestats/prelim\\_births/prelim\\_births04.htm](http://www.cdc.gov/nchs/products/pubs/pubd/hestats/prelim_births/prelim_births04.htm).



Raley, R.K., 2000: "Recent Trends and Differentials in Marriage and Cohabitation: The United States." In: L.Waite *et al.* (eds): Ties that Bind. *Op. cit.*: 19-39.

Raley, R.K., 2001: "Increasing Fertility in Cohabiting Unions: Evidence for the Second Demographic Transition in the United States?" *Demography* 38, 1: 59-66.

Raymo, J., Iwasawa, M., 2006: "Unmarried Cohabitation and Family Formation in Japan." *Paper presented at the Annual Meetings of the Population Association of America*, Los Angeles, March 30-May 1, 2006.

Retherford R.D., Ogawa, N., 2005: "Japan's Baby Bust: Causes, Implications and Policy Responses." Hawaii: *East-West Center Working Papers series – Population & Health Series*, nr 118.

Sutton, P., Mathews, T.J., 2004: "Trends in Characteristics of Births by State: United States, 1990,1995, and 2000-2002." *National Vital Statistics Report*, 52, 9. National Vital Statistics System and Centers for Disease Control., US Dept. of Health and Human Services.

Seltzer, J.A., 2000: "Families formed outside of Marriage." *Journal of Marriage and the Family*, 62: 1247-1268.

Ventura, S., Bachrach, Ch., 2000: "Non-marital Childbearing in the United States, 1940-99." *National Vital Statistics Report*, 48, 16 (revised), Natl. Center for Health Statistics and Centers for Disease Control, US. Dept. of Health and Human Services.

van de Kaa, D.J., 1987: "Europe's Second Demographic Transition." *Population Bulletin*, 42, 1.

van de Kaa, D.J., 2002: "The Idea of a Second Demographic Transition in Industrialized Countries." *Sixth Welfare Policy Seminar*, Tokyo: National Institute of Population and Social security, January 29, 2002.

## 10. Appendix A : 4 maps (separate file)

Feb8\_SDT\_J.pdf

Feb8\_VUL\_J.pdf

Feb8\_MARR\_J.pdf

Feb8\_COH\_J.pdf