Appendix I

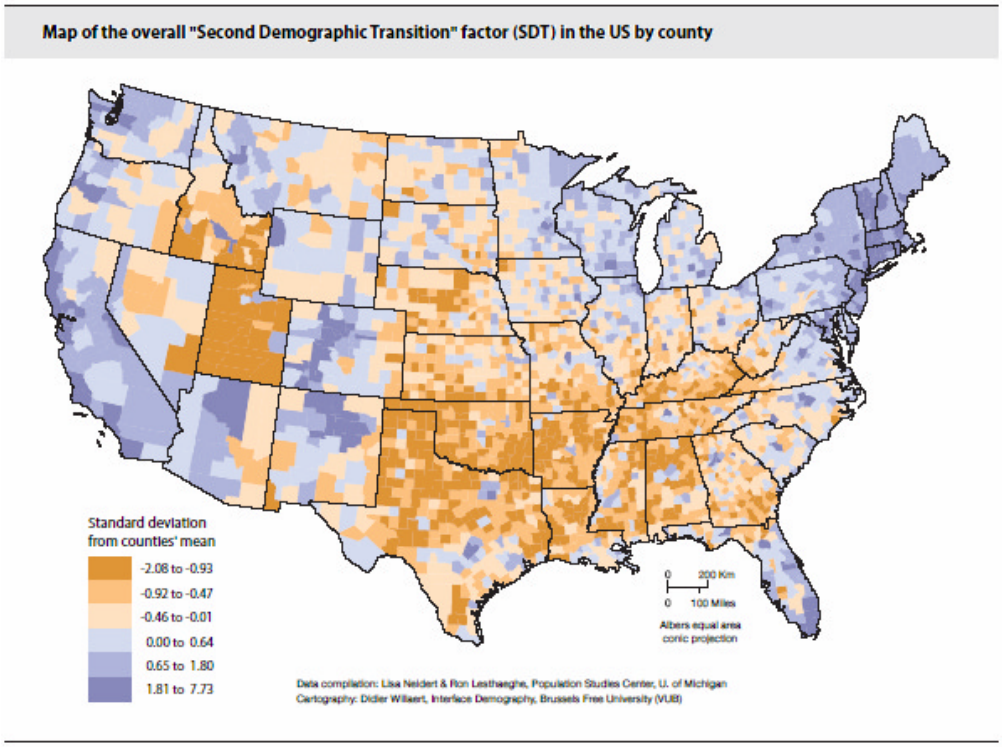
Link to Maps referenced in Lesthaeghe, Ron and Lisa Neidert. 2006. "The Second Demographic Transition in the United States: Exception or Textbook Example?" *Population and Development Review* 32 (December): 669-698.

The following maps illustrate the distribution of the second demographic transition (SDT) in the United States. The first set of maps use a traditional representation of the United States, while the second set uses population cartograms, which scale the area of each county in proportion to its population. This better represents the increasing domination of the attributes of the second demographic transition among the US population.

The cartography was done by Didier Willaert of the Interface Demography at the Free University of Brussels (VUB).

Figure A-1 shows the spatial distribution of the second demographic transition factor in the United States by county. The scale ranges from dark blue to dark red with dark blue associated with high values on second demographic

Figure A-1. Second Demographic Transition factor (SDT) in the US by county

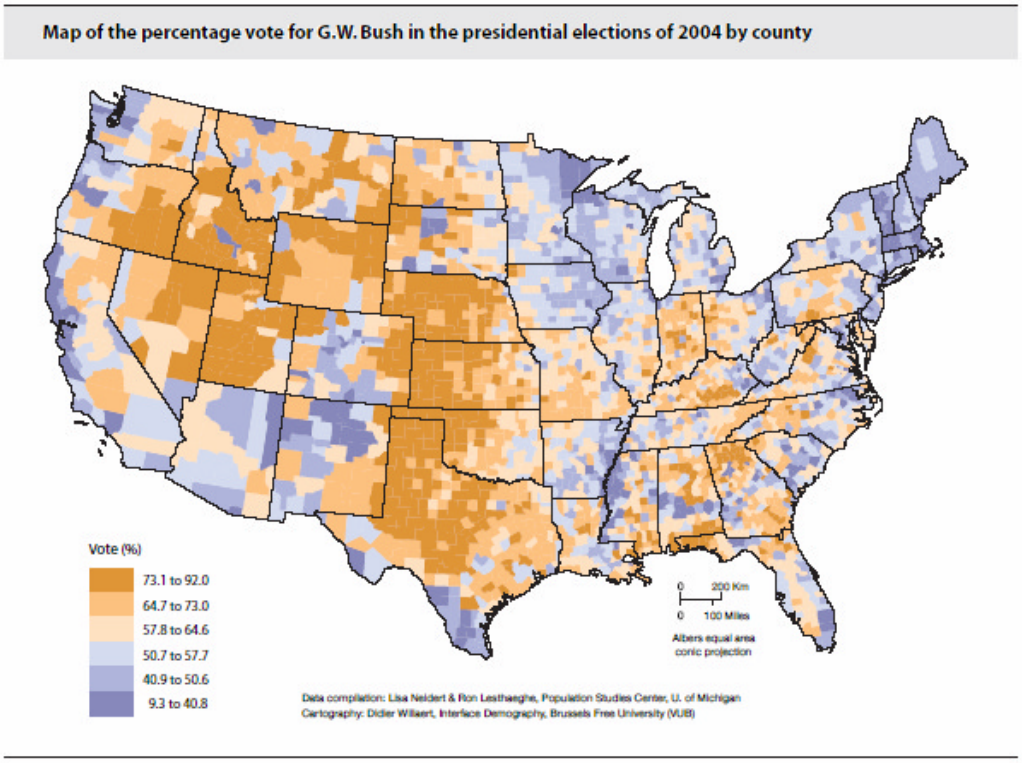


[*for a larger version of figure, please click here*]

transition and red associated with areas that have not begun the second demographic transition. The color scheme on the SDT map corresponds with

the blues and reds used in the map of the presidential election results from 2004 in Figure A-2. Note that the cut-off point on the election map is 57.7 percent, which is the mean percentage vote for G.W. Bush in the 3,141 counties.

Figure A-2. Percentage Vote for G.W. Bush in the presidential elections of 2004 by county



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The SDT factor can be decomposed into (i) a "postponement" component, indicative of late marriage and especially, late fertility and (ii) a "cohabitation" component. Figures A-3 and A-4 illustrate the spatial distribution of these two components of the SDT factor. These two components have a positive correlation with each other (0.69).

Figure A-3. Marriage and Fertility Postponement component of the US SDT-factor by county

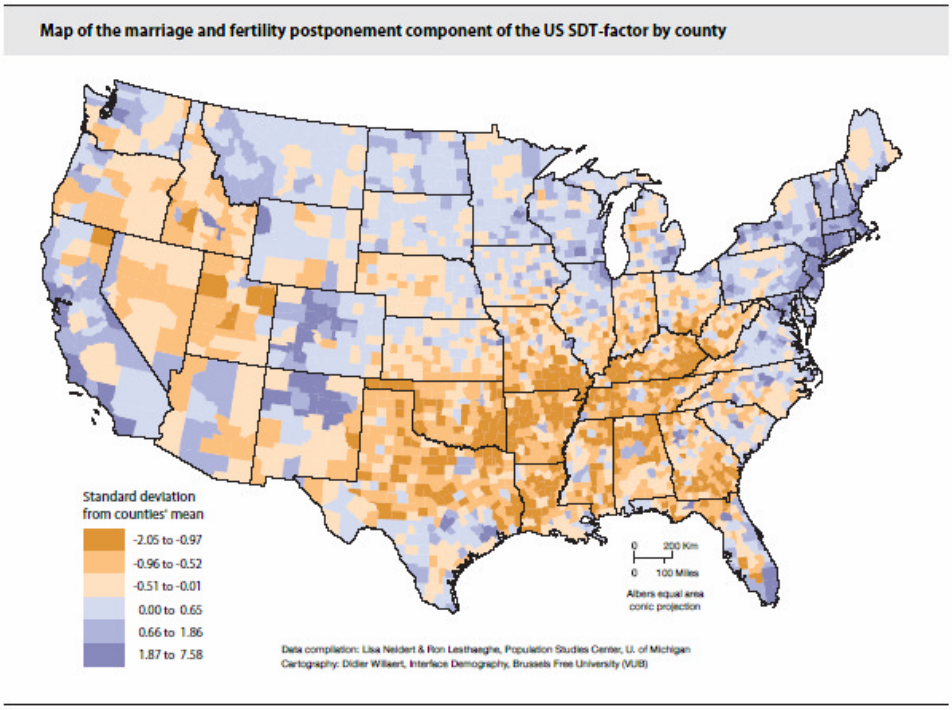

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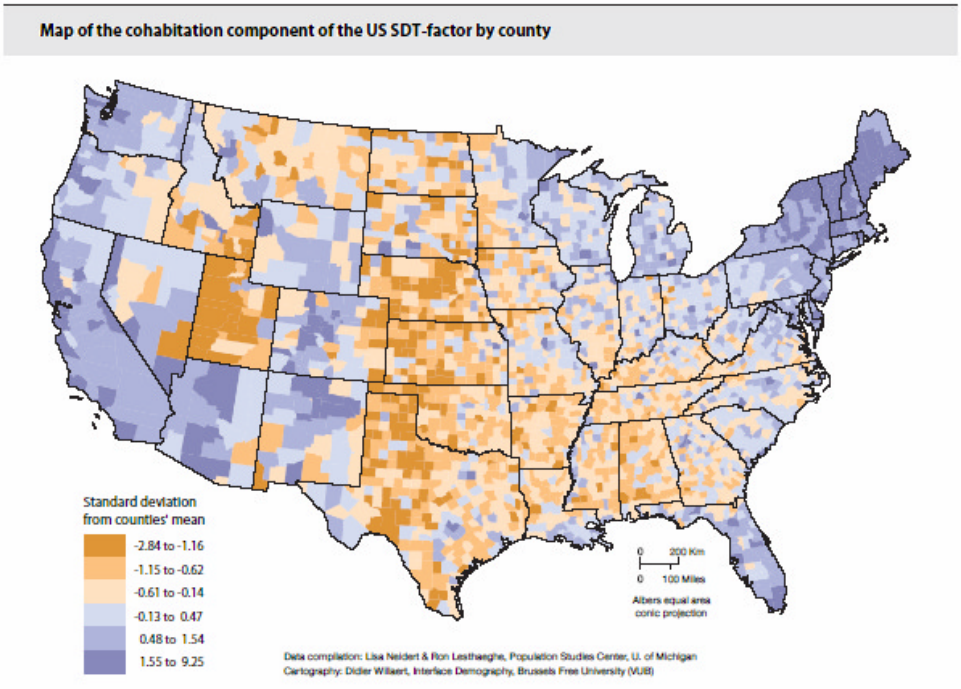
Figure A-4. Cohabitation component of the US SDT-factor by county



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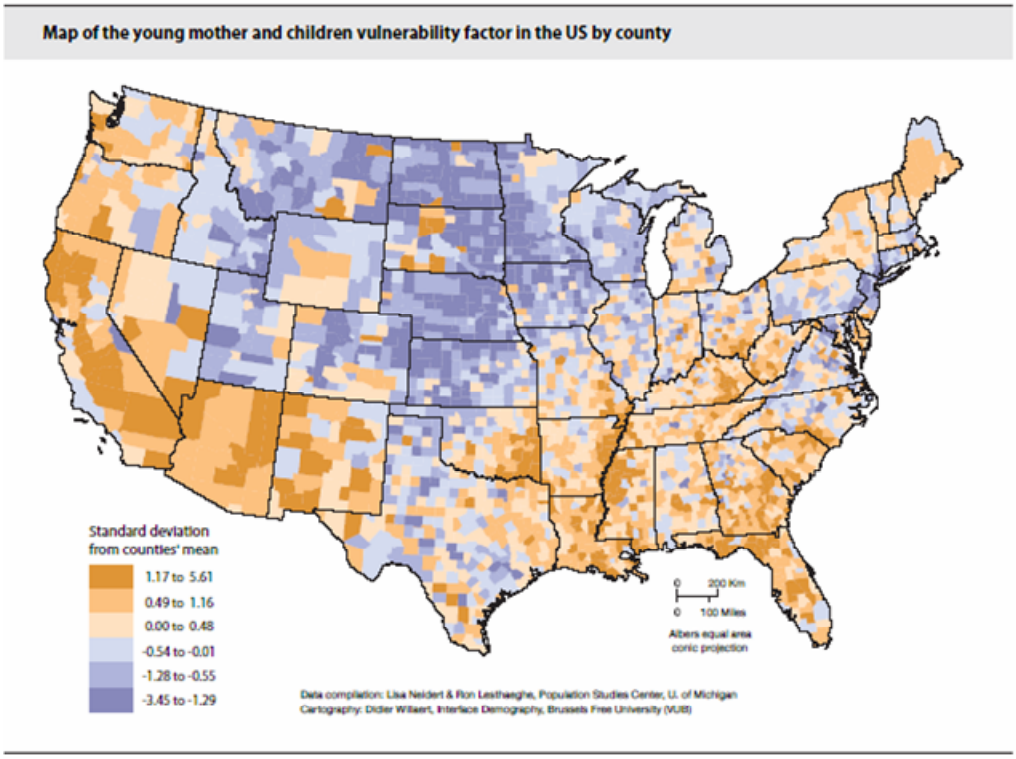
The other component of household formation in the United States, which is uncorrelated with the second demographic transition component, is identified by high teenage fertility, including that of non-Hispanic whites, high fertility out of wedlock, single mothers, and the emergence of households in which grandparents have become the caretakers of children. We use the shorthand "vulnerable young women and children" to describe this factor. See Figure A-5 for a geographic representation of it.

Figure A-5. Young Mother and Children Vulnerability factor in the US by county



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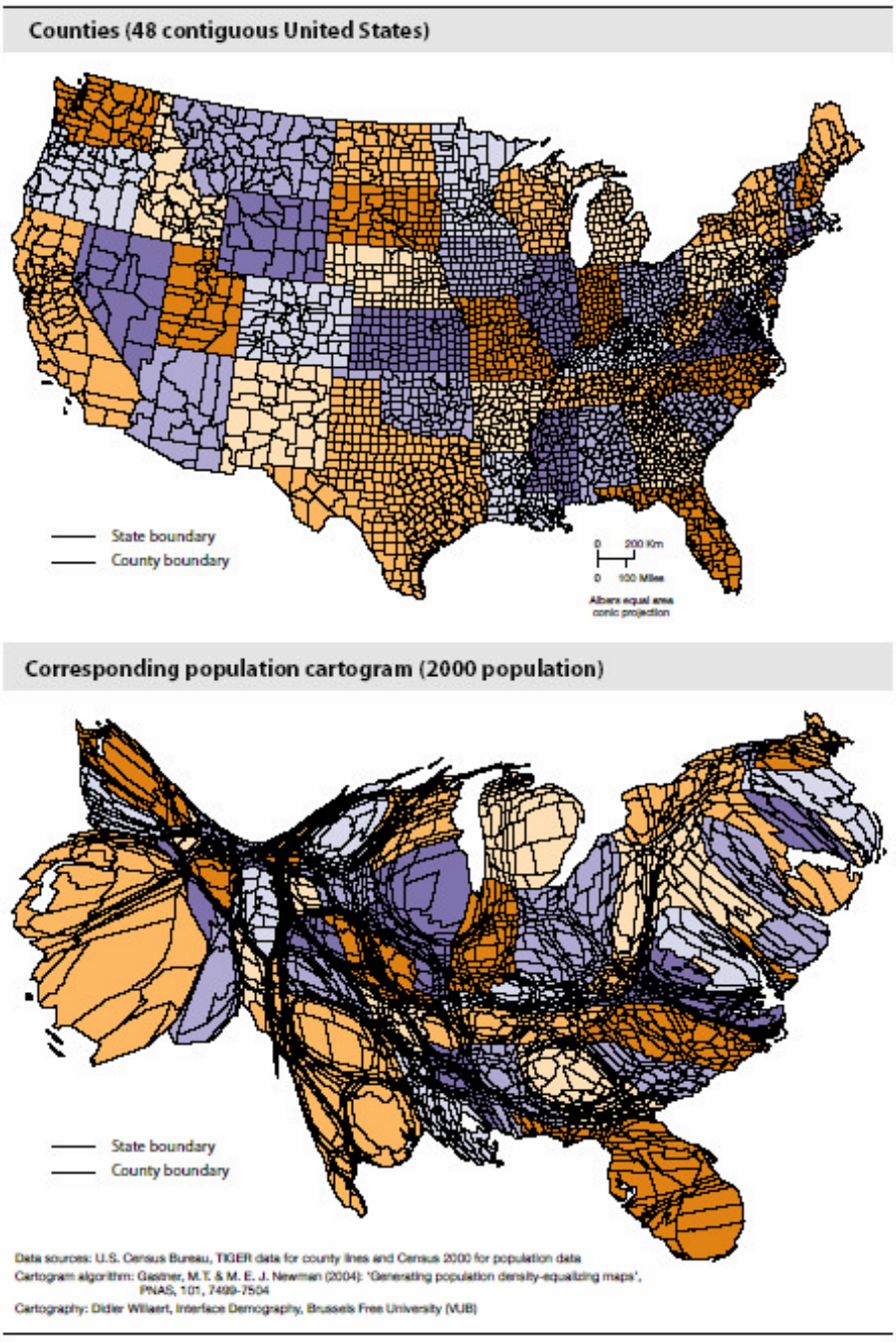
This factor is evidently an older feature of early family formation in the United States, with unmarried teenagers or young women – black, white, or Hispanic – becoming mothers, ending up as single-parent households, or needing their own parents to look after their children.

The following figures are representations of the previous maps as cartograms. The cartograms are created using Gastner and Newman's density-equalizing algorithm (CLICK HERE), which is considered as a major scientific breakthrough in the construction of computer cartograms.

To understand the relationship between a land-based representation of a map and a population cartogram, refer to Figure A-6.

The top portion of Figure A-6 is a land-based map. Five colors are used so that no contiguous states have the same color. This makes it easier to identify the states and populous counties in the population cartogram in the lower portion of the figure.

Figure A-6. Comparison of a Land-based map of the United States and a Population Cartogram

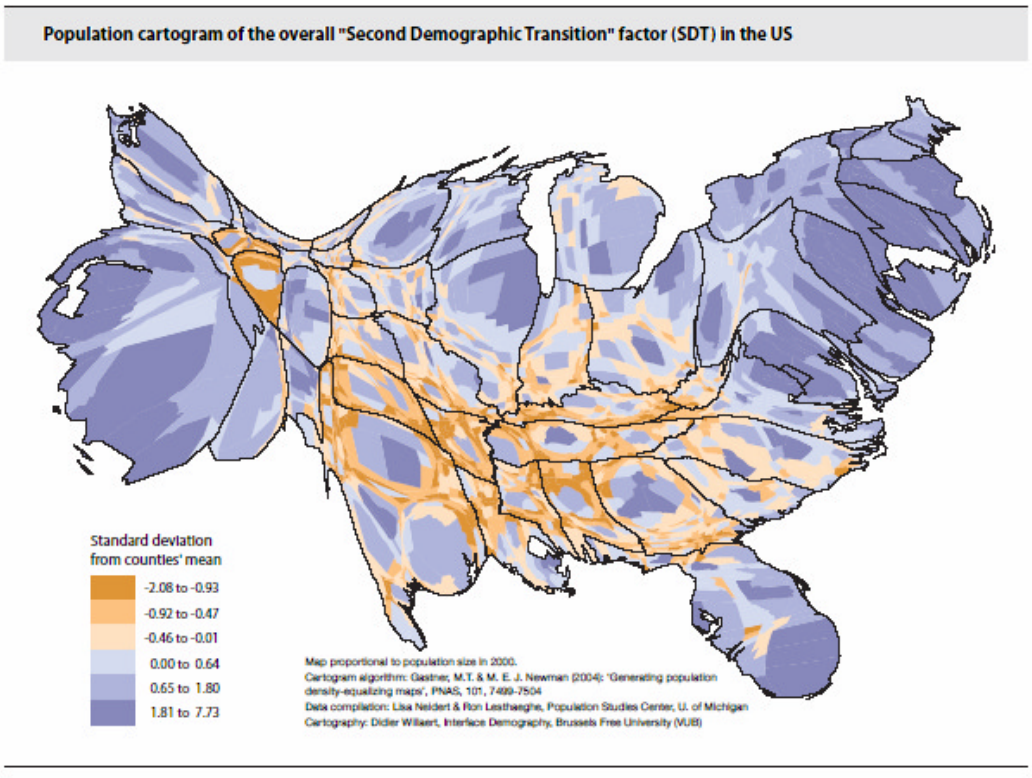


[for a larger version of figure, please click here]

In the population cartogram one can pick out specific populous counties (Cook county, IL; Los Angeles, CA) and others associated with large metropolitan areas. On the other hand, non-populous states are very small. Idaho shows up as a light orange triangle in the upper left area of the cartogram. In fact, most of the mountain states and prairie states are only identifiable based on their color in the map in the upper panel.

The following figures are representations of the previous maps as cartograms.

Figure A-7. Population Cartogram of the Second Demographic Transition (SDT) factor in the US



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Notice, that the main difference in the two representations of the second demographic transition (Figure A-1 and Figure A-7) is that the red areas of the country are much less prominent in the cartogram. This is because the red counties are not as populous as most of the blue counties. Thus, the political map of the US, which appears so red in Figure A-2, is less red in Figure A-8.

Figure A-8. Population cartogram of the percentage vote for G.W. Bush in the presidential elections of 2004

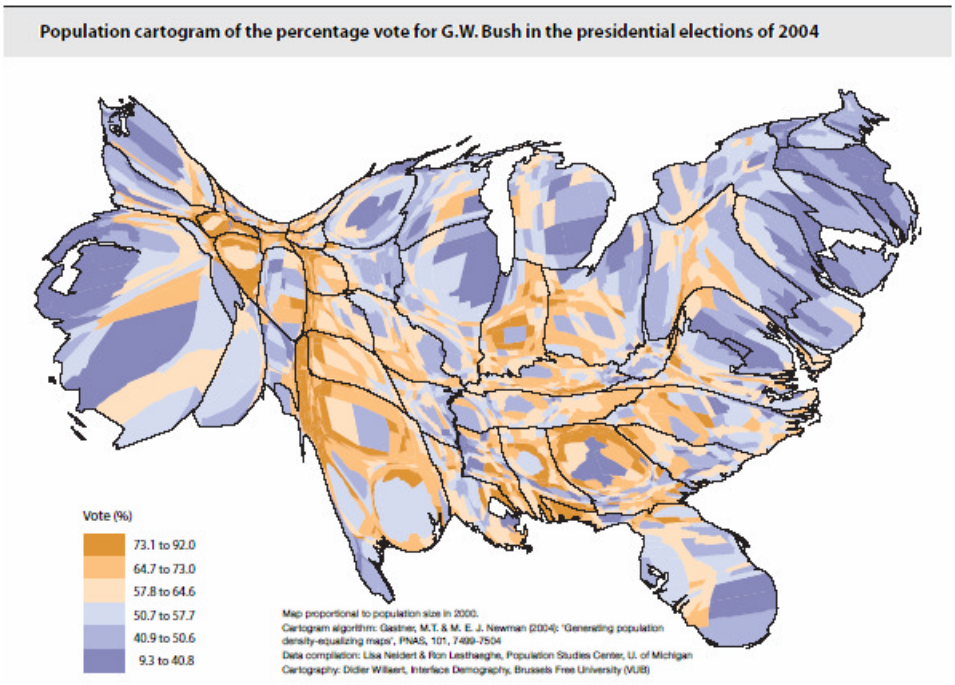

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Figure A-9. Population cartogram of the marriage and fertility postponement component of the US SDT-factor.

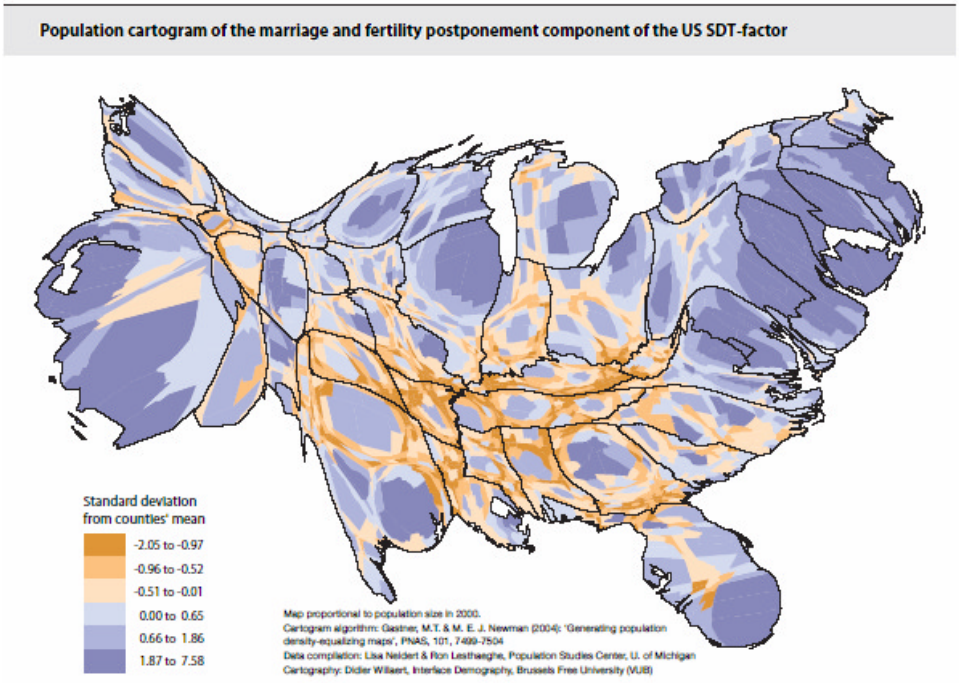

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Figure A-10. Population cartogram of the Cohabitation component of the US SDT-factor

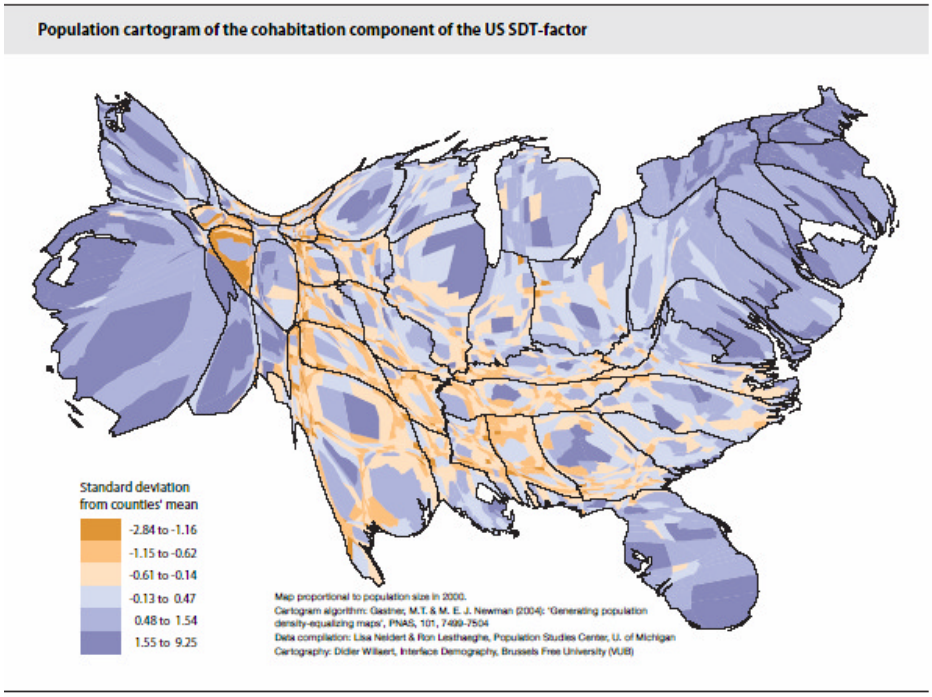

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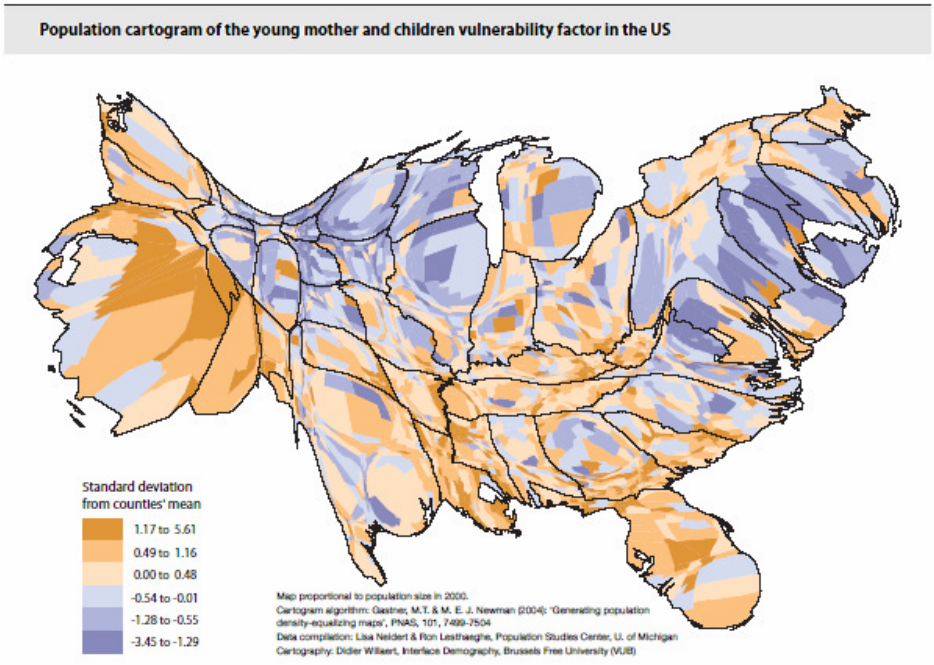
Figure A-11. Population cartogram of the Young Mother and Children Vulnerability factor



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