

Is There a Post-Industrial Family Form? An Exploration Using Global Data.

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Abstract

Macrosociological analyses by Goode (1963, 1993) documented that industrialization led to changes in the family institution. These changes included movement to a conjugal family form and an increase in the divorce rate. Some scholars suggest that the United States, along with a handful of other nations, is now moving into a post-industrial mode of production. If this is the case, discernable differences should appear between the family structure in the most developed countries and that in older, industrial modes. This paper will explore cross-national data in an attempt to uncover an identifiable post-industrial family form.

Introduction

William J. Goode's best-known work was his 1963 *World Revolution and Family Patterns*. The title reference was to the industrial revolution, which Goode found was associated with predictable changes in family patterns.

Goode used analysis of existing data from sources from all over the world in his macro-sociological analysis of the family. His unobtrusive research uncovered a vast amount of data, much of it quantitative. He used official government data where such existed, along with other sources. *World Revolution* contained an in-depth analysis of industrialized western nations, along with thorough chapters on Arabic Islamic societies, Sub-Saharan Africa, India, China, and Japan.

Goode found that the Western family was never quite the ideal extended, self-sufficient, harmonious unit that some earlier scholars had described. Goode (1963:3) referred to this as "the classical family of Western nostalgia." He did, however, find that individuals had become less dependent on extended family groups during the industrial revolution in the west, and predicted that other societies would go through the same family changes as they, too, went through the industrialization and urbanization processes.

Goode documented the rise of the conjugal family unit. The nuclear family was becoming less embedded in the extended family, bringing a host of specific changes. These changes were compatible with industrial production, wherever that occurred. In 1993, Goode published a follow-up volume, focusing on the topic of divorce. In the intervening thirty years, Goode concluded, his findings had generally been confirmed.

Goode's work set the agenda for decades of macro-sociological and historical research, and remains influential. Although exceptions exist, most scholars agree with his central theses (Cherlin, 1996). By formulating specific, testable hypotheses, Goode contributed significantly to the scientific nature of family studies. He widened the scope of family studies and increased the respectability of the field of study (Aldous, 2000).

Industrialization and The Conjugal Family Form

Goode recognized that forces other than industrialization were at work in producing the conjugal family, and that the changes were complex and sometimes only a matter of degree. Still, certain characteristics of industrialization influence family change. Four major points can summarize Goode's argument: geographic mobility, social mobility, "achieved" occupational status, and increased specialization and functional differentiation of the social structure.

Industrial economies require geographic mobility. Industrialization was characterized by a rapid change in geographical location of jobs. When factories opened or expanded, new workers, including managers and professionals who were free to relocate, were required. Getting appropriate education or training itself often required relocation. A conjugal family, with only one major earner, was in a better position to relocate than was an entire extended family.

Industrialization produces, and requires, social mobility. The kinds of workers needed, not just their location, changed as industrialization proceeded. Factory workers were needed where none existed before. Phase two of the industrial revolution required a new group of salaried managers, and phase four required computer experts; neither group of workers previously existed. Parents could not, by themselves, provide the necessary training, skills, or jobs. Individuals had to be socially mobile enough to move into the new occupational niches, which often lead to very different lifestyles from their parents.

Industrialization is associated with "achieved" occupational status. In pre-industrial societies, one's occupational role was determined almost entirely by one's family. Sons of peasant farmers become peasant farmers, daughters of patricians become patrician mothers, and so on. Those who did not end up in the same occupational role as their parents typically had their occupation assigned to them when they were apprenticed; in either case the occupational position was ascribed.

In industrial systems, families and kin groups had less control over occupational entry. Some families had more resources than did others to find jobs and pay for college or other occupational expenses, but individuals were more able to pursue their own interests and undergo the training provided by extra-familial agencies. Their position in the social system was still heavily influenced by their parents' position, but it was increasingly the result of achieved status. Since persons were increasingly on their own in terms of finding an occupation in the industrial economy, their individualism was increased and reliance on family and kin was decreased.

Industrialization increases specialization and functional differentiation. Underlying the influences of industrialization was the fact that the household was no longer the center of economic production. Although the family still cooperated as a unit of economic consumption, social differentiation separated the family from its economic production function. Whether it was in a factory, mine, office, or classroom, most activity for which workers got paid was done outside the home.

Work was not alone in being separated from family. Recreation, health care, religion, and problem solving increasingly became extra-familial activities, especially when families were geographically and socially separated. Until the twentieth century, most women gave birth in their homes, assisted by female midwives or kin. Increasingly, as medical professionals took over, birth took place in hospitals. For the first half of the twentieth century, doctors worked in patients' homes, but later required all patients to come to them.

Goode generally concluded that industrialization was associated with movement to the conjugal family form. In its ideal-typical form the conjugal family had five characteristics: a

nuclear household, bilateral kinship, mate selection by choice, few economic transfers at marriage, and egalitarian interactions.

The family became more nuclear and less extended. One way in which the family became more nuclear is that the parent-child unit was less likely to live with non-relatives. We have seen that the *familia* once often included persons not related by blood. In one town in Massachusetts in 1880, more than one-third of all households had non-related boarders (Morgan and Golden, 1979). Significant numbers of urban families continued to take in boarders through the first third of the twentieth century (Hareven, 1997).

Unlike the family with unrelated members, the extended family was never common in the United States. One colonial Rhode Island sample studied by Laslett (1977) found that only three percent of households contained extended family members. This is a considerably lower figure even than that for England of the time, where about 11 percent of households were extended. Immigration from Europe to America, and then from coastal to inland settlements, probably decreased the extent to which adult children lived with their parents, even before industrialization. Although the actual number of extended family households was quite small, several researchers (see Lee, 1987) have argued that the extended family might well have been the preferred or normative form, but high mortality and other factors limited its practice.

Families have, however, gotten smaller. In the New England colonies, families averaged eight or nine children (Demos, 1970). At any one time, household size was about six persons (Laslett, 1977). By contrast, in 1990 the average family size was 3.17 and the average household size was 2.63. Although women are healthier, reach menarche at a younger age, and live longer, they now have fewer children during their lifetimes.

Several factors account for the decline in childbearing in industrial societies. For one thing, children become economic liabilities in urban societies; they cannot be economically productive until they receive many years of education, after which time they move out of the home. Also, as increasing numbers of women enter the paid labor force, they postpone the birth of their first child and have fewer children.

Not only did families get smaller, they became more socially isolated. By the early nineteenth century, the idea of the private family had begun to emerge. The term "family" itself increasingly came to mean the conjugal or nuclear unit. Rather than being integrated into the community or the kin network, the family was increasingly seen as a retreat from work and other aspects of community life. Family matters were less accessible to the inquisitive eyes of the community. In the first part of the twentieth century, architecture reflected the desire for privacy. City homes were less apt to have porches, which had been the meeting place between family and community. The middle classes set aside one room in the house, the parlor, for formal visits. Only family members and very close friends were allowed access to the remainder of the house.

Although kin groups became less important during industrialization, their influence was still important. Immigrants often relied on kin who had preceded them for support upon arrival to America. Those who arrived first sent money to those who had been left behind (Bodnar, 1985). The same kinds of dynamics operate with many of today's immigrants (See Chapter Seven).

Many recent family scholars have concluded that the family did not become as small and isolated during the industrial revolution as previous researchers believed. Households were smaller, but significant numbers of persons still interacted with extended family and kin on a regular basis. The nuclear household with extended family ties has been called a modified-extended family (Litwak, 1965; Litwak and Kulis, 1987.) This might best describe the American family just prior to the post-industrial revolution.

Kinship more bilateral. Goode found that unilateral forms of descent and inheritance, whether patrilineal or matrilineal, declined when societies underwent industrialization. This has clearly been the case in the United States. The idea of keeping an estate in a family for centuries was not as applicable to the early American experience as it had been in Europe. For those who wished to farm, land was relatively cheap in terms of capital; the expense came in terms of hard work in often-dangerous conditions. The emerging democratic ideal was antithetical to primogeniture.

In both the working and professional classes, it was labor and knowledge that provided a living, not inheritable property. What family property there was got divided equally among children (Leslie and Korman, 1989). Although persons can will their property to anyone they wish, most states now provide that if a parent dies without a will, the surviving spouse gets a certain share, with the remainder to be divided equally among the children. Bilateral kinship is also evidenced in the declining number of women who change their last name when they marry.

Mate selection based on choice. Goode found that, as societies industrialized, young adults were freer to pick their own mates. Even prior to industrialization, the European family was allowing more choice in mate selection. This was the result of many of the same factors that allowed individuals to pick their own careers. Parents had less control, since occupational entry did not depend so much on parental authority. The spreading sense of individualism and democracy also influenced movement toward the "choice" position on the mate selection continuum.

Industrialization impacted the development "romantic love" as a criterion for mate selection. As parental control waned, some mechanism had to replace arranged marriage. Prolonged adolescence in the form of more years of schooling and later age at marriage gave young persons more opportunity to interact with members of the opposite sex in less supervised settings. Romantic love, then, replaced rational self-choice or parental choice in the mate selection process.

Economic exchanges at marriage disappear. Neither young couples nor their parents talk today about bride wealth, dowry, *donatio*, or *morgengeld*. The only property transfers at weddings today typically come in the form of wedding presents from families and close friends. The gifts serve a similar function as some older forms of economic transfer--helping the newlyweds establish their own household.

Families become more egalitarian. Goode found that relationships between spouses, as well as those between parents and children, became more egalitarian under industrialization. Increasing democratization and individualism, along with the decline of patrilineal inheritance, accompanied increasing equality of married couples.

In 1831 and 1832, Alexis de Tocqueville visited the United States from France. He expressed surprise at how egalitarian American marriages were compared to those found in Europe at the time. In the mid-nineteenth century, a series of laws called the Married Women's Property Acts repealed the old coverture laws. The right of married women to keep and acquire their own property was thereby recognized. Although there are still echoes of the old laws, most states now treat property rights of husbands and wives the same (Collins and Coltrane, 1995).

Marital expectations were not always in favor of the wives, however. Men were traditionally expected to financially support their wives, but wives had no such responsibility toward their husbands. It was not until 1979 that the Supreme Court, acting on a case from Alabama, granted men and women the same right to expect support from each other (Orr v. Orr, 440 U.S.268).

Equality in inheritance law and ownership laws did not translate into identical gender roles. Industrialization created different spheres of influence for husbands and wives. This was reflected in the "cult of domesticity" that glorified the role of the homemaker and mother. The image, probably reaching its peak in the 1950s, was that the father went off to work every day while the mother maintained the home and nurtured the children. This was, at the time, considered a "companionate" marriage (Mintz and Kellogg, 1988).

Consistent with the "cult of domesticity," women began to be awarded custody of children in the still rare divorce cases. In agrarian societies, patrilineal norms awarded custody of minor children to the father and his kin group. Early in phase two of industrialization, however, many states adopted the "tender years rule". By this doctrine, custody of children younger than puberty would automatically be awarded to their mothers unless the mother was proved unfit (Grossberg, 1983). In the United States today, custody is still awarded to the mother in about 90 percent of the cases, but increasing numbers of courts are considering joint or paternal custody.

Industrialization and divorce. William J. Goode (1963, 1970, 1993) found that, whenever and wherever it happened, the industrial revolution resulted in increasing divorce rates. A person's status is defined more by achievement than by ascription in such systems. Individuals increasingly come to rely on their own educational achievements and work experiences, and become less dependent upon their families of orientation for adult status and livelihood.

As individual freedom increases in the economic sphere, there is pressure to increase it in the personal and family sphere as well. Persons begin to believe that they have the "right" to seek their own happiness, rather than follow the script laid out by tradition and by their families of orientation. Marriage begins to be seen more as a matter of individual development than as a life-long spiritual or family commitment. The result is the "desacralization" of the social institution of marriage (Goode, 1993).

Industrialization and individualism have led to a steady, long-term increase in divorce rates. In North America, after a very long-term increase, divorce rates peaked in the United States in about 1980. In other countries, however, rates have continued to climb.

The industrialized world shares other divorce-related characteristics. Wives file for divorce in two-thirds to three-fourths of the cases, and custody of minor children goes to the mothers in 80 to 90 percent of cases. Although fathers are expected to provide child support after divorce, all countries have difficulty in fully enforcing this expectation (Goode, 1993).

With the possible exception of Russia, the United States retains the highest divorce rates in the modern world, but other countries are catching up. Popenoe (1988) argued that Sweden has surpassed the United States in the effective, if not the reported, divorce rate. Cohabitation prior to marriage is almost universal in Sweden now, and cohabiting relationships have a considerably higher break-up rate than do marriages.

Goode (1964, 1993) intended his model not only as a description about what has happened in countries that have already gone through the industrial revolution, but also as a prediction about what will happen as other countries industrialize. Central and South America, which always had very low rates, have recently begun to see their divorce rates climb. Similar patterns can be found in Africa, although less is known about patterns in the sub-Saharan region (Goode, 1993).

Societies that had stable-high-rate divorce systems just prior to industrialization provide apparent exceptions to Goode's hypothesis that industrialization increases divorce rates. This was the case in Taiwan, Japan, Malasia, and Indonesia (Wolf and Huang, 1980; Kumagai, 1983; Goode, 1993). In virtually all of the societies with initial high-rate systems, however, divorce

rates reached some low point, and then began to creep back up in the pattern previously seen in European societies.

In the Muslim Arab countries there seems to be no clear association between industrialization and divorce. Part of the reason, Goode (1993) argued, is that industrialization has not yet fully impacted these countries. While the petroleum industry has become highly industrialized, the Arab societies are still largely organized around pre-industrial patterns.

A Post-Industrial Revolution?

Gerhard Lenski (1987; Nolan and Lenski, 1999) assume that today's most developed societies are still in phase four of the industrial revolution. Because of the significance of some recent technological innovations, however, it is reasonable to follow the lead of Daniel Bell (1973, 1979) and others by assuming that, beginning in about 1970, society began to undergo a post-industrial revolution.

The industrial revolution was characterized by use of fossil fuels for production and transportation. Beginning in about 1970, the use of electronic technologies began to transform the home and workplace. At the same time, gender roles underwent significant alteration. By the late 1980s, women constituted the majority of college students. By 1998, nearly 80 percent of mothers were in the workforce, including 64 percent of married women with preschool-age children (Statistical Abstract 1999:T. 659).

The divorce rate, which peaked in about 1980, remains high, and women are still the custodial parents in about 90 percent of divorces. The unwed birth rate, too, is near all-time high levels in the United States. These developments have led some family scholars to conclude that the American family is increasingly matrifocal in its structure. This does not necessarily mean that women have social power, but that the mother-child unit is considered the basic family form. If a post-industrial family form exists, it may be found in the movement from a conjugal to a matrifocal structure.

While electronic communication and processing constitute the technological base of a post-industrial, the economy is increasingly characterized by services, rather than agriculture or manufacturing. Economic pursuits become less physically dangerous and less dependent on the physical strength of workers. Instead, mental development becomes the important worker qualification. This, along with other changes, finds more women in the wage-labor system. That, in turn, continues to change families in the directions begun in the industrial era.

Method and Results

Much of the data for this exploration came from the 1995 World Values Survey (WVS), directed by the Institute for Social Research. This global survey builds on the European Values Surveys, first conducted in 1981. The WVS now includes surveys of more than 65 societies on all six inhabited continents, containing almost 80 percent of the world's population (<http://wvs.isr.umich.edu/>). Virtually all European and North American countries are included,

along with many South American and Asian ones. The only African nations involved are Nigeria and South Africa. Survey respondents were selected randomly within countries.

WVS data were converted to percents and added to MicroCase's Global 1999 ecological database, which incorporates global data from a number of other sources. This database includes 174 nations of the world with populations of 200,000 or more. Not all of the 238 variable are available for all countries.

The independent variable in all calculations is values of services per capita (SERVCAP). Values for this variable were calculated by multiplying the gross domestic product per capita in dollars by the percent of the total economy accounted for by services. This variable provides an indicator of the degree of post-industrial development of each country. The top ten nations are the United States, Luxembourg, Bahamas, Canada, Norway, Austria, Denmark, Singapore, Switzerland, and France (see appendix A).

The SERVCAP variable appears to be a good indicator of post-industrial economies. Significant positive correlations of at least .60 were found between SERVCAP and percent urban, university enrollment per 1,000 population, and televisions per capita.

A number of family-related demographic variables were correlated with SERVCAP (see Table One). Significant negative relationships were found with birth rate, infant mortality, maternal mortality, fertility rate and percent of population under 15 years of age. Positive relationships were found with life expectancy, and percent of population over 64.

These variables indicate a smaller family size, at least in the nuclear family unit. Goode found that decreasing family size was a result of industrialization. Current data indicate that family size continues to decline in post-industrial societies. Fertility decline is an intentional process, since services per capita is highly correlated with the percent of adult women using contraception (see Table One).

SERVCAP was correlated with several marital-status variables, but not with the crude marriage rate. The crude divorce rate, however, was positively correlated with SERVCAP. The percent of population selecting "divorced" as their current marital status showed a positive correlation, as did the percent cohabiting. The percent of the adult population that is currently married had a negative correlation with SERVCAP. Attitudinally, there was no correlation between SERVCAP and the percent of the population who thought marriage was an outdated institution.

These data represent mixed results on the status of conjugal (husband-wife) families in post-industrial nations. On the one hand, "marriage for life" and "only marriage for togetherness" is declining, as indicated by the cohabitation rates, the current married rates, and the divorce rates. On the other hand, neither the crude marriage rate nor the belief in the importance of marriage seems to be associated with post-industrialism.

Remarriage rates may be part of the key here, and that data were not available. Some countries, such as the United States, have high marriage, divorce, and remarriage rates. The U.S. had the second-highest crude marriage rate in the world, below only Mauritius. Sweden, which is also a highly developed nation, ranked 54th of the 64 nations for which that information was available. By contrast, of the 38 nations for which cohabitation data were available, Sweden ranked third (behind Iceland and Denmark) while the United States ranked 24th.

Table One: Correlations between Services per Capita and Family-Related Variables	
Variable	Correlation *=.05; **=.01
Demographic Variables	
Birth rate	-0.615**
Infant mortality	-0.650**
Fertility rate: average number of children born to each woman	-0.572**
Maternal mortality rate per 100,000 live births	-0.516**
Percent of adult women using contraception	0.588**
Life expectancy	0.651**
Percent of population under 15 years of age	-0.680**
Percent of population over 64 years of age	0.746**
Crude marriage rate: marriages per 1,000 population	-0.043
Crude divorce rate: divorces per 1,000 population	0.316**
Cohabitation: percent of population "Living together as if married"	0.435**
Divorced: percent of adult population that is divorced	0.283*
Married: percent of adult population that is currently married	-0.495**
Gender Variables	
Gender-related development index	0.725**
Working mom: percent who agree that "A preschool child is likely to suffer if his or her mother works."	-0.586**
Home and kids: percent who agree that what "Women really want is a home and children"	-0.765**
Diversity/equality Variables	
Extent of civil liberties (1 = least free; 7 = most free)	0.578**
Racism: Percent who would not want members of another race as neighbors	-0.513**
Anti-gay: Percent who would not want homosexuals as neighbors	-0.730**
Gay sex: Percent who believe homosexuality is never acceptable behavior	-0.754**
Richest 10%: Percent of national income received by the richest 10 percent	-0.591**
Inequality: Gini index (deviation from equal distribution of income or consumption; 0 = perfect equality; 100 = perfect inequality)	-0.378**
Family Attitude Variables	
Single mom: Percent who approve of a woman choosing to be a single parent	0.283*
Wed Passe: Percent who agree that "Marriage is an outdated institution."	0.199
Family importance: Percent who say the family is very important in their lives	0.330*
Kid independence: Percent who think it very important that a child develop independence	0.283*
Kid manners: Percent who think it is important that children learn good manners	0.030
Kid obey: Percent who think it very important that a child be obedient	-0.070
Well-being Variables	
Home life: Percent who said they were "Very satisfied" with their home life	0.432**
Happy overall: Percent who say they are "Very happy"	0.536**

Regional differences apparently exist among post-industrial nations with respect to the way in which life-long marriage is declining, but all seem to exhibit some form of "desacralization" of marriage. Individuals exhibit this either by cohabiting rather than marrying or through serial marriage. Goode found industrial impact on divorce rates. Even though many individuals in post-industrial societies think marriage is still important as an institution, the difference between marital and non-marital relationship is apparently being blurring in ways not found during the industrial era.

Goode found that family equality increased during the industrial era. The post-industrial era is extending that equality, sometimes in ways not seen by Goode. Equality, both factually and attitudinally, is higher in post-industrial societies--not just in families but in society as a whole. SERVCAP was negatively correlated with the amount of income received by the richest ten percent of the population, as well as by the Gini index. Extent of civil liberties was higher in more post-industrial societies.

A gender-development index, indicative of sex equality, is positively correlated with SERVCAP. Negative correlations were found both with the percent who agreed that "A preschool child is likely to suffer if his or her mother works" and the percent who agreed that what "Women really want is a home and children."

Post-industrial family equality may also be extending in directions not found in industrial societies. Racism, as measured by the percent of respondents who would not want a different race as neighbors, is negatively correlated with SERVCAP. Although quite indirectly, this might indicate greater acceptance of multi-racial families.

Two homophobia-related variables are negatively correlated with SERVCAP. Again quite indirectly, this may signal a move toward acceptance of same-sex marriages. On April 1, 2001, the Netherlands (eleventh in SERVCAP ratings) was the first nation to remove gender from its marriage, divorce, and adoption laws (nytimes.com). Several other highly developed nations are close to doing so.

In the United States, same-sex near-marriages are available in many jurisdictions. According to Gallup polls, attitudes are changing. Eighty-three percent of Americans agreed in 1999 that homosexuals should have equal rights, up from 56 percent in 1977. In 1999, sixty two percent said that gay marriages should not be legalized, but that is down from the 68 percent only two years previously. In 2000, 42 percent of American favored same-sex civil union, up from 28 percent in 1996 (www.gallup.com).

Same-sex marriages, or near-marriages, appear much more likely in post-industrial societies than in others. This development is something Goode did not find--or even think to look for--in industrial societies.

A positive relationship was found between SERVCAP and acceptance of a women choosing to become a single mother. The relation was not as strong as many others, but that, along with higher divorce rates, does support the possibility that "defathering" (Blankenhorn, 1995) is occurring in post-industrial societies. In the United States, rate of children born to unmarried mothers increased from 18 percent in 1980 to 32 percent in 1995. Similar rates of increase were found in all other highly developed nations except Japan, which remained at one percent (Statistical Abstract, 1998, T. 1347).

Relationships between SERVCAP and other family-attitude variables are not completely clear. There was no relationship for the belief that marriage is passé, and there was a small but significant positive relationship ($p < 0.05$) between SERVCAP and the percent who said that the family is very important in their lives. By these measures, neither marriage nor the family

appears to be in decline, but it is difficult to interpret this. Respondents to the survey undoubtedly had different definitions of family, and perhaps marriage, in mind when they answered the questions. The attitudinal variables seem somewhat at odds with the behavioral variables.

SERVCAP was not associated with images of child rearing in predicted ways. The importance of teaching children independence seems like it should be positively correlated with SERVCAP. It was, but only at the .05 level. Both the importance of teaching children to have good manners and to be obedient were predicted to be negatively correlated with SERVCAP, but no significant correlations in either direction were found.

Finally, SERVCAP is positively associated with individual well-being. More respondents were "very satisfied" with their home life and were "very happy" with their lives, than was the case in less developed nations. Home life is not necessary family life, however, and good health and a number of other factors associated with SERVCAP can result in greater happiness. In societies at all levels of development, married persons were more likely to report being "very happy" with their lives than were persons who were not married. This finding held true for both men and women ($p < 0.000$).

Discussion

Most of Goode's findings about the impact of industrialization on family continue to be true of post-industrialization. Bilateral descent and the elimination of property transfers at marriage are effectively things of the past. Fertility continues to decline, divorce rates increase or remain high, and familial and societal gender equality increases. Pronatalism continues to decline.

Although it was not directly tested in the present research, mate selection continues to be by choice, a phenomenon that is probably increasing. The choice is now apparently extending to choosing not to get married at all.

Goode did not predict the rapid increase in cohabitation, which appears to be a post-industrial family influence. Nor did he see a rapid increase in acceptance of same-sex relationships and probable growth in institutionalization of same-sex marriage.

It is probable that "desacralization" of marriage (Goode, 1993) will continue to be a post-industrial process. People in some countries will continue to get married, but the legal, religious, psychological, and social distinction between being married and not being married will continue to blur. The traditional connection between marriage and having children is further weakening in post-industrial societies. This is evidenced by acceptance of unmarried mothers having children, out of wedlock birth rates, and high divorce rates.

These changes are made possible by the demands of a post-industrial economy. Jobs are increasingly requiring skills that are neither sexed nor gendered. Individualism continues to increase. World over-population makes having large numbers of children unnecessary; urbanization, educational demands, and work demands provide disincentives to having large numbers of children.

While it would appear that post-industrialization has effects on families somewhat distinct from industrialization, additional data would be necessary before a final conclusion could be drawn. It would be useful to know more about what is happening with extended kin

networks, actual household sizes, and the perceived and actual importance of father-child compared with mother-child relationships.

Cross-sectional rather than trend data were primarily used for this study. Comparisons were not to individual countries over time but to countries with different levels of a services economy. The next wave of the World Values Survey, soon to be available, will provide an opportunity to do more trend analysis.

No attempt was made in this study to determine whether post-industrial changes are a good or bad process for individuals, families, or societies. It seems clear, however, that some changes associated with industrialization are continuing, while post-industrialization introduces some family alterations of its own.

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Appendix A: Ranking and Values of SERVCAP (Per Capital Services, in dollars)

SERVCAP -- Per capita GDP (var. 49) times percent services (74) equal services production per capita.

	Rank	Case Name	Value	
5	1	UNITED STATES	21450	
5	2	LUXEMBOURG	18130	
5	3	BAHAMAS	17017	
5	4	CANADA	16500	
5	5	NORWAY	16349	
5	6	AUSTRALIA	16331	
5	7	DENMARK	15663	
5	8	SINGAPORE	15264	
5	9	SWITZERLAND	14939	
5	10	FRANCE	14860	
5	11	NETHERLANDS	14555	
5	12	BELGIUM	14210	
5	13	AUSTRIA	13790	
5	14	ICELAND	13523	
5	15	GERMANY	13138	
5	16	UNITED ARAB EMIRATES	13090	13090
5	17	UNITED KINGDOM	13056	13056
5	18	JAPAN	12825	
5	19	ITALY	12485	
5	20	NEW ZEALAND	12358	
5	21	ISRAEL	12218	
5	22	QATAR	11502	
5	23	FINLAND	10640	
5	24	CYPRUS	9864	
5	25	KUWAIT	9686	
5	26	SPAIN	9608	
5	27	TAIWAN	8967	
5	28	IRELAND	8820	
5	29	SWEDEN	8528	
5	30	BRUNEI	8058	
5	31	BAHRAIN	7930	
5	32	MALTA	7686	
5	33	SLOVENIA	7626	
5	34	PORTUGAL	7192	
4	35	TRINIDAD & TOBAGO	7155	7155
4	36	SOUTH KOREA	6674	
4	37	GREECE	6400	
4	38	MAURITIUS	6087	
4	39	CZECH REPUBLIC	5883	5883
4	40	BARBADOS	5593	
4	41	ARGENTINA	5504	
4	42	MEXICO	5103	
4	43	CHILE	4956	
4	44	URUGUAY	4944	
4	45	VENEZUELA	4860	
4	46	HUNGARY	4560	
4	47	THAILAND	4543	
4	48	MALAYSIA	4408	
4	49	SLOVAK REPUBLIC	4376	4376
4	50	SAUDI ARABIA	4346	
4	51	OMAN	3990	
4	52	FIJI	3965	
4	53	PANAMA	3922	
4	54	POLAND	3456	

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4	55	SYRIA	3402	
4	56	JORDAN	3300	
4	57	COSTA RICA	3190	
4	58	TURKEY	3172	
4	59	SOUTH AFRICA	3132	
4	60	BRAZIL	3087	
4	61	ESTONIA	2947	
4	62	COLOMBIA	2862	
4	63	LIBYA	2628	
4	64	GABON	2543	
4	65	CROATIA	2537	
4	66	TUNISIA	2530	
4	67	ROMANIA	2423	
3	68	NAMIBIA	2405	
3	69	BULGARIA	2394	
3	70	IRAN	2184	
3	71	LATVIA	2166	
3	72	LITHUANIA	2129	
3	73	DOMINICAN REPUBLIC	2019	2019
3	74	ECUADOR	2009	
3	75	LEBANON	2006	
3	76	SRI LANKA	1936	
3	77	GUATEMALA	1903	
3	78	JAMAICA	1816	
3	79	SWAZILAND	1710	
3	79	PERU	1710	
3	81	PARAGUAY	1696	
3	82	KAZAKSTAN	1670	
3	82	SURINAME	1670	
3	84	BOTSWANA	1643	
3	85	MOROCCO	1597	
3	86	BELIZE	1569	
3	87	BOLIVIA	1560	
3	88	INDONESIA	1546	
3	89	ALGERIA	1520	
3	90	BELARUS	1500	
3	91	YEMEN	1479	
3	92	EGYPT	1450	
3	93	EL SALVADOR	1227	
3	94	PHILIPPINES	1196	
3	95	UZBEKISTAN	1142	
3	96	PAKISTAN	1120	
3	97	ZIMBABWE	1086	
3	98	CONGO, REPUBLIC	1047	1047
3	99	UGANDA	1046	
3	100	MALDIVES	1024	
3	101	TURKMENISTAN	1022	
2	102	SENEGAL	1020	
2	103	CUBA	918	
2	104	DJIBOUTI	912	
2	105	CHINA	868	
2	106	HONDURAS	840	
2	106	ARMENIA	840	
2	108	KENYA	829	
2	109	GUYANA	822	
2	110	NICARAGUA	810	
2	111	COTE d'IVOIRE	794	
2	112	MONGOLIA	762	
2	113	LESOTHO	744	
2	113	PAPUA NEW GUINEA	744	744
2	115	BENIN	729	
2	116	CAPE VERDE	690	
2	117	AZERBAIJAN	682	

Post--Industrial Family 16

2	118	WEST BANK	672	
2	118	INDIA	672	
2	120	VIETNAM	647	
2	121	BANGLADESH	643	
2	122	GAMBIA	638	
2	123	GHANA	581	
2	124	MOLDOVA	576	
2	125	CAMEROON	566	
2	126	MAURITANIA	528	
2	127	KYRGYZSTAN	477	
2	128	SERBIA	475	
2	129	GAZA STRIP	462	
2	130	MADAGASGAR	458	
2	131	GUINEA-BISSAU	456	
2	132	NEPAL	432	
2	133	SUDAN	430	
2	134	GUINEA	428	
1	135	HAITI	422	
1	136	TOGO	407	
1	137	LIBERIA	374	
1	138	ZAMBIA	371	
1	139	UKRAINE	369	
1	139	MOZAMBIQUE	369	
1	141	ERITREA	359	
1	142	BURKINA FASO	326	
1	143	MYANMAR	314	
1	144	COMOROS	312	
1	145	MACEDONIA	307	
1	146	ALBANIA	297	
1	147	SIERRA LEONE	294	
1	148	EQUATORIAL GUINEA	288	
1	148	LAOS	288	
1	148	CENTRAL AFRICAN REPUBLIC	288	
1	151	NIGERIA	262	
1	151	GEORGIA	262	
1	151	NIGER	262	
1	154	ANGOLA	256	
1	155	CAMBODIA	248	
1	156	AFGHANISTAN	232	
1	157	MALI	204	
1	157	CHAD	204	
1	159	MALAWI	200	
1	160	BHUTAN	197	
1	161	TANZANIA	169	
1	162	BURUNDI	156	
1	163	ETHIOPIA	142	
1	164	RWANDA	140	
1	165	NORTH KOREA	135	
1	166	SOMALIA	129	
1	167	CONGO, DEM. REPUBLIC		104
--	--	IRAQ		
--	--	WESTERN SAMOA		
--	--	BOSNIA		
--	--	TAJIKISTAN		
--	--	WESTERN SAHARA		
--	--	SOLOMON ISLANDS		
--	--	RUSSIA		