



Economic Security and Value Change

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ECONOMIC SECURITY AND VALUE CHANGE

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Confirming Inglehart's prediction (1971) of an intergenerational shift toward postmaterialist values, a time series analysis controlling for the joint effects of inflation and unemployment demonstrates that there is a statistically significant trend toward postmaterialism in all eight West European countries for which data are available over the past two decades. Evidence from the 1981–83 and 1990–91 World Values Surveys indicates that this value shift occurs in any society that has experienced sufficient economic growth in recent decades so that the preadult experiences of younger birth cohorts were significantly more secure than those of older cohorts. Large intergenerational differences tend to be found in societies that have experienced rapid growth in gross national product per capita, and are negligible in societies that have had little or no growth. Accordingly, postmaterialism increased in 18 of the 20 societies on five continents for which we have comparable data over the past decade.

Over two decades ago, one of the authors proposed a theory of value change implying that value priorities in advanced industrial society will tend to shift away from *materialist* concerns about economic and physical security toward greater emphasis on freedom, self-expression, and the quality of life, or *postmaterialist* values (Inglehart 1971).¹ Arguing that differences between the formative socialization of young Europeans and their elders were leading younger birth cohorts to give relatively high priority to freedom and self-expression, he suggested that future intergenerational population replacement would bring about a shift toward new value priorities.

If this shift is taking place, it may have far-reaching implications. The growth of postmaterialist values appears to have contributed to a decline of social class voting (Dalton 1991; Dalton, Flanagan, and Beck 1984; Inglehart 1977, 1990; Lipset 1981) and to the rise of new social movements (Ganzeboom and Flap 1989; Inglehart 1990; Klandermans 1990; Kriesi 1989; Offe 1990; Rohrschneider 1990), particularly environmentalist movements and parties (Bennulf and Holmberg 1990; Betz 1990; Hoffmann-Martinot 1991; Müller-Rommel 1990; Rohrschneider 1993). Changing value priorities may be reshaping the nature of political cleavages and the political meaning of *left* and *right*, giving rise to a *new politics* axis. This new axis cuts across the traditional left–right dimension, characterized by radical reform parties and movements at one pole and right authoritarian parties and movements like the Christian Coalition, the National Front, and the Republikaner at the other (Huber 1989; Inglehart 1977; 1990; Kitschelt 1994; Kitschelt and Hellemans 1990; Lafferty and Knutsen 1985; Minkenberg 1990). Moreover, Dalton, Flanagan, and Beck (1984) and Inglehart (1990) argue that weakening party loyalties and low voter turnout partly reflect the established parties' failure to offer meaningful choices about the new politics issues. Conversely, Crepaz (1990) has demonstrated that the presence of a Green party or

some other postmaterialist type of party enhances electoral turnout. Finally, this process of value change seems conducive to democratization throughout advanced industrial society (Gibson and Duch 1994; Inglehart 1992).

Despite this evidence, Inglehart's most basic prediction—that a trend toward postmaterialist values actually does exist—remains controversial. Earlier critics (Böltken and Jagodzinski 1985; van Deth 1983) argued that differences between the basic values of the old and the young were simply due to life-cycle effects, rather than intergenerational change. Empirical support for this position has eroded in recent years, as it became evident that given birth cohorts did *not* become more materialistic as they aged.

Since the original thesis was published, the values battery has been used in scores of countries, and more than two decades of time series evidence are now available to test it. But even in recent years, several scholars have disputed the existence of a trend toward postmaterialist values. For example, Thomassen and van Deth examine value trends in the Netherlands between 1970 and 1986; they argue that the data demonstrate "fluctuations" in values but maintain that "no dramatic shift of political values has occurred" (1989, 64). "There does seem to be a decline of materialism and an increase in post-materialism since 1982," they argue, "but it is unclear at present whether that is the dawn of the expected revolution or just a temporary fluctuation" (*ibid.*). Shively acknowledges that there has been value change among the West European public but argues that Inglehart's claim that this change is generationally driven is "fundamentally flawed" (1991, 237). Clarke and Dutt (1991) have advanced the farthest-reaching objections to Inglehart's thesis. They argue that there has been no significant trend toward postmaterialism in half of the countries he studied and that even where there is such a trend, this movement is driven by rising levels of unemployment. If high levels of unemployment contribute to

postmaterialism, they argue, then Inglehart's measure and/or theory is flawed, since it claims that security is conducive to postmaterialism, whereas they find that economic *adversity* promotes postmaterialist values.

We shall demonstrate that there has been a clear trend toward postmaterialism largely resulting from intergenerational population replacement. Moreover, the growth of postmaterialism has occurred in spite of, rather than because of, rising levels of unemployment. In short, the trend toward postmaterialism results from the processes that Inglehart discussed when he first advanced his theory of value change over two decades ago.

SHORT-TERM AND LONG-TERM VALUE CHANGE

Inglehart advances two hypotheses that predict changing values. He postulates a *scarcity hypothesis*, which states that "an individual's priorities reflect one's socioeconomic environment" and a *socialization hypothesis*, which postulates that "to a large extent, one's basic values reflect the conditions that prevailed during one's preadult years" (1985, 103). "The scarcity hypothesis" Inglehart writes, "implies short-term changes, or period effects: periods of prosperity lead to increased postmaterialism, and periods of scarcity lead to materialism. The socialization hypothesis implies that long-term cohort effects *also* exist" (ibid). During the traumatic recessions of the mid-1970s and early 1980s, period effects were substantial. Inglehart (1985) concluded that between 1970 and 1982 period effects and cohort effects were both important, with period effects actually outweighing cohort effects.

Inglehart's theory of value change predicts that intergenerational population replacement will gradually lead to a long-term shift from materialist to postmaterialist values. It not only helps predict the *direction* of future change but also the *magnitude* of the change that one would expect from generational replacement, which is not the only factor involved but is a major component of value change (see Abramson and Inglehart 1986, 1987, 1992; Inglehart 1990).

Over short periods, the magnitude of change predicted on the basis of population turnover is always small. If one uses Inglehart's overall measure of values, namely, the percentage difference index (the percentage of postmaterialists minus the percentage of materialists), the model predicts a change of only about one point on the index per year.² Given the small size of these predicted effects, short-term forces (or sampling error) can easily swamp the effects of population turnover, but in the long term, its cumulative effects can be massive.

For this reason, it is important to analyze as long a times series as possible. In their analysis of the Netherlands, Thomassen and van Deth study the

years between 1970 and 1986, using Inglehart's four-item measure of materialist/postmaterialist values. Clarke and Dutt analyze only the data collected from 1976 to 1986, although they could have also analyzed the surveys conducted in 1970, 1971, and 1973 and possibly some of the more recent surveys, as well.³ Like Thomassen and van Deth, Clarke and Dutt employ Inglehart's four-item value measure. Clarke and Dutt argue that there was no trend toward postmaterialism in Belgium, France, and Italy and that the trend toward postmaterialism was not statistically significant in Ireland. Unlike Thomassen and van Deth, however, Clarke and Dutt do find a significant movement toward postmaterialism in the Netherlands, as well as in West Germany, Britain, and Denmark.

We shall analyze all the available data from 1970–71 through 1992 for West Germany,⁴ Britain, the Netherlands, France, Belgium, and Italy⁵ and all of the surveys conducted in Denmark and Ireland between 1973 (when surveys started in these countries) and 1992. We shall assess whether or not there is a trend toward postmaterialism using the full time series for each country. We shall also analyze the 1990–91 World Values Survey and show that rising economic security contributes to postmaterialist values in societies with widely varying institutions and cultural heritages and at various levels of economic development. Finally, we will compare data from the 1981–83 World Values Surveys and the 1990–91 World Values Surveys to demonstrate that the predicted trend toward postmaterialism took place in 18 of the 20 societies that can be compared during this decade.

LONG-TERM VALUE CHANGE

Figure 1 shows the percentage of postmaterialists minus the percentage of materialists based on the four-item index for eight West European countries from the beginning of the time series through the fall of 1992, as well as for the United States.⁶ It is apparent that there has been a trend toward postmaterialism in seven of these eight European societies, as well as the United States. Only the Belgian data fail to reveal a trend toward postmaterialist values.

Figure 1A presents the results for Britain and France. (Presenting the data for all nine countries at once would produce an unreadable graph.) Both countries show an overall trend toward a rising proportion of postmaterialists, but here (as elsewhere), this trend is punctuated by dips toward materialism that reflect the recessions of the mid-1970s and the early 1980s. There is also a downward fluctuation at the end of the series, reflecting the current global recession. This effect is noticeably more pronounced for Britain (where the latest recession has been more severe) than in France. For Britain, the shift toward postmaterialism reached its peak in 1989, when the inflation rate was 7.8% annually and unemployment was 7.0%. By early

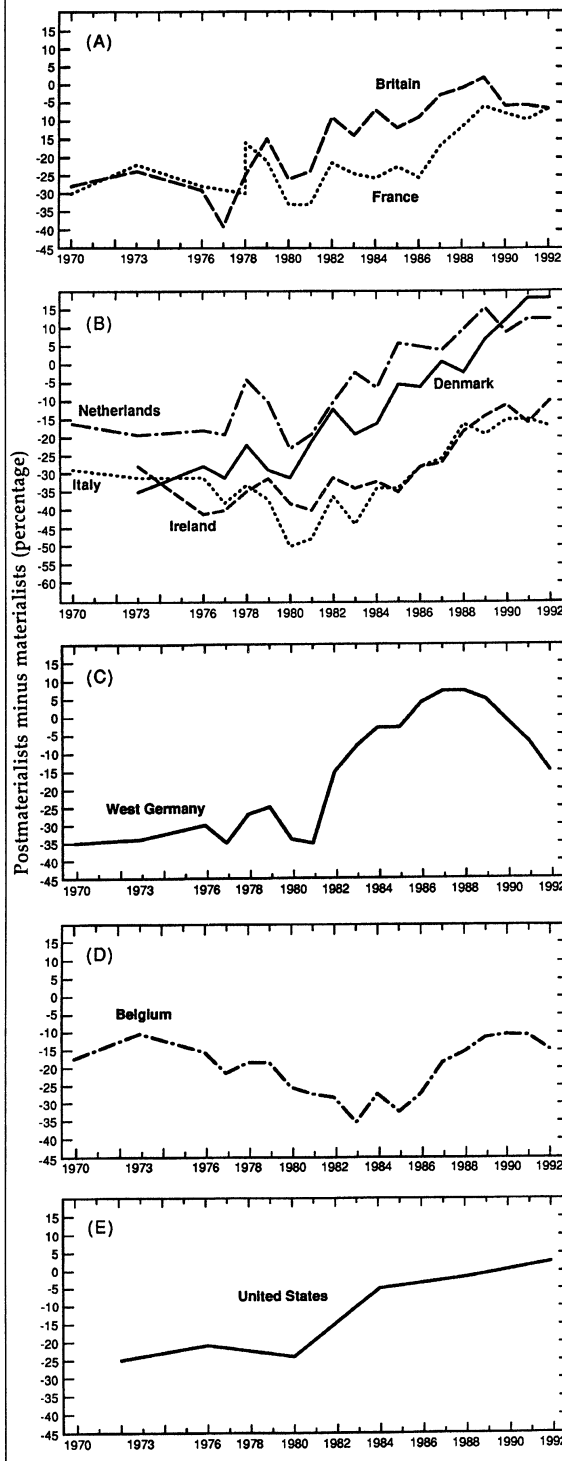
1992, these figures had risen to 10.4% and 10.3%, respectively. In France, on the other hand, unemployment rose only slightly (from 9.4% in 1989 to 9.9% in 1992), while inflation remained at 3.7% in both years. Even though both inflation and unemployment were higher at the end of the time series than at the beginning, there was a substantial overall trend toward postmaterialist values. In Britain, for example, at the start of the series in 1970–71, materialists (36%) were five times as numerous as postmaterialists (7%), producing an index of -29 (with the remainder having mixed values). By 1992, 24% were materialists and 16% were postmaterialists, producing an index of -8 : postmaterialists were now two-thirds as numerous as materialists. In France, the figures changed from 41% materialists and 11% postmaterialists in 1970–71, to 27% materialists and 19% postmaterialists in 1992.

Figure 1B presents the results from four more countries, two of which had even stronger shifts from materialist to postmaterialist values than those found in Britain or France. The Netherlands, Denmark, Ireland, and Italy all show downward fluctuations linked with the global recessions of the mid-1970s and early 1980s, plus a leveling-off or downward movement linked with the latest recession at the end of the time series—but all four show clear trends from materialist toward postmaterialist values.

Although the West German data (see Figure 1C) show the same overall trend toward postmaterialism, they manifest a much larger downward shift between 1988 and 1992. After the wall came down in 1989, West Germany absorbed East Germany, a society with a political system that had collapsed and an economy in free fall. East Germany's problems became West Germany's problems, with huge sums being transferred from the west to help reconstruct Eastern Germany. Inflation rose from 1.3% in 1988 to 4.0% in 1992 and though unemployment remains fairly low in the West, it has risen to appalling levels in the East (with some estimates placing it at 30%). In addition, following the collapse of the socialist regimes in Eastern Europe, hundreds of thousands of political and economic refugees fled to Germany, giving rise to a pervasive sense of insecurity and severe xenophobia, linked with attacks on foreigners. Despite the severity of recent conditions, West Germany nevertheless shows a significant long-term shift from materialist to postmaterialist values over the past two decades. In 1970 (with much lower rates of inflation and unemployment than in 1992), 45% of the West Germans were materialists and only 10% were postmaterialists, producing a percentage difference index of -35 . In 1992, the proportion of materialists had fallen to 31%, and that of postmaterialists had risen to 14%, for an index of -16 . This overall upward movement of the index, in the face of strong, short-term, downward pressures, resulted largely from intergenerational population replacement processes in which younger, relatively postmaterialist birth-cohorts replaced older, relatively materialist cohorts.

FIGURE 1

Percentage of Postmaterialists Minus Percentage of Materialists in Eight West European Societies and the United States: 1970 through 1992.



Belgium is the only remaining country for which we have detailed survey data with numerous regular measurements covering a long span of years (see Fig. 1D). The Belgian time series shows no clear trend toward postmaterialist values. At the end of the series in 1992, postmaterialism among the Belgian public was only marginally higher than it was in the 1970–71 baseline surveys.

Finally, though no detailed time series is available for the United States like that produced by the Euro-Barometer's semiannual surveys, the four-item materialist/postmaterialist values battery has been included in each of the National Election Study (NES) presidential election surveys from 1972 through 1992. Figure 1E shows the results: again, we find the predicted long-term upward trend, with the ratio rising from 35% materialists and 10% postmaterialists in 1972, to 16% materialist and 19% postmaterialists in 1992.

Inglehart's thesis predicts only modest gains of about one point per year in postmaterialism, since he argues that the trend is driven by generational replacement. If generational replacement were the only factor influencing value change, the trend toward postmaterialism would be similar in all these societies, since the speed of generational replacement varies only slightly from country to country (see Abramson and Inglehart 1992). As we shall see, economic factors do influence short-term value change. Before examining the dynamics of long-term and short-term value change, it is important to illustrate that the trend toward postmaterialism is robust in the face of alternative values measures.

Inglehart has also developed a broader indicator of values based upon a choice among 12 national goals.⁷ As Inglehart has demonstrated (1977, 1990), this 12-choice measure is more reliable and valid than the widely employed measure based upon a choice of four goals and less sensitive to the effects of inflation. Unfortunately, the more complex index is also more time-consuming and expensive to administer and, as a consequence, has been used in relatively few national surveys. However, we can examine levels of materialism/postmaterialism using this 12-choice measure with surveys conducted in 1973 and 1990. The results from these eight European societies are presented in Table 1. These data reveal a shift toward postmaterialism in all eight countries, although the shift in Belgium is relatively modest. Across the eight countries for which data covering this 17-year period are available, the percentage scoring "high" on the materialist/postmaterialist index rose from 41% in 1973 to 54% in 1990. As Inglehart (1990) has shown, young Europeans are much more likely to score as postmaterialists on this measure than older Europeans are. Though there are not enough observations for a detailed analysis of the dynamics of value change, the trend toward postmaterialism also emerges when the more reliable 12-item measure is used.

TABLE 1

The Shift toward Postmaterialist Values: Results from the 12-Item Index in 1973 versus 1990

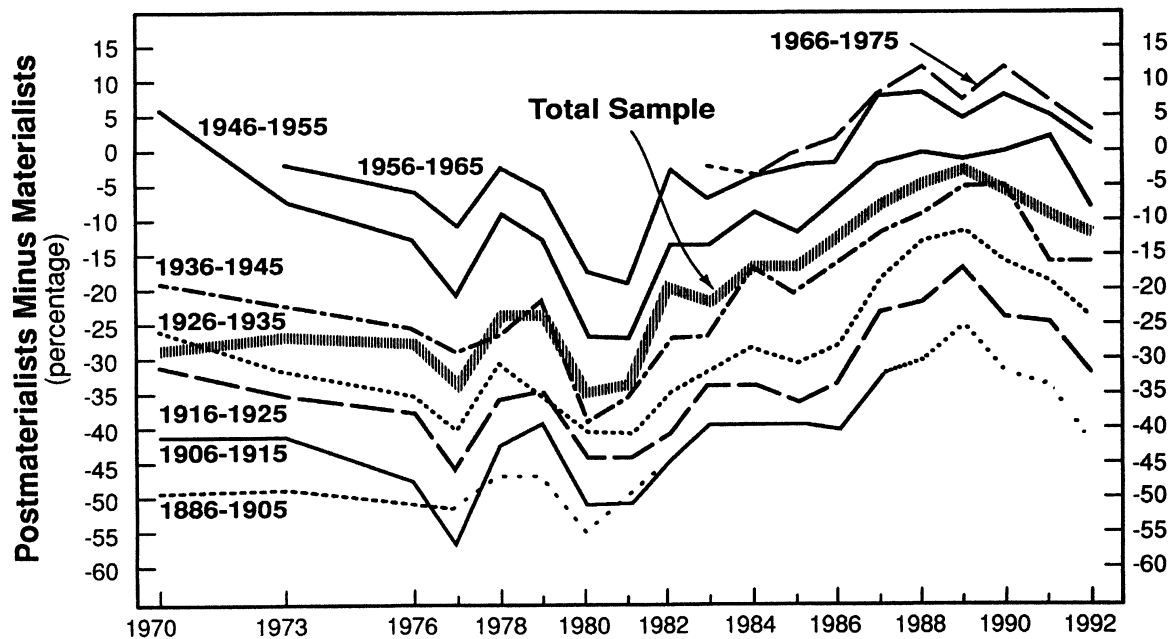
COUNTRY	PERCENTAGE SCORING "HIGH" ON 12-ITEM INDEX ^a		
	1973	1990	SHIFT
West Germany	25	53	+28
Italy	34	52	+18
Denmark	35	51	+16
Netherlands	53	69	+16
Britain	38	50	+12
Ireland	38	46	+8
France	50	58	+8
Belgium	51	55	+4
Mean	41	54	+13

Source: 1973 European Community Survey and 1990 World Values Survey.
^aThis index is constructed by summing the scores from choosing the five postmaterialist goals, when a score of +2 is given if the given item is ranked highest in its group of four items, and a score of +1 is given if it is ranked second highest in its group. Scores on the resulting index range from 0 to 8; a "high" score is one of 4 or higher.

WHAT CAUSES LONG-TERM CHANGE?

Inglehart's thesis maintains that the trend toward postmaterialism results mainly from generational replacement. We have earlier demonstrated that replacement is a driving force behind value change (Abramson and Inglehart 1986, 1987, 1992), but we can provide additional evidence. Figure 2 presents a cohort analysis (using the four-item measure) among eight birth cohorts tracked from 1970 to 1992 using a combined weighted sample of Germany, Britain, the Netherlands, France, Belgium, and Italy.⁸ Vertical comparisons between birth cohorts in each year reveal that younger cohorts consistently have higher levels of postmaterialism than their elders. These relationships are not just a function of the higher educational levels of younger Europeans, although the very low educational levels of older Europeans contributes to their levels of postmaterialism.⁹ Following given cohorts from left to right across the figure tracks the value fluctuations of each cohort as it ages. For example, when it was first sampled, the cohort born from 1946 to 1955 was between the ages of 15 and 24. By 1992, this cohort was between the ages of 37 and 46.

There are obvious short-term fluctuations for every birth cohort. But by following given cohorts from left to right across the figure, it becomes clear that there is no overall tendency for birth cohorts to become more materialist as they age. That cohorts do not become more materialist as they age undermines a life-cycle interpretation for the relationship between age and materialism. But as Shively (1991) correctly argues, such evidence does not conclusively disprove a life-cycle interpretation. As Glenn (1977) has shown, one

FIGURE 2**Cohort Analysis, 1970–92.**

Source: Based on combined weighted sample of European Community Surveys carried out in West Germany, France, Britain, Italy, the Netherlands, and Belgium, in given years, using the four-item materialist/postmaterialist values index (N = 222,699).
 Note: % postmaterialists – % materialists in eight birth cohorts and for total sample in six West European societies.

can never definitely choose between a life-cycle and a generational explanation on statistical grounds alone, for in any cohort matrix the age of a cohort is a perfect function of its date of birth and the time that the survey is conducted. Even though Figure 2 demonstrates that these cohorts did not become more materialist as they aged, one could always argue that some unmeasured period effect conducive to postmaterialism suppressed true life-cycle forces that would otherwise make the cohorts more materialist as they aged. On the other hand, as Shively also notes, analysts *can* distinguish period effects from cohort effects and life-cycle effects if they have side information that enables them to identify any one of the three. We have two important pieces of side information: (1) we know that major economic recessions affected all six of these countries in the mid-1970s, the early 1980s, and again in the early 1990s; and (2) theoretically, these economic conditions would be expected to produce a downward shift toward materialism, since they lead to a diminished sense of economic security. This interpretation was proposed by Inglehart (1981, 1985) to account for the downward swings in postmaterialism in the mid-1970s and

the early 1980s. We now have an additional test of this interpretation: another recession occurred in the early 1990s, and we find another downward swing in the proportion of postmaterialists. If we accept the interpretation that these fluctuations in the values indicator are, indeed, due to these recessions, then we have identified the major period effects. The remaining pattern over time is essentially horizontal for each cohort, which implies that there are no important life-cycle effects and that the enduring intercohort differences reflect generational change. We find this interpretation quite plausible and think most other observers will also: it fits the original theory neatly, with each successive recession producing a shift toward materialism, followed by a resurgence of postmaterialist values when economic recovery takes place.

Even though we cannot definitively rule out the possibility that these cohorts might eventually become more materialist as they age, the overall increase in postmaterialist values that we observe here results largely from generational replacement. This can be seen by comparing the overall trend line in Figure 2 with the trend lines for the eight cohorts.

Despite substantial short-term fluctuation, given cohorts change very little from 1970–71 to 1992. But during these years the overall percentage difference index rises from -29 to -10 , a 19-point gain. None of the cohorts tracked over these years registered a gain that is even close to this magnitude (they show virtually no gain at all). The rise in the overall percentage difference index occurs because during these 22 years, the older, more materialist cohorts were gradually dying and being replaced by younger, more postmaterialist cohorts. These results make clear that generational replacement is a major force driving postmaterialism upward. The net rise in postmaterialism clearly is *not* due to changes in inflation rates, even though the short-term fluctuations within any given cohort do track the inflation rate very closely (as Figure 3 will demonstrate), for the overall inflation rate at the end of this period was *higher* than at the start (6.5% in 1992, 5.2% in 1970), but the proportion of postmaterialists nevertheless reveals a long-term increase. In 1970–71, the six-nation sample examined in Figure 2 contained 40% materialists and 11% postmaterialists, with materialists outweighing postmaterialists by nearly 4:1. By Spring 1992, the figures had shifted to 27% materialists and 16% postmaterialists, for a ratio of less than 2:1. Overall gains in postmaterialism result mainly from the gradual exit of the older cohorts through death and their replacement by cohorts with higher levels of postmaterialism. Although generational replacement is gradual, over the course of two decades, it becomes substantial. According to census statistics, by the end of 1992, 40% of the adults in these six societies were too young to have been sampled in 1970. In other words, between 1970 and 1992, two-fifths of the adult population had been replaced. Obviously, a theory of value change based upon intergenerational population replacement is compatible with substantial short-term variation. But just what causes that short-term variation?

WHAT CAUSES THE PERIOD EFFECTS?

Although there definitively is a trend toward postmaterialism in seven of these eight European societies, none of them shows a simple linear progression toward postmaterialist values (as Figure 1 demonstrates). Clearly, short-term period effects are present. Inglehart's theory predicts that economic and physical insecurity will tend to depress the proportion of postmaterialists and that relatively secure conditions will be conducive to increases in postmaterialism. The four-choice value battery employed to measure materialist/postmaterialist values includes one choice that makes the measure sensitive to changing rates of inflation, since one of the four proposed national goals is "fighting rising prices."¹⁰ Indeed, Inglehart has demonstrated that much of the short-term variation in values results from changing

levels of inflation. Using just two variables—(1) cohort effects and (2) period effects (as measured by change in the consumer price index)—he explained 87% of the cohort-level variation in value priorities in a combined sample of six Western European publics between 1970 and 1982 (Inglehart 1985). We can now examine the relationship between cohort change and inflation rates over a much longer period.

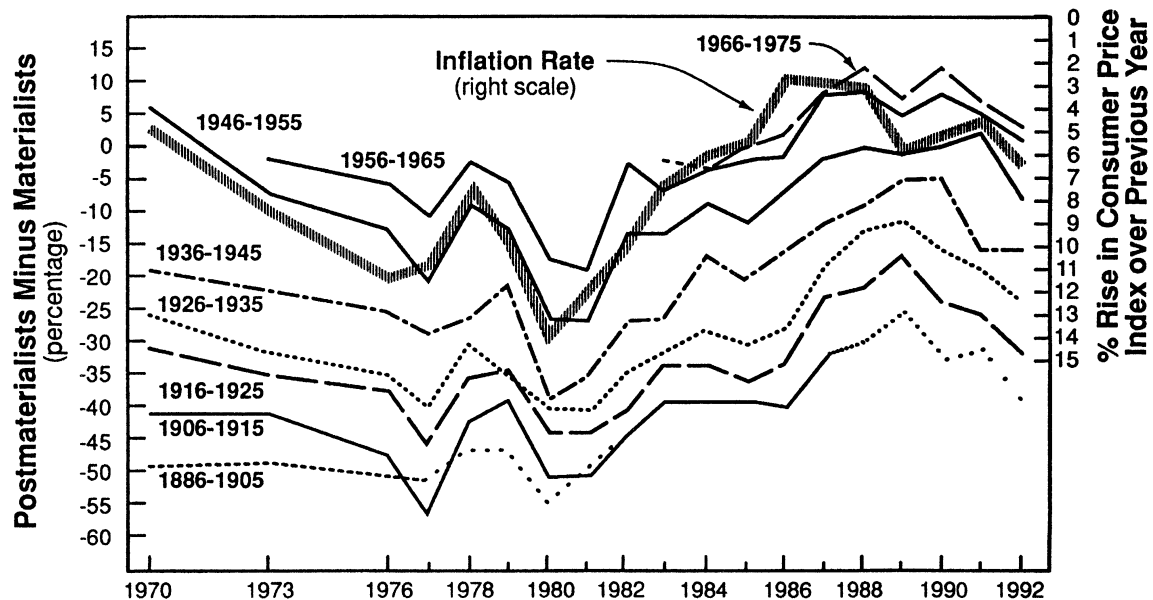
Figure 3 presents the results of a cohort analysis of the pooled results from the six countries that have been surveyed since 1970, but we now superimpose the current rate of inflation.¹¹ Since Inglehart's theory predicts that postmaterialist values will rise when inflation falls, the inflation index runs from low rates at the top of the graph to high rates toward the bottom. This makes it easy to see that (as predicted) inflation and postmaterialist values move up and down together, bearing in mind that a *downward* movement of the inflation line indicates *rising* rates of inflation.

Substantial period effects occur during these years, as even a cursory glance at Figure 3 suggests. Though the long-term tendency is for each cohort to remain about as materialist or postmaterialist as it was when it was first sampled, we find three pronounced dips in the proportion of postmaterialists; they correspond to the recessions of the mid-1970s, the early 1980s, and the early 1990s. As predicted, period effects are closely linked with the inflation level at a given time. At most time points, the percentage difference index for each cohort moves up or down with the current rate of inflation. When we control for the effects of inflation, the period effects largely disappear. But statistical controls are not needed in the present example. As it happens, by 1990, the weighted mean inflation rate for these six countries had returned to almost exactly the same level that it had in 1970. Thus, when we compare the 1970 results with the 1990 results, the main source of short-term period effects (inflation) has been controlled for by nature. With inflation thus controlled, note that the percentage difference index for these six countries rose from -29 to -6 in 1990, a net gain of 23 points. In other words, over this 20-year period, the balance between materialists and postmaterialists shifted by 1.15 points per year—the very amount that would take place from the intergenerational population replacement process alone. In any given year, current period effects will add to, or subtract from, this amount, but this is the long-term trend. The finding that short-term change results largely from changes in inflation is clearly consistent with Inglehart's scarcity thesis. Moreover, as we shall see, in seven of the eight countries for which detailed data are available, short-term value change results mainly from changing inflation rates.

Clarke and Dutt propose an alternative source of short-term variation that is not consistent with the scarcity hypothesis. They argue that contrary to what one might expect, rising levels of unemployment are

FIGURE 3

Cohort Analysis with Inflation Rate Superimposed (Using Inverted Scale on Right), 1970–92.



Source: Based on combined weighted sample of European Community Surveys carried out in West Germany, France, Britain, Italy, the Netherlands, and Belgium, in given years, using the four-item materialist/postmaterialist values index ($N = 222,699$).

Note: % postmaterialists – % materialists in six West European societies.

conducive to postmaterialist values. They argue that this happens because respondents cannot choose fighting unemployment as a goal, so that when unemployment rises, they tend to choose the option of "Giving the people more say in important government decisions" to express their concern about unemployment.

The rationale for expecting such a relationship is much less straightforward than the relatively obvious linkage between high levels of inflation and the goal of fighting rising prices. But if high levels of unemployment *do* in fact contribute to postmaterialism, this relationship should be found at the individual level. Clarke and Dutt present some evidence from the 1980–81 wave of a panel study conducted in West Germany, the Netherlands, and the United States that they claim demonstrates this linkage. This survey includes a question about jobs, but it is ambiguous. Respondents are asked, "Which of the following problems do you consider most important?" Immediately after the item "Guaranteeing equal rights for men and women," the next choice is "Seeing to it that everyone who wants a job can have one." This item could tap either the respondent's *own* anxiety about becoming unemployed or concern for fair employment practices for *everyone*, since it explicitly refers to jobs for "everyone who wants one" and appears immediately after an item about "equal rights for men and women." In any event, this ambiguous item is

weakly related to postmaterialist values. Among those who make it the main concern, 15% are postmaterialists on the 12-choice index; among the entire 1980–81 cross section as a whole, 12% are postmaterialists.

Although this item yields weak and ambiguous results, there is considerable evidence demonstrating the opposite relationship namely, that at the individual level, concern about unemployment is conducive to *materialist* values, rather than to *postmaterialist* values. Let us briefly review this evidence.

In developing a measure of materialist/postmaterialist values in 1970, Inglehart actually *did* experiment with an item that taps concern about unemployment. He employed a four-choice battery that included the following choices:

I will now propose a number of concrete objectives. Among the following things, which are the two that seem most desirable to you?

1. Guarantee greater job security
2. Make our society more humane
3. Raise salaries
4. Guarantee the participation of workers in the management of enterprises.

This measure was employed in five countries, in addition to the now-standard four-item battery. How these four objectives relate to postmaterialism is presented in Table 2. The table demonstrates that

TABLE 2**Percentage of Postmaterialists, by Choice Among Four Concrete Objectives in Five West European Societies, 1970**

OBJECTIVE CHOSEN AS MOST IMPORTANT	PERCENTAGE CLASSIFIED AS POSTMATERIALIST					WEIGHTED MEAN
	WEST GERMANY	NETHERLANDS	FRANCE	BELGIUM	ITALY	
Raise salaries	5	3	2	8	4	4
Guarantee greater job security	6	15	7	12	10	8
Overall sample	11	19	11	14	13	12
More participation by workers	12	22	12	10	26	16
Make our society more humane	26	30	22	21	22	24

Source: 1970 European Community Survey.
 Note: Based on four-item values index.

respondents who emphasized job security are consistently *less* likely than the overall public to be postmaterialists (as Inglehart's theory implies).

The 1973 European Community survey provides further individual-level evidence that contradicts the thesis that concern for unemployment gives rise to postmaterialism. Respondents in eight countries were asked the following question:

Here are some things people usually take into account in relation to their work. Which one would you personally place first? . . . and which next?

1. A good salary so that you do not have any worries about money
2. A safe job with no risk of closing down or unemployment
3. Working with people you like
4. Doing an important job which gives you a feeling of accomplishment.

Unlike both the 1970 question and the 1980–81 question, which could be read as tapping a sociotropic concern to provide greater job security or fair employment practices for everyone, this 1973 item

explicitly refers to concerns that “you personally” would take into account. And here, the relationship between job goals and materialist/postmaterialist values is unambiguous, as we see in Table 3. The pattern is striking. Respondents who emphasize “a safe job with no risk of unemployment” are about *half* as likely to have postmaterialist values as those who choose “working with people you like” or “a job that gives you a feeling of accomplishment.” In all eight countries those who choose “a safe job” are *less* likely to score as postmaterialists than the overall sample. Moreover, similar results obtain when one examines the relationship between employment goals and a measure of materialism/postmaterialism based upon a choice of twelve national goals. Far from being conducive to postmaterialist responses, a concern with unemployment is linked with *materialist* responses (as the scarcity hypothesis implies).

During certain periods, rising levels of unemployment *did* coincide with aggregate-level increases in postmaterialism. This can be seen in Figure 4, which

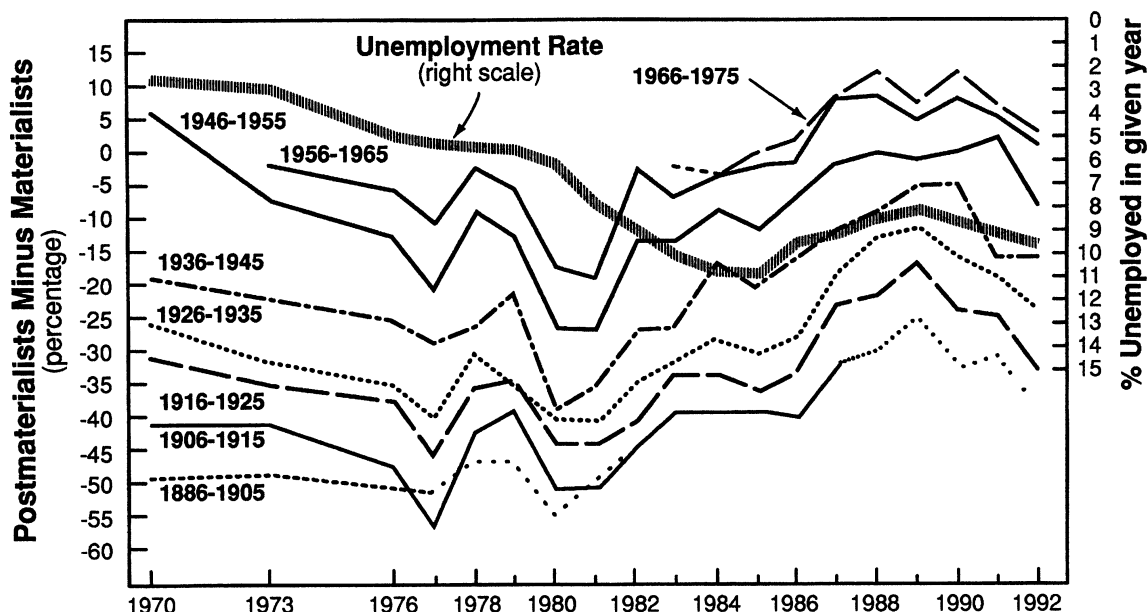
TABLE 3**Percentage of Postmaterialists, by Occupational Goals in Eight West European Societies, 1973**

GOAL CHOSEN AS MOST IMPORTANT	PERCENTAGE CLASSIFIED AS POSTMATERIALIST								MEAN
	WEST GERMANY	GREAT BRITAIN	NETHERLANDS	FRANCE	BELGIUM	ITALY	DENMARK	IRELAND	
A good salary	3	4	4	6	8	6	4	6	5
A safe job	4	6	8	9	10	4	8	4	7
Overall sample	9	8	12	13	14	9	12	8	11
Working with people you like	13	9	17	19	21	13	17	8	15
A feeling of accomplishment	21	14	18	20	21	16	18	14	18

Source: 1973 European Community Survey.
 Note: Based on four-item values index.

FIGURE 4

Cohort Analysis with Unemployment Rate Superimposed (Using Inverted Scale on Right).



Source: Combined weighted representative national surveys from France, West Germany, Britain, Italy, Belgium, and the Netherlands, including European Community surveys from 1970 and 1973 and Euro-Barometer surveys 6 through 37 (over 220,000 interviews).

Note: % postmaterialist - % materialist in six West European societies.

(like Figures 2 and 3) shows percentage difference index levels among the eight birth cohorts. For this figure, however, we superimpose unemployment rates. Unemployment is indexed so that a downward movement in the graph indicates higher rates of unemployment. Bear in mind that Clarke and Dutt's analysis is limited to the period from 1976 through 1986.

The most striking feature of the relationship between unemployment and materialist/postmaterialist values is its *inconsistency* over time. The contrast with the consistent relationship between inflation and values is impressive. From 1970 to 1977 and from 1985 to 1992, the unemployment index moves in the *same* direction as the value index; that is, higher rates of unemployment are linked with movement toward materialism, not postmaterialism. But the relationship reverses itself during most of the period studied by Clarke and Dutt. Here, rising rates of unemployment were accompanied by value shifts toward postmaterialism, as they claim. This pattern does not hold up even throughout the entire period from 1976 through 1986. During the first year of this period, unemployment is rising, accompanied by a shift toward materialism and during the last year of this period, unemployment is falling, accompanied by a shift toward materialism, and during the last year of

this period, unemployment is rising, accompanied by a shift toward materialism, and during the last year of this period, unemployment is falling, accompanied by a shift toward postmaterialist values. But the relationship reported by Clarke and Dutt does prevail from 1981 to 1985. During these years—and only during these years—a resurgence of postmaterialism was accompanied by a steep rise in unemployment. A glance back at Figure 3 reveals that this steep rise in unemployment went along with an even steeper drop in inflation, bringing a sharp rise in postmaterialist values.

A more rigorous test to determine whether there is a significant trend toward postmaterialism can be conducted using a time series regression analysis. Moreover, because statistical analyses are parsimonious, we can examine change in all eight societies, as well as the combined European sample. The results of our time series analysis are presented in Table 4. We present the results of a time series regression analysis (employing ordinary least squares) in which the materialist/postmaterialist values index is the dependent variable and in which the number of years from the baseline survey, the annual inflation rate, and the annual unemployment rate are the independent variables.

The last two columns of Table 4 present diagnostic

TABLE 4

Predicting Postmaterialist Values in Eight West European Societies, 1970/71–92

COUNTRY	B	SE B	BETA	T	(SIG. 2-TAILED)	R ²	DW	ACF (1)
West Germany								
Years since baseline	1.31	.28	.50	4.64	.0003	.89	1.36	.263
Inflation	-4.20	.91	-.45	-4.60	.0003			
Unemployment	1.60	.79	.22	2.02	.0616			
Britain								
Years since baseline	1.21	.31	.66	3.91	.0014	.78	2.01	-.047
Inflation	-.99	.36	-.40	-2.75	.0148			
Unemployment	-.20	.64	-.06	-.32	.7568			
Netherlands								
Years since baseline	1.29	.25	.63	5.18	.0001	.88	2.02	-.012
Inflation	-2.39	.56	-.50	-4.24	.0007			
Unemployment	-.58	.36	-.17	-1.62	.1261			
France								
Years since baseline	1.82	.54	1.34	3.38	.0041	.73	2.19	-.113
Inflation	-.60	.39	-.27	-1.51	.1510			
Unemployment	-2.54	1.01	-.89	-2.52	.0235			
Belgium								
Years since baseline	.79	.20	.62	4.01	.0011	.85	2.11	-.136
Inflation	.09	.43	.03	.22	.8278			
Unemployment	-2.41	.29	-1.05	-8.29	.0000			
Italy								
Years since baseline	1.07	.32	.63	3.29	.0050	.85	1.84	.066
Inflation	-1.46	.23	-.76	-6.47	.0000			
Unemployment	-2.23	.74	-.54	-3.01	.0088			
Denmark ^a								
Years since baseline	2.65	.59	.82	4.46	.0005	.94	1.63	.145
Inflation	-.96	.80	-.19	-1.20	.2491			
Unemployment	-.48	.75	-.06	-.64	.5301			
Ireland ^a								
Years since baseline	2.07	.38	1.09	5.47	.0001	.87	1.47	.116
Inflation	-.96	.26	-.57	3.78	.0020			
Unemployment	-2.00	.47	-.84	-4.25	.0008			
Six European Societies ^b								
Years since baseline	1.03	.25	.61	4.09	.0010	.89	1.84	.003
Inflation	-1.62	.32	-.53	-4.98	.0002			
Unemployment	-.40	.53	-.10	-.76	.4597			

Source: Data about values are based upon European Community Surveys. Data about inflation and unemployment are from the Statistical Office of the European Communities. For the results employing iterative Prais-Winsten estimators, see Inglehart and Abramson 1993, tbl. A1.

Note: Values are percentage difference indices using the four-item measure (ordinary least squares).

^aBaseline survey is 1973.

^bCombined weighted sample of West Germany, Britain, the Netherlands, France, Belgium, and Italy.

statistics (the Durbin-Watson test and a first-order autocorrelation function coefficient) on the residuals that test for the presence of autocorrelation. Both statistics reveal that there is no problem with autocorrelation,¹² and we can therefore employ these ordinary least squares results.¹³

As Table 4 shows, when we simultaneously control for the effects of inflation and unemployment, there is a significant trend toward postmaterialism in all eight countries, *including* Belgium. Of course, we know from Figure 1D that actual levels of postmaterialism increased only negligibly in Belgium. These

analyses suggest that there would have been a substantial increase in postmaterialism in Belgium if unemployment had not contributed to *materialism*. Table 4 also shows that inflation has a statistically significant effect on reducing postmaterialism in every country except France, Belgium, and Denmark. Unemployment has a statistically significant impact on the percentage difference index in Belgium, as well as in France, Italy, and Ireland. But in all four countries, unemployment contributes to materialism. The positive relationship between unemployment and postmaterialism comes close to statistical signif-

icance in Germany but falls far short of significance when the minimal effects of autocorrelation are removed (see Inglehart and Abramson 1993, table A1).

The crucial finding is that when we take the effects of inflation and unemployment into account, there is a statistically significant trend toward postmaterialism in all eight societies. Moreover, this change is very much in the order of magnitude predicted by Inglehart's thesis—about a one-point gain per annum on the index. For the combined six-nation sample, there is a 1.03-point per year increase in the index; and this result is statistically significant at the .001 level. Inflation also affects values, a result that is statistically significant at the .0002 level. Unemployment is negatively related to postmaterialism, although the relationship is negligible (the significance level is .4597).

These results strongly support Inglehart's (1971) thesis that there would a trend toward postmaterialism.¹⁴ Moreover, Inglehart was making actual *ex ante* predictions, not *ex post* predictions, in which a theory can be designed to fit the observed results. Indeed, the theory predicting the shift toward postmaterialist values was published many years before most of the data used to test it had been collected.

The argument that high rates of unemployment should be conducive to postmaterialism seemed implausible from the start. Although at certain times high rates of unemployment happened to coincide with a rise in postmaterialism, the apparent causal linkage is spurious.

UNEMPLOYMENT AND POSTMATERIALISM IN EX-SOCIALIST COUNTRIES

The evidence we have examined so far is based on only relatively modest changes in unemployment rates. Recent events in the ex-socialist world provide a stronger test of this argument. Within the past few years, these countries have gone from being socialist societies, in which unemployment was quite low, to an abrupt transition to market economies, in which unemployment has suddenly become unprecedentedly widespread. If unemployment is conducive to postmaterialist values, we should observe a sharp rise in postmaterialism in these societies since the collapse of socialism. On the other hand if, as we argue, insecurity is conducive to materialist values, we should find a dramatic shift toward materialism in the last few years.

Among the ex-socialist societies, East Germany provides a particularly good site for testing these two competing interpretations. For one thing, it has experienced a severe rise in unemployment. Since the collapse of the socialist regime in 1990, entire sectors of East German industry have proven to be non-competitive by Western standards and have closed down completely. Unemployment has risen from an

official rate near zero to traumatic levels that are partly concealed by labeling unemployment payments as retraining salaries but that some observers estimate to include as much as 30% of the work force. Moreover, we can test the proposition readily in this setting because, from reunification to the present time, Euro-Barometer surveys have been carried out, with separate samples in each of the two former regions of Germany each spring and fall.

Let us examine the results. Did the massive rise in unemployment bring a surge in postmaterialist values, as Clarke and Dutt's interpretation implies? Or did it bring a sharp decline in postmaterialism, as the value-change thesis implies? The answer is clear and unequivocal. In Fall 1990, when the German Democratic Republic was abolished, Euro-Barometer Survey 34 found that 21% of the East German public fell into the materialist category, 65% were mixed, and 14% were postmaterialists, yielding a percentage difference index of -7. While this was well below the West German level of postmaterialism, East Germany was probably the most postmaterialist society in the ex-socialist world. But with the subsequent dismantling of large parts of the East Germany economy, this index fell sharply, dropping to -9 in Spring 1991, to -19 in Fall 1991, to -26 in Spring 1992, and to -24 in Fall 1992. Within two years, the proportion of postmaterialists had been cut in half. Here again, the notion that high levels of unemployment are conducive to postmaterialism is contradicted by the empirical evidence.

ECONOMIC SECURITY AND VALUE CHANGE: NEW EVIDENCE FROM 40 SOCIETIES

The World Values Surveys carried out in 1981-83 and 1990-91 provide further evidence that economic security contributes to the rise of postmaterialist values.¹⁵ Though they do not provide the detailed time series that is available from the Euro-Barometer surveys, they do provide a broader coverage of the developmental spectrum that has ever previously been available. The 1981-83 surveys conducted representative national samples in 22 societies; apart from a small sample in Northern Ireland (about 300 cases in both surveys), the sample sizes ranged from 927 to Iceland to 2,303 in Spain. The 1990-91 surveys provide data from representative national samples from 40 societies containing over 70% of the world's population, with sample sizes ranging from 588 in Finland to 4,147 in Spain, and it employed the 12-choice value battery. (We give the actual number of respondents in each society that received a score on the 12-choice measure of materialism/postmaterialism in Inglehart and Abramson 1993, tbl. A2). These surveys cover an unprecedentedly broad range of the economic and political spectrum, with data from such

low-income nations as China, India, and Nigeria, as well as from ex-socialist countries in Eastern Europe and from advanced industrial democracies. Both World Values Surveys measured materialist/postmaterialist values in every inhabited continent except Australia.

The value change thesis implies that the shift from materialist to postmaterialist priorities is potentially a universal process: it should occur in any country that moves from conditions of economic insecurity to relative security (though during a transitional period, older generations will continue to reflect the conditions that characterized their preadult experiences). This has clear implications concerning the linkage between economic development and value change: though a high level of per capita income does not necessarily produce a sense of security, it seems likely that people living in rich countries will experience a stronger sense of economic security than those in poor nations. A high gross national product per capita is at least a rough indicator of a country's level of economic security. In short, economic development should be conducive to a shift from materialist to postmaterialist values.

Though this implication is straightforward, it has never before been possible to test it adequately because representative national surveys are usually carried out only in relatively developed societies. Using the 1990–91 World Values Surveys, we can now test this hypothesis across the full range of economic development. We elsewhere display the relationship between per capita gross national product and scores on the 12-item measure of materialist/postmaterialist values for all 40 societies studied in the 1990–91 World Values Survey (Abramson and Inglehart N.d., fig. 1).¹⁶ As we show, societies with relatively high per capita gross national product tend to have higher proportions of postmaterialists than poorer countries have. There is a strong relationship between per capita gross national product and values. The overall correlation is $r = .68$, significant at the .0001 level. The regression coefficient indicates that every thousand-dollar increase in per capita gross national product contributes to a 1.7 point gain on the materialist/postmaterialist value index. This test suggests that a linear model fits the data relatively well.¹⁷

Diez-Nicolas (n.d.) demonstrates that this relationship also holds true at the regional level in Spain. He has included the four-item materialist/postmaterialist values battery in monthly national surveys of the Spanish public since 1988. Cumulating large numbers of interviews for each region enables him to perform a statistically reliable analysis of the relationship between values and economic security at the regional level, in a country with great regional variation. He finds that the relative level of postmaterialism varies considerably from region to region and is stable over time, with the wealthiest regions (the Basque country and Madrid) consistently having the highest propor-

tions of postmaterialists and the poorest regions (Andalusia and Castilla-La Mancha) showing the lowest proportions of postmaterialists in virtually every year. This relationship is strong and shows a particularly good fit with a given region's level of economic development 25 years prior to the survey, during the median respondent's adolescent years ($r = .88$).

This reinforces the findings from the global array of 40 societies that we have studied (see Abramson and Inglehart n.d.), which also demonstrates that postmaterialist values are closely linked with prosperity. Although the relationship between per capita gross national product and values is cross-sectional, the value-change thesis implies that this configuration reflects a dynamic process in which economic development leads to increasing postmaterialism through a gradual process of intergenerational change. If this theory is correct, we should find a higher proportion of postmaterialists among the younger cohorts than among the old, *provided* that a society has had sufficient economic growth during the past four or five decades so that the younger cohorts experienced significantly greater economic security during their preadult years than did those who are now in their fifties, sixties, or seventies.

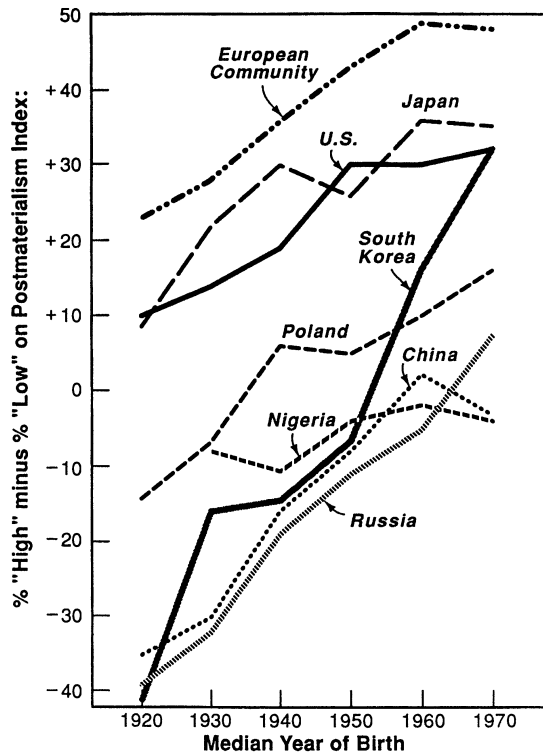
Figure 5 presents the value scores among birth cohorts in several selected societies studied by the 1990–91 World Values Survey (the entire array would be unreadable). As it illustrates, the younger birth cohorts do, indeed, show considerably higher proportions of postmaterialists than the older cohorts. This is not a phenomenon that is limited to Western democracies: it is found across societies having a wide variety of political and economic institutions and a wide variety of cultural traditions. Though the richer countries have much higher absolute proportions of postmaterialists than the poorer ones, we also find a steep slope reflecting intergenerational value differences in poor countries that have experienced a rapid increase in prevailing standards of living during the past several decades.

The results from the European Community countries have already been examined in detail and are combined into a single line on Figure 5. Over all, the European Community shows the highest proportion of postmaterialists on this graph, with the United States and Japan also ranking high. Even the oldest birth cohorts in these advanced industrial societies rank higher than even the youngest cohorts in most other countries. But an upward slope, linked with a rising proportion of postmaterialists to materialists as we move from old to young, is also found in Russia and East Asia.

At first glance, it might seem surprising that the shift from materialist to postmaterialist values has taken place in Russia, which experienced economic stagnation during the decade preceding these surveys and which by 1990 was in a state of economic collapse. If the postmaterialist shift simply reflected

FIGURE 5

Values by Birth Cohort, in Western Democracies, Eastern Europe, and East Asia.



Source: 1990-91 World Values Survey.

Note: Respondents are classified as "high" on the 12-item materialist/postmaterialist values index if they gave high priority to at least three of the five postmaterialist goals (i.e., as one of the two most important goals out of each group of four goals); they are classified as "low" if they chose none of the five postmaterialist goals among their high priorities.

recent conditions, we would *not* expect to find intergenerational differences. But Inglehart's theory postulates a long-term process of intergenerational change based on the differences experienced during a given cohort's preadult years. From this perspective, we *would* expect to find sizable intergenerational value differences in Russia, for the formative experiences of the cohorts born in the 1950s, and 1960s, and the 1970s were characterized by far more secure circumstances than those which shaped the cohorts born in the 1920s, 1930s, or 1940s.

Older Russians, for example, experienced the mass starvation linked with forced collectivization during the 1920s, followed by the terror and the Stalinist purges of the 1930s and the starvation and the loss of 27 million lives in the Soviet Union during World War II. The 1950s and 1960s, by contrast, were an era of recovery and rapid economic growth at rates that exceeded those of most Western countries. This was the era that led Khrushchev to boast, "We will bury

you" (economically)—and at the time, many Western observers thought it a plausible boast. Recent years have been calamitous, creating a period effect that tends to drive all of the Russian cohorts downward toward the materialist pole. But the formative years of the younger cohorts were far more secure than those of the older cohorts, and if the intergenerational differences reflect differences in preadult experience, we would indeed expect to find sizable evidence of intergenerational change in Russia. We do, as Figure 5 demonstrates. Though the Russian cohort line starts and ends at a level far below that of the richer countries, intergenerational differences in Russia are even steeper than those found in Western Europe, the United States, or Japan. Future research will be needed to determine whether the relatively postmaterialist values of young Russians will persist in the face of the economic collapse following the dissolution of the Soviet Union.

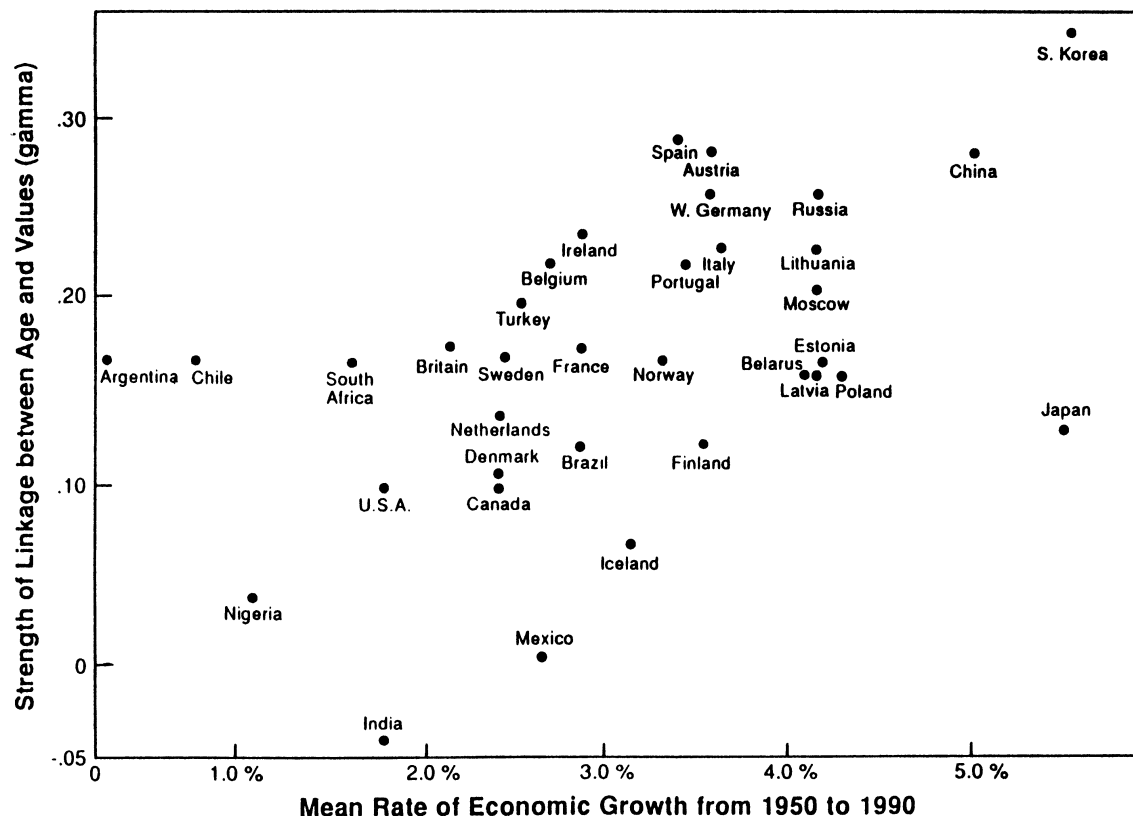
China shows an equally steep slope, reflecting sharp intergenerational differences that may have contributed to the Spring 1989 clash between young intellectuals and an octogenarian leadership still in control of the army. There were massive differences between the formative experiences of the older generation in China, who lived through an era of mass starvation and civil war that went on almost continuously from the 1920s to 1949, and those of the younger cohorts, brought up in conditions of relative stability and prosperity, though broken by the severe but relatively brief upheavals of the Great Leap Forward and the Cultural Revolution in the late 1960s.

The most dramatic set of intergenerational value differences are found in South Korea. Since the 1950s, South Korea has shown spectacular economic growth rates: among all the countries for which the World Bank reports data, only one country (Singapore) showed higher economic growth rate during the period from 1965 to 1990. Apart from this ministrate, South Korea has led the world in economic growth, rising from starvation-level poverty in the 1950s to become a relatively rich country. In keeping with this history, older Koreans show an immense preponderance of materialist priorities, and Korea's overall level of postmaterialism is still low. But young South Koreans show a clear preponderance of postmaterialist priorities, with the slope rising so steeply that the youngest cohort actually converges with its American counterparts.

By contrast with South Korea, the Nigerian data show negligible intergenerational value differences: the old are almost as likely to emphasize postmaterialist values as are the young. Here again, the size of the intergenerational value differences reflects the rate of economic change experienced by the given country, for Nigeria has had virtually no increase in per capita income since the 1960s. As our theory implies, intergenerational value differences are present if the formative years of the younger cohorts were shaped by significantly higher levels of economic security

FIGURE 6

Differences between the Values of Young and Old in Societies with Differing Rates of Economic Growth



Note: Data on economic growth were not available for Bulgaria, Czechoslovakia, East Germany, Hungary, or Northern Ireland.
 Source: 1990-1991 World Value Survey; $r = .52$ $p < .001$; based on the 12-item index of materialist/postmaterialist values.

than those of the older cohorts. In countries that have not experienced economic development, this does not hold true.

Figure 6 condenses the relationship between age and values for each country into a single coefficient. As this figure demonstrates, the selected examples shown in Figure 5 reflect the overall pattern: intergenerational value differences tend to be largest in those countries which have experienced the greatest amounts of economic growth during the past 40 years. Accordingly, the correlation between age and values is strongest in such countries as South Korea and China. It is weak or negligible in such countries as Nigeria and India, which have not only experienced much lower rates of economic growth than China or South Korea but also have much more unequal distributions of income, with the result that substantial proportions of the population live at the edge of starvation.

Note also that the intergenerational value differences are relatively weak in the United States (the

four-item index shows even weaker differences): though it has a relatively high absolute level of post-materialism, the rate of intergenerational change is relatively small. Although the United States has been one of the world's richest countries throughout the twentieth century, it has not experienced dramatic changes between the formative experiences of younger and older cohorts comparable to those which have characterized Europe and East Asia. The United States has been a relatively rich country throughout the lifetime of virtually everyone in the sample and was not devastated by World War II, but it has had relatively slow growth in recent decades.

We find some deviant cases. Argentina and Chile are "overachievers," showing larger intergenerational differences than their economic growth rates would predict; while Japan is an "underachiever," showing smaller intergenerational value differences than its history of economic growth would predict. But overall, the pattern is clear. High rates of economic growth tend to go with large intergenerational value

differences: the relationship is strong ($r = .52$) and statistically significant at better than .001 level.

Data from a long time series would be needed in order to demonstrate directly that economic development tends to produce an intergenerational shift toward postmaterialist values globally, and such data are not available for most of these countries. But the evidence that is available has a remarkably good fit with the predictions of the postmaterialist value shift thesis, and we can supplement it with a modest amount of relevant time series data: for 20 of these countries, data from the four-item values battery are available from both the 1981–83 and the 1990–91 World Values Survey.¹⁸ As Table 5 shows, among these countries, 18 out of 20 reveal a shift in the predicted direction. Only two countries (Iceland and South Africa) show shifts toward materialism. We have no explanation for why Iceland is a deviant case, but it is not at all surprising that South Africa shows a shift toward materialist goals. A society's values at any given time point reflect a combination of long-term trends and current period effects, and South Africa experienced a period of severe insecurity during the 1980s. Its economy, suffering from international boycott and low commodity prices, experienced economic stagnation throughout the 1980s. Moreover, widespread violence and political instability gave rise to growing concern for physical security among both blacks and whites. Powerful period effects were working to produce a sense of insecurity, rather than the security that contributes to postmaterialist values.

CONCLUSION

The critics who argue that there has been no clear trend toward postmaterialism are mistaken. Despite Thomassen and van Deth's doubts, the evidence since 1986 makes it clear that there has been a strong trend toward postmaterialism in the Netherlands. Although Shively is technically correct in stating that one cannot definitively reject a life-cycle interpretation using cohort data, the data strongly suggest that generational replacement has been a major long-term force pushing postmaterialism upward. As of 1992, the data for all eight countries they examined reveal a statistically significant trend toward postmaterialism.

Clarke and Dutt also assert that short-term change in values responds to economic changes in ways that are inconsistent with Inglehart's thesis. The argument that postmaterialism increases when unemployment rises is not sustainable. At the individual level, the bulk of the data indicate that persons who are concerned about unemployment tend to have materialist values. During the early 1980s, postmaterialism did tend to increase when unemployment was rising, but this relationship reflects a negative correlation between inflation and unemployment. In fact, in those countries in which the effects of unemployment are statistically significant, unemployment is related to the growth of *materialism*.

TABLE 5

**The Shift toward Postmaterialist Values:
Results from the 1981–83 versus 1990–91 World
Values Surveys**

COUNTRY	PERCENTAGE POSTMATERIALIST – PERCENTAGE MATERIALIST		
	1981–83	1990–91	NET SHIFT
Finland	21	23	+2
Netherlands	–2	26	+28
Canada	–6	14	+20
Iceland	–10	–14	–4
Sweden	–10	9	+19
W. Germany	–11	14	+25
Britain	–13	0	+13
France	–14	4	+18
Belgium	–16	2	+18
S. Africa	–16	–33	–17
Mexico	–19	–14	+5
Ireland	–20	–4	+16
Argentina	–20	–6	+14
Norway	–21	–19	+2
United States ^a	–24	6	+30
Japan	–32	–19	+13
Italy	–39	7	+46
Spain	–41	–6	+35
N. Ireland	–45	–7	+38
Hungary	–50	–41	+9

Source: 1981–83 and 1990–91 World Values Surveys.

^aThe values question was not asked in the United States in the 1981–83 survey; results are from the 1980 NES survey. Results are based on the four-item values index.

In short, the basic four-choice value measure developed by Inglehart behaves very much as he theorized. By the usual tests of validity, the basic four-choice battery has performed remarkably well. Over the past two decades, investigators in more than 20 countries have tested its validity against scores of theoretically relevant demographic and attitudinal variables; in the vast majority of cases, the predicted relationships have been found. The dimensional structure of the measure has also been analyzed in detail, and the measure has a theoretically coherent structure across a wide range of countries. The stability of this structure has also been demonstrated in surveys conducted in 1973, 1978, 1988, and 1990 that employ a larger number of value choices. To a remarkable degree, the same structure appears in survey after survey.

The four-choice indicator that has been used since 1970 has proven to be a very useful indicator of values, and one that is strongly related to intergenerational differences. This relationship has allowed scholars to predict the direction and even the approximate magnitude of change (the component due to

intergenerational population replacement). That cohort replacement is the major force driving value change seems clear. Figures 2–4 show that given cohorts tended to have about the levels of postmaterialism in 1992 as they had when they were first surveyed 22 years earlier. If there had been no population turnover during these two decades, overall levels of postmaterialism would have increased very little. But in fact, absolute increases in postmaterialism took place in seven out of the eight countries for which detailed data are available over the past 22 years. In every country but Belgium, generational replacement has been a major force pushing absolute levels of postmaterialism upward.

Of course, there is no guarantee that the trend toward postmaterialism will continue. As Duncan reminded us, “There is nothing about a trend, supposing it to have been reliably ascertained for some specific period, that guarantees its own continuation” (1968, 679). It does seem likely, at least for the next several decades, that future generational replacement will tend to push postmaterialism upward. In every society except India, the young were more likely to have postmaterialist values than their elders (although, as Figure 6 shows, this relationship varies greatly from society to society). As Hyman observed: “It is the inevitable fact of life that the young will replace the old and will determine the future course of any trend. Thus if the young differ from the old, and were to continue to do so despite their own aging, some prediction can be ventured” (1972, 243).

Although generational replacement is likely to push postmaterialism upward, our time series analyses demonstrate that economic forces (especially changing inflation rates) can affect value change. Thus, while a trend has been clearly documented and although young Europeans have remained more postmaterialist despite their own aging, economic forces can influence the pace, and even the direction, of future value change. It is possible to make projections about the future magnitude of value change in these societies (see Abramson and Inglehart 1987, 1992; Inglehart 1990), but such projections are only guidelines about what *might* happen.

The consequences of the breakup of the Soviet Union are only beginning to be felt, and it is easy to advance a bleak scenario that renders the entire study of mass values as meaningless. But it is possible to end on a brighter note. We now have data on values from a wide range of societies, representing 70% of the world’s population. Conducting surveys, in cooperation with native scholars would have been impossible in many of these countries a decade earlier. The changes that made such research possible have benefited social scientists, but they have the potential of benefiting billions of ordinary citizens as well. This broad range of data from the World Values Surveys helps place the Western European data in global perspective. These new data illustrate two major points.

First, the shift from materialist to postmaterialist values is not a uniquely Western phenomenon.

Rather, it is found in societies with widely different institutions and cultural traditions. The rise of postmaterialist values is closely linked with prosperity and seems to occur wherever a society has experienced enough economic growth in recent decades so that the younger birth cohorts have experienced significantly greater economic security during their formative years than older cohorts experienced. Intergenerational value differences reflect a society’s rate of economic growth. Economic growth, of course, is only one factor contributing to security or insecurity, but it happens to be (1) an important part of the story and (2) one for which we have relatively good cross-national and cross-time data. War, domestic upheaval, and ethnic conflict can also have a major impact on feelings of security, but precisely because they tend to be situation-specific (and are less readily quantified), they are more difficult to analyze empirically.

Second, where value change has occurred, intergenerational differences are remarkably robust. In Western Europe, clear and substantial differences between the values of younger and older birth cohorts persisted through the recessions of the mid-1970s and the early 1980s. More remarkable still, in Russia and Eastern Europe sizable intergenerational value differences are found despite the collapse of the economic and political systems in recent years. These values show predictable period effects, in response to current economic conditions. But the postmaterialist value shift does not simply reflect current conditions: it also has a long-term component that seems to reflect the distinctive formative circumstances that given birth cohorts experienced as much as 40 or 50 years ago.

The enduring intergenerational differences found here seriously undermine rational choice explanations that seek to explain behavior as an immediate response to a given situation, unshaped by internal cultural differences, for we observe generational differences that seem to reflect the enduring legacy of the distinctive formative experiences of given generations. At any given point in time, the respective birth cohorts in a given society are in the same situation as their elders, but they respond to it in fundamentally different ways, because they evaluate it by different values. These different responses to the same situation do not seem simply to reflect the fact that the respective cohorts are of different ages, for the distinctive values continue to characterize given cohorts even after they have aged over many years.

Notes

We are grateful to the Commission of the European Communities (and especially to Karlheinz Reif and Anna Melich) for providing us with the Euro-Barometer surveys and to Jim Granato and to Charles W. Ostrom for their extensive advice. Sara McLaughlin assisted with the data analysis. Jan van Deth, Nicolas van de Walle, and Frank P. Zinni, Jr., made helpful comments on earlier versions of this article. The U.S.

National Election Studies surveys were provided by the Inter-University Consortium for Political and Social Research.

1. Respondents are asked to select what they believe their country's two top goals should be among the following four choices: (1) maintaining order in the nation, (2) giving the people more say in important government decisions, (3) fighting rising prices, (4) protecting freedom of speech. Respondents who select "maintaining order" and "fighting inflation" are classified as materialists, while those who choose "giving the people more say" and "freedom of speech" are classified as postmaterialists. The four remaining combinations are classified as "mixed."

2. As the basic measure of materialism/postmaterialism has three categories (materialist, mixed, and postmaterialist), the percentage difference index is equivalent to a mean score (see Inglehart 1990, 436). More specifically, it is equivalent to a mean score that assigns each postmaterialist a score of 100, each respondent with mixed values a score of 0, and each materialist a score of -100. In the vast majority of analyses, there is a monotonic relationship among the three categories of this measure. For example, in the 1992 U.S. presidential election postmaterialism was positively correlated with voting for Bill Clinton. According to our analyses of the 1992 National Election Study survey, among major-party voters who were postmaterialists ($N = 248$), 76% voted for Clinton; among those with "mixed" values ($N = 876$), 57% voted for Clinton; and among major-party voters who were materialists ($N = 212$), 43% voted for Clinton (based upon weighted N s.)

3. As the time of writing, the Inter-University Consortium for Political and Social Research survey data archive had released the results of all of the Euro-Barometer surveys conducted through Fall 1992.

4. Beginning with Fall 1990, the Euro-Barometer surveys include the newly formed states from the territory that used to comprise East Germany. To maintain overtime comparability, we exclude respondents from these states from our analyses.

5. Following Inglehart (1977), in our analysis of change over time, we combined the results of European Community Surveys conducted in 1970 and 1971. For 1977, 1978, and 1980-92, we combined the results of two surveys. Clarke and Dutt also employ a single annual result for their analyses (1991, Figs. 1, 2), although Thomassen and van Deth provide results for each semiannual survey (1989, fig. 1).

6. We give the full distribution of values for each of these eight European countries for each survey year from 1970-71 or 1973 through Spring 1990 in Abramson and Inglehart 1992.

7. In addition to choosing among the four standard national goals (see n. 1), respondents are also asked to choose their two top goals among the following two sets:

1. maintain a high rate of economic growth
 2. make sure that this country has strong defense forces
 3. give people more say in how things are decided at work and in their community
 4. try to make our cities and countryside more beautiful
- and

1. maintain a stable economy
2. fight against crime
3. move toward a friendlier, less impersonal society
4. move toward a society where ideas count more than money.

For the scoring procedures used to create the twelve-choice index, see Inglehart 1990.

8. We present complete cohort results for each of the eight countries through Spring 1990, as well as the specific values for each cohort for the combined six-nation sample in Abramson and Inglehart 1992. As we point out, most of our cohort estimates for the six-nation sample are based on over a thousand cases, and even the smallest cohorts contain over six hundred cases.

9. The impact of education on values is complex, and we discuss its multifaceted effects in Abramson and Inglehart n.d. We present an extensive critique of Duch and Taylor's

(1993) argument that past educational attainment and current economic conditions are the major factors influencing values.

10. See n. 1.

11. The cohort results track cohorts through Spring 1992. Data about inflation and unemployment are based upon statistics published by the Statistical Office of the European Communities. German economic statistics for 1990-92 exclude the states that used to comprise East Germany.

12. Chatfield points out that the conventional tests of autocorrelation lack power when N is less than 100 (1989, 62). He suggests that the most powerful test is to examine the first-order autocorrelation function coefficient. As there are 18 observations for Denmark and Ireland, a finding of $+/- .471$ indicates the presence of autocorrelation; as there are 19 observations for the other countries and for the six-nation sample, a finding of $+/- .458$ indicates autocorrelation. None of the first-order autocorrelation functions is close to these magnitudes. The highest first-order autocorrelation function is in Germany (.263). Germany is the only country in which a result is more than marginally affected by controlling for autocorrelation.

13. Even though there was no problem with autocorrelation, we removed the minimal effects of autocorrelation using iterative Paris-Winsten estimators. (See Ostrom 1990 for a discussion.) We present these results in Inglehart and Abramson 1993, tbl. A1. Except for changing a significance level in Germany (the significance of the relationship between unemployment and values falls from .0616 to .1334), there are only marginal differences between the results in that table and those in our Table 4.

14. Clarke and Dutt (1991) also argue that Inglehart's measure of materialism/postmaterialism manifests a high level of individual-level instability. This argument is orthogonal to our present analysis, since even relatively high levels of individual-level instability are compatible with the thesis that long-term generational replacement tends to drive postmaterialism upward. However, we have argued elsewhere that Clarke and Dutt's estimates are unreliable: LISREL analyses by Inglehart (1990), De Graaf (1988) and van Deth (1989) all indicate higher levels of stability than Clarke and Dutt found. We offer an extensive discussion of alternative tests of individual-level stability in Inglehart and Abramson 1992.

15. The data for the 1981-83 World Values Survey are available through the ICPSR survey data archive; and the 1990-91 World Values Survey data are currently being documented for release through the ICPSR archive and are scheduled to be released in 1994. The documentation will contain information about the sampling procedures used in all 40 societies.

16. Factor analyses demonstrate that some minor modifications in Inglehart's 12-choice measure are necessary to construct a measure that is cross-culturally comparable across a wide variety of societies (see Abramson and Inglehart 1993). The "economic growth" option tends to load as a postmaterialist value in the state-socialist countries (including China), and the "beautiful cities" choice tends to load as a materialist value in several state-socialist countries and in Third World societies. However, five of the six items designed to tap postmaterialist values (all except "beautiful cities") clearly tap postmaterialist values. Respondents are initially scored from zero to five, according to the total number of postmaterialist responses they select. Although we have developed a percentage difference to facilitate the visual presentation of these data here, we display the full distribution of scores for each country in Inglehart and Abramson, 1993, tbl. A2.

17. Inglehart (1987) does discuss the diminishing marginal utility of increased wealth. However, he does not argue that increasing wealth has a diminishing marginal impact on feelings of security, and the linear relationship between wealth and postmaterialism is consistent with Inglehart's theory.

18. Although the first World Values Survey measured materialism/postmaterialism in Denmark, technical problems render this measurement noncomparable with the second World Values Survey. At the request of the Argentine inves-

tigators, the 1983 survey of Argentina was not released through the ICPSR.

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