INGLEHART

CHAPTER 2

The Rise of Postmaterialist Values

INTRODUCTION

A process of intergenerational value change is gradually transforming the politics and cultural norms of advanced industrial societies. A shift from Materialist to Postmaterialist value priorities has brought new political issues to the center of the stage and provided much of the impetus for new political movements. It has split existing political parties and given rise to new ones and it is changing the criteria by which people evaluate their subjective sense of well-being. Moreover, the rise of Postmaterialism itself seems to be only one aspect of a still broader process of cultural change that is reshaping the religious orientations, gender roles, sexual mores, and cultural norms of Western society.

In this chapter, we will present evidence of these trends. We will start by reviewing data concerning the shift from Materialist to Postmaterialist values from 1970 to 1988. In subsequent chapters, we will present evidence that this value shift is itself part of a broader syndrome of intergenerational culture change, in which a growing emphasis on the quality of life and self-expression is accompanied by a declining emphasis on traditional political, religious, moral, and social norms.

In 1970, we hypothesized that the basic value priorities of Western publics had been shifting from a Materialist emphasis toward a Postmaterialist one—from giving top priority to physical sustenance and safety toward heavier emphasis on belonging, self-expression, and the quality of life. This shift was traced to the unprecedented levels of economic and physical security that prevailed during the postwar era (Inglehart 1971). Since this first exploration, the Materialist/Postmaterialist value change hypothesis has been subjected to further analysis by dozens of investigators using fieldwork carried out in the United States, Canada, Australia, Japan, Mexico, Argentina, South Africa, Hungary, Poland, and seventeen West European nations. Measurements at multiple time points are now available for a number of these countries; more than 200 representative national surveys have measured the prevalence of Materialist/Postmaterialist value priorities among the publics of advanced industrial societies. Much of this research has taken place in Germany and Japan—two countries that have experienced rapid economic growth in recent decades, and relatively rapid value change. Less evidence has been gathered in the relatively stagnant

United States, despite the dominant position this country held until recently in empirical social research.

Our data now span almost two decades. Implications for political change that were suggested by the original cross-sectional analysis can be tested in diachronic perspective. We can begin to distinguish between (1) intergenerational value change, based on cohort effects; (2) life cycle, or aging, effects; and (3) period effects. We can examine the impact of the economic uncertainty of recent years on the proportions of Materialist and Postmaterialists among given publics. As we will see, there has been a gradual overall rise in the ratio of Postmaterialists to Materialists among Western publics. Much of the literature on Postmaterialism deals with whether it is a deep-rooted phenomenon having a long-term impact on political behavior or simply a transient epiphenomenon. We will reexamine this issue in the light of recent evidence. If a society's basic values change mainly through intergenerational population replacement, we would expect them to change at a gradual pace. But though short-term changes may be small, close examination of their societal location can provide valuable insight into their long-term implications. Contrary to what some observers assumed (Kesselman 1979), Postmaterialism did not dwindle away in the face of diminished economic and physical security. In most countries, its numbers grew, and in many ways its political influence seems greater now than it was a decade or two ago; but its character and tactics have changed significantly.

One of the most important changes derives from the simple fact that today Postmaterialists are older than they were when they first emerged as a major political factor in the 1960s. Initially manifested mainly through student protest movements, their key impact is now made through the activities of young elites, for the students have grown older, and Postmaterialism has penetrated deeply into the ranks of young professionals, civil servants, managers, and politicians, as we will see in chapter 9. It seems to be a major factor in the rise of a "new class" in Western society—a stratum of highly educated and well-paid young technocrats, who take an adversary stance toward their society (Ladd 1978; Gouldner 1979; Lipset 1979; Steinfels 1979). The debate between those giving top priority to reindustrialization and rearmament versus those who emphasize environmentalism and the quality of life reflects persisting value cleavages.

REEXAMINING THE THEORY OF VALUE CHANGE

Before turning to time series evidence, let us reexamine our theoretical framework in the light of recent findings. It is based on two key hypotheses:

1. *A scarcity hypothesis*. An individual's priorities reflect the socioeconomic environment: One places the greatest subjective value on those things that are in relatively short supply.
2. *A socialization hypothesis*. The relationship between socioeconomic environment and value priorities is not one of immediate adjustment: A substantial time lag is involved because, to a large extent, one's basic values reflect the conditions that prevailed during one's preadult years.

The scarcity hypothesis is similar to the principle of diminishing marginal utility in economic theory. The complementary concept of a need hierarchy helped shape the survey items we used to measure value priorities. In its simplest form, the idea of a need hierarchy would probably command almost universal assent. The fact that unmet physiological needs take priority over social, intellectual, or aesthetic needs has been demonstrated all too often in human history—starving people will go to almost any length to obtain food. The rank ordering of human needs becomes less clear as we move beyond those needs directly related to survival. But it does seem clear that there is a basic distinction between the "material" needs for physiological sustenance and safety and nonphysiological needs, such as those for esteem, self-expression, and aesthetic satisfaction.

The recent economic history of advanced industrial societies has significant implications in the light of the scarcity hypothesis. These societies are a remarkable exception to the prevailing historical pattern: The bulk of their population does *not* live under conditions of hunger and economic insecurity. This fact seems to have led to a gradual shift in which needs for belonging, esteem, and intellectual and aesthetic satisfaction became more prominent. As a rule, we would expect prolonged periods of high prosperity to encourage the spread of Postmaterialist values; economic decline would have the opposite effect.

But it is not quite that simple. There is no one-to-one relationship between economic level and the prevalence of Postmaterialist values, for these values reflect one's subjective sense of security, not one's economic level per se. While rich individuals and nationalities, no doubt, tend to feel more secure than poor ones, these feelings are also influenced by the cultural setting and social welfare institutions in which one is raised. Thus, the scarcity hypothesis alone does not generate adequate predictions about the process of value change. It must be interpreted in connection with the socialization hypothesis.

One of the most pervasive concepts in social science is the notion of a basic human personality structure that tends to crystallize by the time an individual reaches adulthood, with relatively little change thereafter. This concept permeates the literature from Plato through Freud and extends to the findings of contemporary survey research. Early socialization seems to carry greater weight than later socialization.

This, of course, does not imply that no change occurs during adult years. In some individual cases, dramatic behavioral shifts are known to occur, and the process of human development never comes to a complete stop (Levinson, et al. 1979; Brim and Kagan 1980). Nevertheless, human development seems to be far more rapid during preadult years than it is afterward, and the great bulk of the evidence points to the conclusion that the statistical likelihood of basic personality change declines sharply after one reaches adulthood (Block 1981; Costa and McCrae 1980; Jennings and Niemi 1981; Jennings and Markus 1984).

Taken together, these two hypotheses generate a coherent set of predictions concerning value change. First, while the scarcity hypothesis implies that prosperity is conducive to the spread of Postmaterialist values, the socialization hypothesis implies that neither an individual's values nor those of a society as a whole are likely to change overnight. Instead, fundamental value change takes place gradually, almost invisibly; in large part, it occurs as a younger generation replaces an older one in the adult population of a society.

Consequently, after a period of sharply rising economic and physical security, one would expect to find substantial differences between the value priorities of older and younger groups: they would have been shaped by different experiences in their formative years. But there would be a sizable time lag between economic changes and their political effects. Ten or fifteen years after an era of prosperity began, the age cohorts that had spent their formative years in prosperity would begin to enter the electorate. Ten more years might pass before these groups began to occupy positions of power and influence in their society; perhaps another decade would pass before they reached the level of top decision makers.

The socialization hypothesis complements the scarcity hypothesis, resolving objections derived from an oversimplified view of how scarcity affects behavior. It helps account for apparently deviant behavior: on one hand, the miser who experienced poverty in early years and relentlessly continues piling up wealth long after attaining material security and, on the other hand, the saintly ascetic who remains true to the higher-order goals instilled by his or her culture, even in the face of severe deprivation. In both instances, an explanation for the seemingly deviant behavior of such individuals lies in their early socialization.

The socialization hypothesis also explains why experimental tests of the need hierarchy have found no positive correlation between satisfaction of a given need at one time and increased emphasis on the next higher need

at later time (Alderfer 1972; Kmieciak 1976), for these experiments are based on the implicit assumption that one would find almost immediate changes in an individual's priorities. But if, as hypothesized, an individual's basic priorities are largely fixed by the time he or she reaches adulthood, one would not expect to find much short-term change of the kind that was tested for.

This does not mean that an adult's value priorities are totally immutable—merely that they are relatively difficult to change. Normally, the rewards and deprivations employed in experimental psychology are modest, and the treatment is continued for a fairly brief time. Only in unusual experiments has the treatment been extreme enough to produce evidence of changed priorities among adults. In one such experiment, for example, a conscientious objector was kept on a semistarvation diet for a prolonged period under medical supervision. After several weeks, he lost interest in his social ideals and began to talk about, think about, and even dream about food (Davies 1963). Similar patterns of behavior have been observed among inmates of concentration camps (Elkins 1959; Bettelheim 1979).

From the outset of this research, *The Authoritarian Personality* (Adorno, et al. 1950) seemed to have intriguing implications. A standardized set of authoritarianism items was used in an earlier cross-national exploration of nationalism and internationalism. The results were disappointing: Dimensional analysis showed that the authoritarianism items did not cluster together as they theoretically should (Inglehart 1970b).

Subsequent pilot tests gave similar results. Authoritarianism items showed relatively weak relationships with one another. Some of them seemed closely related to the Materialist/Postmaterialist dimension, but others seemed to tap entirely different dimensions. Authoritarianism, at least as it has been operationalized thus far, has a poor empirical fit with Materialism/Postmaterialism.

The theoretical basis of authoritarianism is not necessarily incompatible with that of the Materialist/Postmaterialist dimension, but there are important differences in focus. The initial concept of authoritarianism emphasizes the psychodynamics of early child-rearing practices rather than influences from the broader economic and political environment. On the other hand, Hyman and Sheatsley (1954), in their critique of the original study, advance a cognitive explanation, arguing that certain respondents, especially those from a lower socioeconomic level, may show an "authoritarian"-type response because this is a more or less accurate reflection of conditions governing their adult lives. Our own interpretation of the genesis of Materialist/Postmaterialist values contains elements of both positions. It emphasizes the importance of relatively early experiences, but links them with environmental factors other than parental discipline.

The original authoritarianism hypothesis fails to predict either the age-group differences or the social class differences that are strikingly evident in the data, as we will see shortly. On the contrary, studies of authoritarianism have found that children tend to be *more* authoritarian than adults. It would not be impossible to reinterpret the authoritarian personality hypothesis in such a way as to explain the age and class differences. One could argue that child-rearing practices vary according to social class, and have changed over time. But in that case, one would need to seek an explanation of why they vary and why they have changed. Quite probably, one would eventually trace this explanation to the economic and political changes on which we rest our own interpretation.

Time Series Evidence from the Postwar Era

Our hypotheses imply that the unprecedented prosperity prevailing from the late 1940s until the early 1970s, has led to substantial growth in the proportion of Postmaterialists among the publics of advanced industrial societies. We believe that this proportion was already rising during the years preceding our first survey of this topic in 1970. We would need a time machine in order to go back and test this proposition, using the battery specifically developed to measure Materialist/Postmaterialist values. Though this is impossible, some available data do seem to tap the relevant dimension.

Data on the priorities of the German public, for example, cover more than twenty years, from 1949 to 1970. In these surveys, representative national samples were asked, "Which of the four freedoms do you personally consider most important—freedom of speech, freedom of worship, freedom from fear, or freedom from want?" In 1949, postwar reconstruction had just begun, and "freedom from want" was the leading choice by a wide margin. But in the following years, Germany rose from poverty to prosperity with almost incredible speed. In 1954, "freedom from want" was still narrowly ahead of any other choice, but by 1958 "freedom of speech" was chosen by more people than all other choices combined (EMNID 1963, 1970).

These changes in the German population's value priorities seem to reflect concurrent changes in their economic environment. Moreover, there is clear evidence of an age-related lag between economic change and value change. In 1962, 59 percent of the Germans from 16 to 25 years old chose "freedom of speech"; the figure declines steadily as we move to older groups; among Germans aged 65 and older, only 35 percent chose "freedom of speech." The fact that the young are much likelier to give "free-

dom of speech'' priority over ''freedom from want'' fits theoretical expectations neatly. The original data have been lost, and it is not possible to perform a cohort analysis in order to determine how much of this age difference is due to generational change. But the magnitude of the overall shift is so great that each age group must have deemphasized ''freedom from want'' as it aged during this period. The age differences definitely cannot be attributed to life cycle effects. Further persuasive evidence of an intergenerational shift toward Postmaterialist priorities among the German public is found in the massive and definitive analysis of German survey data from 1953 through 1976 by Baker, Dalton and Hildebrandt (1981).

One of the most dramatic examples of economic change in modern history is Japan—a nation that rose from harsh poverty to astonishing prosperity in a single generation. Indicators of the Japanese public's values are available in the Japanese national character studies carried out at five-year intervals, from 1953 through 1983. Analysis of these surveys indicates that Japanese culture changed along several different dimensions during this period, with the perceived sacredness of the emperor declining and emphasis on individuation and political participation rising (Ike 1973; Hayashi 1974; Nisihira 1974; Richardson 1974; Research Committee on the Study of the Japanese National Character 1979; Flanagan 1980a; Inglehart 1982). One of the changes, it seems clear, was a shift from Materialist to Postmaterialist priorities. Among the available survey questions, the most unambiguous indicator of Materialist versus Postmaterialist priorities is the following: ''In bringing up children of primary school age, some think that one should teach them that money is the most important thing. Do you agree or disagree?'' In 1953, a strong majority (65 percent) of the Japanese public agreed that financial security was the most important thing. This figure declined steadily in subsequent surveys; by 1983, only 43 percent of the Japanese public still took this view. As was true of Germany, the trend is in the predicted direction—but in this case, the original data have been preserved, and we can carry out a cohort analysis. Table 2-1 shows the results.

In any given year, the young are a good deal less likely to emphasize the importance of money than are the old. Does this simply reflect an inherent idealism of youth that will disappear as they grow older? Apparently not—for when we follow given age cohorts as they age during this twenty-five-year period, we find no indication whatever of increasing materialism. On the contrary, we find a tendency for a given cohort as it grows older to place *less* emphasis on money. The four cohorts for which we have data throughout the thirty-year period show an average shift of 7 points *away* from giving top priority to money. Almost certainly this was a period effect, with the sharply rising prosperity of the postwar era producing a diminishing emphasis on money within each age cohort, quite independently of generational change or aging effects. As closer examination of Table 2-1 indicates, this period effect operated rather strongly from 1953 to 1973 and then reversed direction, so that from 1973 to 1978 each age cohort came to place slightly more emphasis on the importance of money. This pattern reflects changes in the economic environment rather faithfully. The extraordinary rise in prosperity that took place in Japan from 1953 to 1973 was mirrored in a gradual deemphasis on money within each age cohort, and the economic uncertainty that followed the oil shock of 1973 was accompanied by a temporary reversal of this trend. By 1983, however, the long-term trend away from Materialism had resumed.

TABLE 2-1. COHORT ANALYSIS: ANNUAL PERCENTAGES OF JAPANESE COHORTS AGREEING THAT FINANCIAL SECURITY IS MOST IMPORTANT

Age Group	1953	1958	1963	1968	1973	1978	1983	Change within Given Cohort 1953 - 1983	
20 - 24	60	-	43	34	22	18	20		
25 - 29	66		55	49	36	26	24		
30 - 34	63		58	58	42	37	28		
35 - 39	62		56	59	43	43	39		
40 - 44	65		63	59	46	49	42		
45 - 49	66	-	62	62	46	56	48		
50 - 54	72	-	68	65	49	51	54	- 6	Mean: -7
55 - 59	72	-	72	67	60	56	52	-14	
60 - 64	77	-	76	66	59	62	64	+ 1	
65 - 69	78	-	72	73	59	62	59	- 3	

Source: Japanese National Character Surveys carried out by the Institute of Statistical Mathematics, Tokyo.

But these period effects are dwarfed by the intergenerational differences. While period effects seem to account for a mean net shift of 7 percentage points away from emphasizing the importance of financial security, we find a difference of 39 points between the youngest and oldest groups in 1983. Since these data show no evidence whatever that aging leads to increasing emphasis on money, there is a strong prima facie case for attributing this 39-point difference entirely to intergenerational change. It is conceivable that a life cycle tendency toward increasing Materialism with increasing age also exists, but is totally concealed by stronger period effects working in the opposite direction. The complexities of distinguishing among aging effects, cohort effects, and period effects are such that we cannot totally exclude this possibility (Glenn 1976; Knoke and Hout 1976). But belief in such an aging effect must depend on faith alone; it is totally unsupported by empirical evidence. Jagodzinski (1983) argues that life cycle effects are present in these data, and tries to measure them with a regression model. His model is fatally flawed, however, because it sim-

ply assumes that the age differences present at the start of the series in 1953 reflect life cycle differences. This implicit assumption that Japan had a steady-state economy prior to 1953, in which the only difference between generations was based on life cycle effects, is totally untenable. As we saw in chapter 1, Japan was already experiencing one of the world's highest economic growth rates during the period from 1913 to 1938. These data show no evidence of life cycle effects.

Indications of intergenerational change, on the other hand, seem incontrovertible. In 1953, even the youngest group showed overwhelmingly Materialistic priorities—because at that time, all adult age cohorts had spent their formative years during World War II or earlier. These cohorts show only modest changes as they age during the ensuing quarter-century. It is only from 1963 on—when the cohorts shaped by the postwar economic miracle begin to enter the adult population—that we find a clear rejection of financial security as a value having top priority among the younger cohorts. The shift of the Japanese public from a heavy majority giving money top priority, to a minority doing so, seems to reflect intergenerational population replacement above all, with only a minor component due to period effects. In 1953, age differences were relatively small, but since 1963 there has been a tremendous increase in the difference between the priorities of younger and older Japanese. As the leading example of economic growth in the postwar era, Japan constitutes a crucial case for testing our hypotheses. The time series data are unambiguous, clearly indicating that from 1953 to 1983, there was an intergenerational shift away from Materialism among the Japanese public.

Materialist and Postmaterialist Values from 1970 to 1988

Our data from Western countries cover a shorter period than the Japanese data do, but they were specifically designed to measure Materialist/Postmaterialist value priorities. It is difficult to measure values directly. But their presence can be inferred from a consistent pattern of emphasis on given types of goals. Accordingly, we asked representative samples of citizens from Western nations what they personally considered the most important goals among the following:

A. Maintain order in the nation
B. Give people more say in the decisions of the government
C. Fight rising prices
D. Protect freedom of speech
E. Maintain a high rate of economic growth

F. Make sure that this country has strong defense forces
G. Give people more say in how things are decided at work and in their community
H. Try to make our cities and countryside more beautiful
I. Maintain a stable economy
J. Fight against crime
K. Move toward a friendlier, less impersonal society
L. Move toward a society where ideas count more than money

Our earliest survey (in 1970) used only the first four items, in six countries. The full twelve-item battery was first used in 1973 in the nine-nation European Community and the United States (Inglehart 1977). Both batteries were administered in subsequent surveys, though the simpler four-item battery has been used much more frequently. Items A, C, E, F, I, and J above were designed to tap emphasis on Materialist goals; theoretically, these values should be given high priority by those who experienced economic or physical insecurity during their formative years. The remaining items were designed to tap Postmaterialist goals; they should be emphasized by those raised under relatively secure conditions. If so, certain respondents would favor Materialist items consistently, while others would consistently emphasize the Postmaterialist ones.

Survey results support these theoretical expectations. Those who give top priority to one Materialist goal tend to give high priority to other Materialist goals as well. Conversely, the Postmaterialist items tend to be chosen together. Hence, we can classify our respondents as pure Materialists (those whose top priorities are given to Materialist goals exclusively); pure Postmaterialists (those whose top priorities are given to Postmaterialist items exclusively); or mixed types, based on any combination of the two kinds of items. Though for simplicity of presentation we will sometimes compare the two polar types, we are dealing with a continuum having numerous intermediate categories.

The predicted relationships with social background are confirmed empirically. Within any given age group, those raised in relatively prosperous families are most likely to emphasize Postmaterialist items, and the predicted skew by age group is manifest. Figure 2-1 depicts this age skew in the pooled sample of six West European publics interviewed in our initial survey. Significant cross-national differences exist, but the basic pattern is similar from nation to nation: Among the older groups, Materialists outnumber Postmaterialists enormously; as we move toward younger groups, the proportion of Materialists declines and that of Postmaterialists increases. Thus, among the oldest cohort, Materialists outnumber Postmaterialists by a ratio of more than 12 to 1. Among the youngest cohort, the

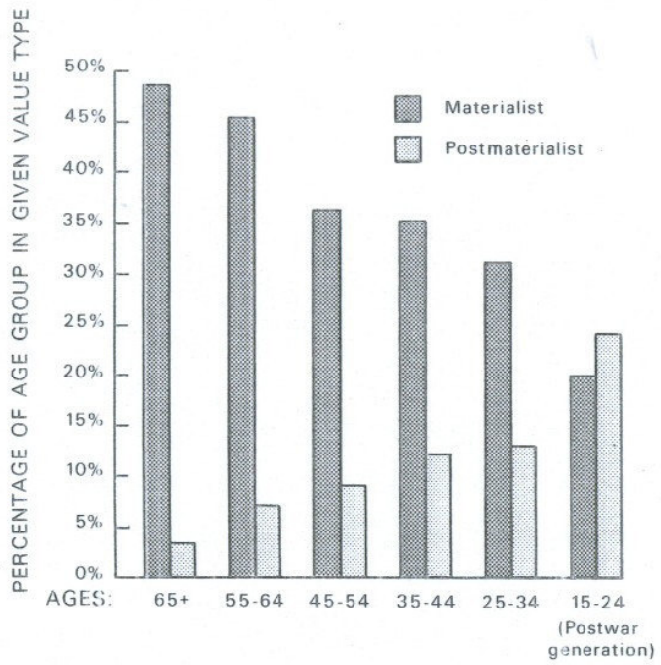

FIGURE 2-1. Value type by age group, among the combined publics of Britain, France, West Germany, Italy, Belgium, and the Netherlands in 1970.

balance has shifted dramatically: Postmaterialists are about as numerous as Materialists.

The Materialist and Postmaterialist types have strikingly different opinions on a wide variety of issues, ranging from women's rights to attitudes toward poverty, ideas of what is important in a job, and positions on foreign policy. Within each age group, about half the sample falls into the Mixed value types. On virtually every issue, their position is about halfway between the Materialists and Postmaterialists; they seem to be a cross-pressured group that could swing either way.

By 1970, Postmaterialists had attained numerical parity with Materialists only among the postwar generation. Furthermore, they were concentrated among the more affluent strata of this age group; among university students, they heavily outnumbered the Materialists. In this light, perceptions of a generation gap in the late 1960s and early 1970s are understandable. Even among the postwar generation, Materialists were about as numerous as Postmaterialists. But in this age group's most articulate and

most visible segment—the students—there was an overwhelming preponderance of Postmaterialists. The students lived in a distinct milieu; they had highly developed communications networks with other students but were largely isolated from their nonstudent peers. The priorities prevailing in this milieu were fundamentally different from those shaping the society as a whole.

The existence of such a milieu can play an important part in the evolution and propagation of a given set of values. Indeed, Habermas (1979) argues that the rise of Postmaterialism is not due to the different formative experiences of different generation units, but to exposure to the specific world views inculcated by distinct communications networks (cf. Jaeggi 1979). But this explanation seems to complement, not substitute for, the one proposed here. It helps account for the spread of values in a given milieu, but provides no explanation of why given generation units were disposed to accept given values in the first place, while others rejected them. It seems clear that in virtually all Western nations, the student milieu of the late 1960s did constitute a distinct communications network, propagating a distinctive viewpoint. Given these circumstances, it is not surprising that the student elite saw themselves as part of a counterculture that was engaged in an irreconcilable clash with the culture of an older generation: From their viewpoint, the dictum "Don't trust anyone over thirty" seemed plausible. Our hypotheses imply that as time went by, the Postmaterialists would become older and more evenly distributed across the population. Hence, the plausibility of a monolithic generation gap would fade away. But in 1970, conditions were optimal to sustain belief in a generation gap, with youth all on one side and older people all on the other.

Clearly, there are large empirical differences between the priorities of younger and older groups in Western Europe (and, as subsequent research revealed, the entire industrialized world). But one can advance various interpretations concerning the *implications* of this finding. Though our own hypotheses point to intergenerational change based on cohort effects, we must consider the fact that any given pattern of age differences could, theoretically, result from (1) aging effects, (2) cohort effects, (3) period effects, or some combination of all three.

Aging effects versus cohort effects. Perhaps the most obvious alternative interpretation is one based on aging effects. It would argue that, for biological or other reasons, the young are inherently less materialistic than the old. As they age, however, this model asserts, they inevitably become just as materialistic as their elders, and after fifty years, the youngest group will show the same overwhelming preponderance of Materialists that the oldest group now displays. The aging interpretation, then, holds that the pattern found in 1970 is a permanent characteristic of the human life cycle

and will not change over time. The cohort interpretation, on the other hand, implies that the Postmaterialists will gradually permeate the older strata, eventually neutralizing the relationship between values and age.

Period effects. Both the German data and the Japanese data reviewed earlier show period effects: The economic environment of the period up to 1973 apparently induced all age groups to become less materialistic as time went by, quite apart from any processes of aging or generational change. These surveys were carried out during a period of dramatic improvement in living standards, particularly in Germany and Japan; even in the United States (where economic growth was much slower) the real income of the American public approximately doubled from 1947 to 1973.

From 1973 on, however, economic conditions changed dramatically. Energy prices quadrupled almost overnight; the industrialized world entered the most severe recession since the 1930s. Economic growth stagnated and Western nations experienced extraordinarily high levels of inflation and unemployment. By 1980, the real income of the typical American family was actually lower than in 1970.

Western publics were, of course, acutely aware of changed economic circumstances, and responded to them. The most amply documented case is that of the American public, whose economic outlook is surveyed each month. In mid-1972, The University of Michigan Survey Research Center's Index ("SRC Index") of Consumer Sentiment stood at 95, only slightly below its all-time high. By the spring of 1975, the SRC Index had plummeted to 58—the lowest level recorded since these surveys were initiated in the 1950s. With the subsequent economic recovery, consumer confidence revived—only to collapse again in the wake of the second OPEC price shock in late 1979; in April 1980 consumer confidence had reached a new all-time low, with the SRC Index at 53. But with the economic recovery of the mid-1980s, consumer confidence again reached its former high levels. Similar patterns of declining confidence in the economic outlook, followed by recovery, were recorded among West European publics. Clearly (as the scarcity hypothesis implies), the conditions felt during the mid-1970s and early 1980s should work against the development of a Postmaterialist outlook.

Models of cohort, period, and life cycle effects. Which of the three processes—period effects, aging effects, or generational change—was most important? Given the severity of the economic decline and the disappearance of student protest and other dramatic manifestations of a counterculture, one might assume that Postmaterialism was swept away completely by the new, harsher environment. Or—as the socialization hypothesis suggests—are these priorities sufficiently deep-rooted among the adult population to weather such fluctuations in the socioeconomic environment?

The scarcity hypothesis 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: the values of a given generation tend to reflect the conditions prevailing during its preadult years. The theory implies nothing about aging or life cycle effects.

Taken together, the two basic hypotheses imply that the process of value change will be characterized by period effects (reflecting short-term fluctuations in the socioeconomic environment) superimposed on long-term cohort effects (reflecting the conditions prevailing during a given age group's formative years).

An empirical test of this theory requires that one distinguish between period effects, cohort effects, and life cycle effects. This is not an easy task. In order to distinguish among the three effects, one must have theoretical grounds for ruling out or controlling for at least one of the three.

The original four-item Materialist/Postmaterialist values battery has now been administered repeatedly to representative national samples of the populations of Britain, France, West Germany, Italy, Belgium, and the Netherlands from 1970 to 1988 in surveys sponsored by the Commission of the European Communities. This massive data base is now reaching the point where it provides measurements at enough time points to trace the rise and fall of period effects and to correlate them with their underlying causes. In order to maximize reliability, this cohort analysis is based on the pooled samples from all six nations. These pooled results, providing an average of approximately 2,000 cases per age cohort in each year, make it possible to follow the value priorities of West European publics across an eighteen-year period that began with high prosperity, was later characterized by two recessions and runaway inflation, and ended with renewed prosperity, mitigated by abnormally high rates of unemployment.

Before we examine the cohort analysis, let us ask: exactly what kind of pattern does each of the three types of effects imply? Figures 2-2, 2-3, and 2-4 depict three possible patterns. Figure 2-2 depicts the pattern of value differences one would find if early socialization were the *only* influence on adult values, so that cohort effects, and only cohort effects, were present.

In this ideal-type model, the younger birth cohorts are less Materialist than all of the older cohorts at all points in time. Because no period effects are present, each cohort's values remain absolutely unchanged, regardless of any changes in the socioeconomic environment. But because of population replacement, the values prevailing in a given society do change over time. During the seventeen-year period depicted here, most of the 1896–

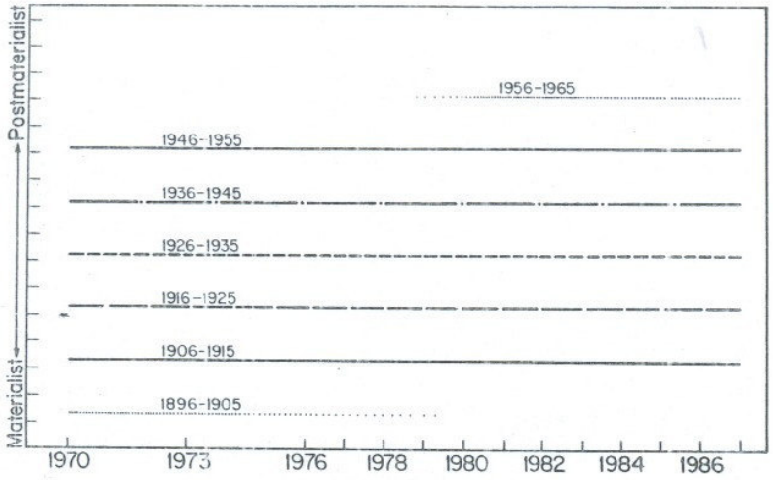

FIGURE 2-2. Cohort effects only.

1905 birth cohort died off and were replaced in the adult population by the cohort born from 1956 to 1965, a group too young to be included in our samples in 1970, but which constituted a major part of the adult public by 1987. The fact that this youngest and much more Postmaterialist cohort replaced the oldest, most Materialist one would tend to produce a net shift toward Postmaterialism.

But since our theory is based on a scarcity hypothesis as well as a socialization hypothesis, one can expect period effects as well as cohort effects. Figure 2-3 depicts a pattern of period effects superimposed on stable cohort differences. Although one can observe substantial fluctuations in response to short-term forces in this figure, the cohort effects are fully as strong as those in Figure 2-2. Consequently, in both cases, the process of intergenerational population replacement tends to produce a gradual shift toward Postmaterialist values.

Figure 2-4 depicts a model in which age-group differences exist, but result entirely from life cycle effects. As a given birth cohort ages, it comes to resemble the next older cohort, so that after ten years have elapsed, a given cohort has shifted to the position held by the cohort that is ten years older. Although each cohort *does* change over time, the values of the society as a whole do not change, because population replacement is offset by life cycle effects. Empirically, life cycle effects can be distinguished from cohort effects because (aside from short-term fluctuations) with life cycle effects, each cohort shows a continuous downward trend, whereas with birth cohort effects, each cohort remains horizontal when

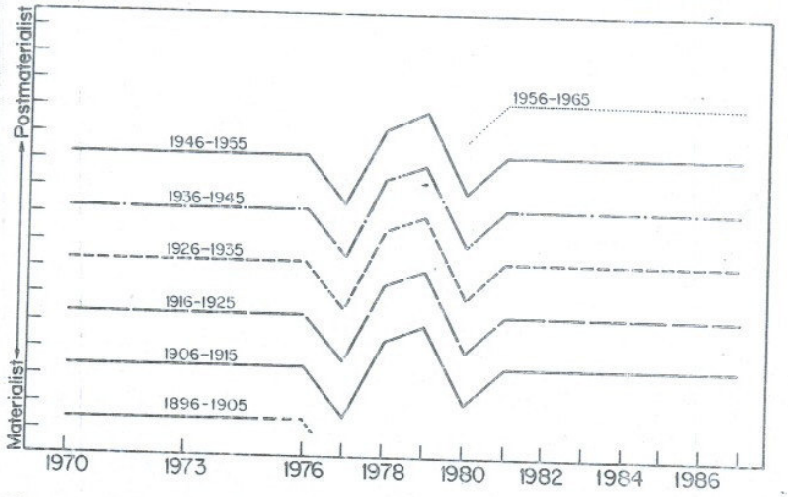

FIGURE 2-3. Cohort effects plus period effects.

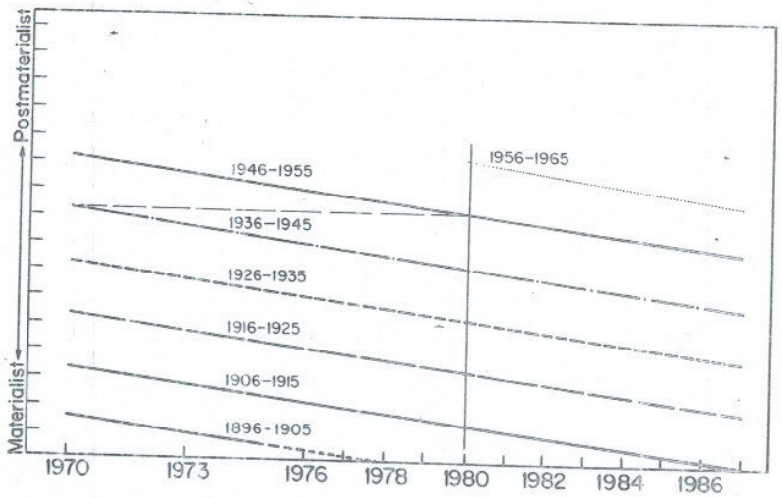

FIGURE 2-4. Life cycle effects only.

plotted as in Figures 2-2, 2-3, and 2-4. The Materialist/Postmaterialist theoretical framework neither predicts nor excludes the possibility of life cycle effects; however, it does predict that there will be substantial and durable cohort effects.

Lehner (1979) argued that values must be either stable or unstable; thus one can have either stable intergenerational differences, or short-term fluc-

tuations, but not both. Fogt (1982), Van Deth (1983a), and Boeltken and Jagodzinski (1985) have all advanced various versions of the same argument; and since they all found short-term fluctuations and anomalies in the values of given groups, they concluded that the hypothesis of intergenerational value change had been falsified.

Superficially, the idea that values must either be stable or unstable sounds plausible. But when translated from nonquantitative labels into the terminology of cohort analysis, it means that one can have either cohort effects or period effects, but not both. A glance at Figure 2-3 will convince the reader that this is not the case. Period effects are perfectly compatible with stable birth cohort differences—indeed, in cohort analysis, one rarely finds intergenerational differences without some period effects as well. The intergenerational differences in Figure 2-3 are exactly as stable as those in Figure 2-2, where period effects are absent; and the two models' implications for the consequences of intergenerational population replacement are identical. Nevertheless, the assumption that short-term period effects are incompatible with a theory of intergenerational value change lies at the heart of these and other recent critiques of the Materialist/Postmaterialist theory.

This assumption is clearly incorrect. The Materialist/Postmaterialist thesis is based on two key hypotheses. The scarcity hypothesis implies period effects. Not only are they not ruled out; they are explicitly predicted, and their polarity is specified: Periods of prosperity lead to increased Postmaterialism, and periods of scarcity lead to Materialism. The socialization hypothesis implies that long-term cohort effects will also exist: The values of a given generation tend to reflect the conditions prevailing during its preadult years.

One might postulate an extreme form of the socialization hypothesis, in which cohort effects were assumed to be so strong that they totally eliminated any period effects. Such an interpretation would require us to assume that once one reaches maturity, no adult learning whatever takes place, and one shows absolutely no further response to one's environment. Such an assumption seems highly implausible. And it clearly is not part of the Materialist/Postmaterialist theory. On the contrary, the implications of the scarcity hypothesis concerning period effects have been discussed explicitly and at some length (Inglehart 1977, 102–06; Inglehart 1981, 887–90).

Taken together, then, the two basic hypotheses underlying the Materialist/Postmaterialist thesis imply that the process of value change is characterized by period effects (reflecting short-term fluctuations in the socioeconomic environment) superimposed on long-term cohort effects (reflecting the conditions prevailing during a given age group's formative years). Thus, an empirical test of this theory requires that one distinguish between period effects, cohort effects, and life cycle effects. This is a difficult task.

A Cohort Analysis of the Value Priorities of West European Publics, 1970–1988

This task can best be accomplished through cohort analysis, and fortunately we now have a large enough data base to begin to determine what is happening. The original four-item Materialist/Postmaterialist values battery has now been administered to representative national samples of the population of several West European countries at numerous time points from 1970 to 1988 in a series of surveys sponsored by the Commission of the European Communities.

This massive data base is now reaching the point where it provides measurements at enough time points to trace the rise and fall of period effects (if any) and to correlate them with their underlying causes. And (if properly handled) it provides enough cases to obtain reliable measures of the dependent variable, enabling us to follow given age cohorts across time, through successive cross-sectional samples. To do so requires a sample size of at least 1,000 cases for each age cohort, at each point in time and, preferably, an N close to 2,000. The reasons for this are simple:

(1) If a random probability sample shows that 50 percent of those interviewed are Materialists, then with a sample size of 1,000 there is a 95 percent probability that the actual figure for the population surveyed falls within the range from 46.8 percent to 53.2 percent—a confidence interval of 6.4 percentage points. However, we are not dealing with random probability samples, but with quota samples: Here, the margin for sampling error is larger than with random probability samples, but it cannot be calculated precisely. A general rule of thumb is to treat one's effective sample size as half the actual number of interviews when calculating confidence intervals. Thus, with a random sample of 500, there is a 95 percent probability that the true percentage of Materialists falls within the range from 45.5 percent to 54.5 percent—a confidence interval of 9 percentage points. As sample size decreases, the margin one must allow for sampling error increases.

(2) The differences between the values of adjacent cohorts are usually less than 10 percentage points, and sometimes as little as 5 percentage points—thus, with as few as 1,000 cases per cohort, the observed values of two adjacent cohorts could readily overlap each other purely through sampling error, with an older cohort appearing to be less Materialist than the younger one, even if the true values confirmed theoretical expecta-

tions. Or one might observe large fluctuations in the values of a given cohort from one survey to the next, not as a result of period effects but simply because of sampling error.

In short, if our sample size falls below about 1,000 cases per cohort, noise tends to drown out the signal in a cohort analysis, because our margin of error exceeds the actual variation between cohorts, or across time. This is exactly what happens in Van Deth's 1983 analysis. His sample of Dutch respondents is broken down into age cohorts containing as few as seventy-five cases; in order to obtain reliable estimates of their values for cohort comparisons, he would need ten to fifteen times as many cases as he possesses. Not surprisingly, he obtains an erratic pattern in which younger groups are sometimes more Materialistic than older ones. Another analysis based on German data, by Boeltken and Jagodzinski (1985), also obtains anomalous results, for precisely the same reasons. Finding such anomalies does not refute the theory of value change—it merely confirms some basic tenets of sampling theory. When we utilize larger and more reliable samples (of both the Dutch and the German publics) we obtain the theoretically predicted pattern, as Table 2-3 demonstrates.

A simple cross-tabulation of values by age can provide a rough idea of the relationship between the two variables even if the sample contains only a few hundred cases per cohort; but this does not provide the degree of accuracy needed for a quantitative analysis that depends on precise comparisons between a given cohort at one point in time, and the corresponding cohort from another sample at another point in time. For this reason, previous analyses that followed the values of given age groups across time (Inglehart 1977, 1981) have been based on the pooled results of simultaneous samples from six Western nations. The publics of these six nations (Britain, France, Germany, Italy, Belgium, and the Netherlands) were first surveyed in 1970, again in 1973, and subsequently at least once a year from 1976 to the present. These pooled results, providing an average of approximately 2,000 cases per age cohort in each year, enable us to follow the value priorities of West European publics across an eighteen-year period, which began with high prosperity, but later was characterized by two recessions and runaway inflation, first in the mid-1970s and later in the early 1980s.

Figure 2-5 traces the balance between Materialists and Postmaterialists within given age cohorts, born in the years indicated, across this period. This analysis is based on the pooled data from all six nations surveyed from 1970 to 1988. Furthermore, when two surveys were carried out in the same year, the data are combined so that the cohort positions at given time points are generally based on *N*s of close to 2,000 cases.

Each cohort's position at a given time is calculated by subtracting the

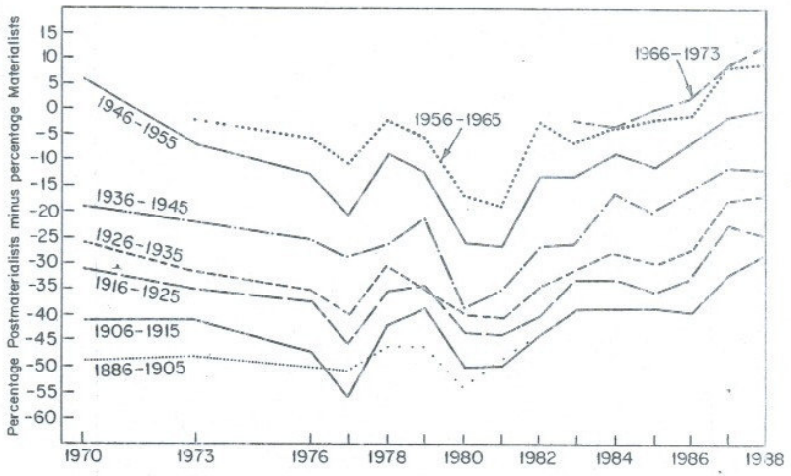

FIGURE 2-5. Value priorities of eight age cohorts across six West European publics, 1970–1988. Based on data from representative national samples of publics of France, Great Britain, West Germany, Italy, Belgium, and the Netherlands, interviewed in European Community surveys of 1970 and 1973 and Euro-Barometer surveys 6 through 29 (total N = 190,129). Principal investigators were Jacques-René Rabier, Karlheinz Reif, and Ronald Inglehart. Data available from ICPSR survey data archive.

percentage of Materialists in that cohort from the percentage of Postmaterialists. Thus, the zero point on the vertical axis reflects a situation in which the two groups are equally numerous (which is about where the cohort born in 1946–1955 was located in 1970). An index of −45 would result if 50 percent of a given cohort were Materialists and only 5 percent were Postmaterialists (with the rest being Mixed types): the oldest cohort was located slightly below this point in 1970. Figure 2-5 summarizes the results from more than 190,000 interviews. It indicates that the age group differences observed in 1970 reflect long-term intergenerational differences, rather than life cycle effects.

Each cohort retains its relative position with striking consistency throughout the eighteen-year period. The 1946–1955 cohort is less Materialistic and more Postmaterialistic than any of the older cohorts at every point in time. The only cohorts that are even less Materialistic are the two other postwar cohorts, the first of which was born from 1956 to 1965 and was too young to be interviewed in 1970; this cohort becomes an increasingly important part of our sample from 1976 on. An even younger cohort, born from 1966 to 1973, begins to enter the sample in the 1980s. Since these samples are limited to the population 15 years and older, this cohort

will not have fully entered the sample until 1990, but it was present in substantial numbers by the mid-1980s. This cohort is more Postmaterialist than all of the older groups, though only a trifle more so than the 1956–1965 cohort. Explosive increases in prosperity during the postwar era helped make the 1946–1955 cohort much less Materialist than its predecessors, but the slower growth rates of recent years seem to be reflected in slower rates of value change. The gap between the 1966–1973 cohort and its predecessor is rarely more than a few percentage points and twice falls to zero. This does not mean that the process of value change is coming to a halt, however. It will not do so for decades. What is currently happening is that the 1966–1973 cohort is replacing the 1906–1915 cohort in the adult population—and the difference between these two cohorts is huge, so population replacement continues to produce a substantial shift in values. As Figure 2-5 demonstrates, each of the older cohorts proves to be more Materialist than all of the younger ones at every time point, with only a few minor anomalies. The intercohort value differences are extremely stable, closely resembling the pattern of Figure 2-3.

Moreover, there is no indication at all that each cohort becomes more Materialist as it ages, as would be the case if these differences reflected life cycle effects as Boeltken and Jagodzinski (1985) suggested. At the end of the eighteen-year period, virtually all of the cohorts were fully as Postmaterialistic as they were in 1970. Indeed, there is something of an upward tendency, with most cohorts less Materialist in 1988 than they were in 1970. There are also significant short-term fluctuations, with each cohort showing a brief downward swing in 1977 and again in 1980–1981. These fluctuations reflect period effects, which result largely from the impact of inflation, as will be demonstrated below. But by 1986, inflation had subsided to approximately the 1970 level. With period effects held constant, there is no sign at all of the gradual conversion to Materialism that would be present if a life cycle interpretation were applicable.

The fact that we find a much narrower gap between the 1966–1975 cohort and its predecessors than between the two other postwar cohorts and their predecessors is yet another indication that these value differences reflect historical change rather than some permanent life cycle tendency for the young to be less Materialist than the old. The narrowing of this gap corresponds to the economic conditions of the past fifteen years—but to explain it in terms of life cycle effects, one would need to invent some reason why the human life cycle had made a sudden drastic change in the 1980s. This finding confirms a good deal of other evidence, cited in chapters 1, 3, and 5, which indicates that these values tend to crystallize relatively early in life. The cohort born in 1956–1965 experienced the recessions of the mid-1970s and early 1980s while they were, on the average, about 20 years of

age, but this did not prevent this cohort from developing values that are considerably more Postmaterialist than those of the next older cohort. The trend toward rising levels of Postmaterialism among each younger cohort is arrested only when we reach the cohort born in 1966–1975—which lived through these two recessions when they were 1 to 16 years of age. The evidence is compelling. Overall, we find large and enduring intercohort differences, which cannot be attributed to life cycle effects. The pattern reflects intergenerational value change.

These stable intergenerational value differences imply that, other things being equal, we will witness a long-term trend toward Postmaterialist values as one generation replaces another. As we will see below, this is precisely what we do find. Contrary to predictions that Postmaterialism would disappear as a result of the economic crisis, the underlying process of intergenerational change continued to function throughout the period, even though its effect was sometimes masked by negative period effects. When short-term forces returned to normal, the results were manifest. A substantial net shift toward Postmaterialism had taken place—most of it the result of intergenerational population replacement.

The most striking feature of Figure 2-5 is the persistence of stable differences between the value priorities of the respective cohorts across a period of eighteen years. In all years for which data are available, the 1956–1965 and 1966–1973 cohorts are more Postmaterialist than any of the older cohorts. In all fifteen of the years for which data are available, those born in 1956–1965 are more Postmaterialist than any older cohort. At all fifteen time points, the 1946–1955 cohort ranks next, above all of the older cohorts. At all fifteen time points, the 1936–1945 cohort ranks after them; at fourteen of the fifteen time points, the 1926–1935 cohort ranks next; at fourteen of the fifteen time points, the 1916–1925 cohort ranks second to last; and the 1886–1905 cohort ranks last or second to last in all years for which we have reliable numbers. Of 105 data points depicted in Figure 2-5, there are only five anomalies, and all of these are minor ones that involve an overlap between two immediately adjacent cohorts and could be caused by samples that deviate by only a few percentage points from the actual values. The pattern is about as close to perfection as one could hope for: The relative positions of the respective cohorts are extremely stable.

The data show a virtually perfect fit with theoretical expectations. As predicted, there are substantial differences between the values of different cohorts; and, as predicted, the younger cohorts are consistently less Materialist than the older ones. Moreover, as predicted, these differences seem to reflect cohort effects. There is no indication of the long-term downward trend that would be present if we were dealing with life cycle effects. A given cohort does not become more Materialist as it ages. The

overall tendency from 1970 to 1988 is horizontal. The respective cohorts are generally at least as Postmaterialist in 1988 as they were in 1970, and whatever net trend exists is upward, toward increasing Postmaterialism.

Some critics have suggested that a cohort analysis based on the mean value scores for each cohort might be more reliable than one based on the percentage difference index used in Figure 2-5. Figure A-2 (in the Appendix) shows the results of such an analysis. For each cohort, the Materialists receive a score of 0, the Mixed types a score of 1, and the Postmaterialists a score of 2. The results are identical with those in Figure 2-5. As hypothesized, we find period effects superimposed on stable cohort differences. There is no overall downward tendency that could support a life cycle interpretation. If we had stopped taking measurements in 1977 or even in 1980 (as Boeltken and Jagodzinski did), the results might have been reconciled with a life cycle interpretation. But with the full time series through 1988, this is implausible. A life cycle model implies that in a ten-year period, each cohort will move downward to the level that the cohort ten years older occupied at the start of the period. The data show no such overall downward tendency.

Instead of following given birth cohorts across time, Figure A-3 (in the Appendix) follows various age groups from 1970 to 1986 using the same values index as in Figure 2-6. If the data fit a life cycle model, we would find horizontal lines here for each age group. What we find, instead, is a clear upward trend. Those who were 65-year-olds in 1986 are markedly more Postmaterialist than those who were that age in 1970; the same is true when we compare the 55- to 64-year-old group in 1987 with the same age group in 1970. Indeed, all six age groups were more Postmaterialist in 1987 than in 1970, in most cases by a substantial margin.

Economic changes furnish a ready explanation for the short-term fluctuations observed in the mid 1970s and early 1980s. But in order to explain this long-term upward trend within each age group, one must either accept the presence of intergenerational value change—or postulate the existence of some mysterious long-term force that no one has yet identified.

The data show no sign whatever of the continuous downward cohort movement that would be associated with the "continuous aging" version of a life cycle model. But it is still conceivable that lesser life cycle effects might be present, linked with specific transitions at given points in the life cycle. Thus one might argue that people become more Materialist when they enter the labor force, or that getting married or having children makes them give a higher priority to economic and physical security than they did when they were single and had no children to support. Is it possible that different values of old and young have nothing to do with historical change

TABLE 2-2. IMPACT OF LIFE CYCLE EFFECTS AND COHORT EFFECTS ON VALUES: MULTIPLE CLASSIFICATION ANALYSIS

	Eta	*Beta*
Respondent's age cohort	.203	.175
Was respondent ever married?	.144	.071
Family income (quartiles)	.103	.065
Is respondent in labor force?	.082	.061
Does respondent have children?	.021	.043

Multiple R = .234 Multiple R^2 = .055 (N = 221,375)

but simply reflect the fact that the old are likelier to be married and have careers and children than are the young?

Let us test this hypothesis by comparing the values of old and young, this time controlling for whether one has married or not, has children or not, and has a full-time job or not. Table 2-2 shows the results of a multiple classification analysis in which the dependent variable is the index of Materialist/Postmaterialist values used in Figure 2-6. This analysis uses data from all Euro-Barometer surveys that included the relevant questions from 1970 through 1986. The predictors are the respondent's age cohort; the respondent's income (by quartiles within each nation); and dummy variables indicating whether or not the respondent was ever married; has children; and has a full-time job. The results suggest that each of these life cycle transitions may have some impact but that cohort effects are far more important than life cycle effects. In Table 2-2, the respondent's birth cohort has a beta coefficient of .175, which is far higher than that of any of the life cycle indicators. The effects of employment are mixed. On one hand, being in the labor force goes with being slightly more Materialist; on the other hand, having a high income makes one *less* so. The net effect is surprisingly weak. By itself, birth cohort explains more than twice as much of the variance in value priorities as do *all* of the life cycle indicators combined.

Even this may overestimate the impact of life cycle factors, however, for, as we will see in chapter 6, Postmaterialists place much less emphasis on getting married and having children than Materialists do. The life cycle interpretation assumes that people are Postmaterialists because they are not yet married or do not yet have children. But a good deal of evidence suggests that it also works the other way around: People are less likely to get married *because* they are Postmaterialists, and less apt to have children *because* they have distinctive Postmaterialist priorities. Insofar as this is true, we would expect to find a diminishing emphasis on marriage, and declining birth rates in advanced industrial societies—which is exactly what has been taking place ever since Postmaterialists began to enter the

adult population in the 1960s. Thus, the linkages between values and marriage and child-bearing shown in Table 2-2 do not necessarily prove that life cycle effects have any impact at all; they merely suggest that this could be the case, and provide an estimate of the upper limits of such effects. Even taking these upper limits at face value, the data indicate that the cohort effects are considerably stronger than the life cycle effects—if the latter exist at all.

In any given sample from a given country, one may find anomalies in which younger groups are more Materialist than older ones (Lafferty 1975; Van Deth 1983a; Boeltken and Jagodzinski 1985). Is the remarkable regularity and theoretical coherence of the cohort differences shown in Figures 2-5 just a fluke that results from pooling cross-national data? No. We obtain results that are equally free from anomalies when we pool the various surveys carried out *within* a given country. Table 2-3 shows the inter-cohort differences in value priorities within each of the member nations of the European Community, based on the combined data from all surveys carried out from 1970 through 1986. Combining these surveys produces eight large samples of over 20,000 cases each, so that each of the seven cohorts averages nearly 3,000 cases, and three medium-sized samples of from 6,000 to 12,000 cases, with an average of more than 1,000 cases per cohort. The three medium-sized samples are from Greece, which has only been included in the European Community since 1981, and from Luxembourg and Northern Ireland, in which relatively small samples of about 300 cases are interviewed in each Euro-Barometer survey. Finally, we also have two smaller samples, of about 2,700 cases each, from Spain and Portugal, respectively (both of which have been in the Community only since 1986). Each sample now displays a pattern almost completely free from anomalies. As we move from younger to older cohorts, the percentage of Materialists rises regularly and monotonically, whereas the percentage of Postmaterialists declines in similar fashion. Among the eleven large or medium-sized samples, we find only one anomaly, in which an older cohort is less Materialist than a younger one; this occurs in Belgium, where, as we have seen, recent influences have had particularly dire effects. But even here the anomaly is very mild, with the youngest cohort only 1 percentage point more Materialist than the second-youngest one. There are no anomalies at all among the rest of the 154 cells in the large and medium samples. The only large anomaly occurs in one of the two small samples, where we find that the second-oldest Spanish cohort is 5 percentage points more Materialist than the oldest cohort. With a larger data base from Spain, we suspect that this deviation from the general pattern would disappear—and, indeed, this is precisely what happens in later Spanish surveys (see Table 2-4). Deviations from the theoretical pattern are largely a

TABLE 2-3. DISTRIBUTION OF MATERIALIST AND POSTMATERIALIST VALUE TYPES BY AGE COHORT IN THIRTEEN SOCIETIES, 1970 - 1986

Birth Years of Age Cohort	Netherlands Mat	Netherlands PM	West Germany Mat	West Germany PM	Great Britain Mat	Great Britain PM	Denmark Mat	Denmark PM	Belgium Mat	Belgium PM
1956 - 1965	20%	27%	22%	26%	22%	15%	24%	20%	30%	16%
1946 - 1955	23	23	26	19	27	14	25	19	29	16
1936 - 1945	26	19	34	12	29	10	32	12	34	12
1926 - 1935	33	13	41	9	31	9	35	9	37	10
1916 - 1925	35	12	42	9	35	7	38	6	42	7
1906 - 1915	42	8	49	6	40	6	46	4	46	5
1880 - 1905	43	6	53	5	45	4	49	2	51	4
N	(24,197)		(24,401)		(24,336)		(21,142)		(22,569)	

Birth Years of Age Cohort	France Mat	France PM	Italy Mat	Italy PM	Repub. of Ireland Mat	Repub. of Ireland PM	Luxembourg Mat	Luxembourg PM
1956 - 1965	26%	20%	30%	14%	31%	11%	22%	22%
1946 - 1955	28	18	34	13	37	8	28	14
1936 - 1945	35	14	48	8	44	5	34	9
1926 - 1935	42	9	51	6	45	5	40	9
1916 - 1925	46	8	55	4	51	3	42	6
1906 - 1915	54	4	57	3	53	3	45	5
1880 - 1905	54	3	58	3	53	3	49	6
N	(26,192)		(26,797)		(20,947)		(6,412)	

Birth Years of Age Cohort	Northern Ireland Mat	Northern Ireland PM	Greece Mat	Greece PM	Spain Mat	Spain PM	Portugal Mat	Portugal PM
1956 - 1965	28%	10%	31%	15%	27%	20%	41%	8%
1946 - 1955	42	5	40	13	40	15	47	4
1936 - 1945	47	5	49	7	53	6	55	5
1926 - 1935	48	6	51	6	60	3	60	3
1916 - 1925	50	5	55	6	62	3	70	2
1906 - 1915	55	4	60	3	72	2	72	1
1880 - 1905	56	4	62	4	67	2	74	0
N	(6,019)		(12,216)		(2,690)		(2,728)	

Source: Combined results from European Community surveys, 1970 - 1986.

Note: Percentages do not add up to 100% because mixed types are omitted.

function of sample size. As sample size increases, one gets an increasingly accurate picture of reality; and the reality is that younger birth cohorts are less Materialist than older ones.

How does the American public compare with West European publics in this respect? In the early 1970s, among the older cohorts (those born before 1924), the American public showed a higher proportion of Postmaterialists

than did any European public except the Dutch; but among the youngest cohort, several West European countries showed a higher proportion of Postmaterialists than did the United States. The overall pattern was similar—in every country, the young were likelier to be Postmaterialists and less likely to be Materialists. As we noted at the time,

> Again and again, in country after country, we find this same indication of change. But the *rate* of change varies from country to country in a striking yet consistent and predictable fashion. The American sample shows less value change than any other country except Britain. The *oldest* American cohort has a higher proportion of Postmaterialists than their peers in any European nation—reflecting the greatly privileged position this country once had—but the *youngest* American cohort has not moved toward Postmaterialism as rapidly as many of their European peers. (Inglehart 1977, 36–37)

During the past fifteen years, West European publics have continued to shift toward Postmaterialist values at a more rapid pace than have the Americans, and this basic contrast between Western Europe and the United States still holds true. As Table 2-4 demonstrates, in 1986–1987, *older* Americans were still more Postmaterialist than most of their European counterparts—but younger Americans lagged behind, being less Postmaterialist than their counterparts in Western Europe as a whole, and far less so than their counterparts in the most advanced European countries, the Netherlands, West Germany, and Denmark.

This contrast between Western Europe and the United States apparently reflects the facts that (1) throughout the first two-thirds of the twentieth century, the United States had the highest per capita income in the world; and (2) compared with the devastation it wrought in Western Europe, World War II had a relatively mild impact on the United States. Thus, the older American cohorts were brought up under conditions of greater economic and physical security than those prevailing in Western Europe. But during the past four decades, the American economy has been relatively stagnant. West European countries have attained high levels of prosperity, and their relatively advanced social security systems have contributed to an atmosphere in which their younger cohorts have grown up with a sense of security as great or greater than that prevailing in the United States.

The result is that while as recently as the 1960s, the United States was at the cutting edge of cultural change in advanced industrial society, that no longer seems to be the case. As evidence presented here and in the following chapters indicates, the United States is experiencing processes of cultural change that are basically similar to those of other industrial societies, but she seems to be encountering them more slowly than are the

TABLE 2-4. DISTRIBUTION OF MATERIALIST AND POSTMATERIALIST VALUE TYPES BY AGE COHORT IN TWELVE WESTERN NATIONS, 1986 - 1987

Age Range in 1987	Neth. Mat	Neth. PM	West Germany Mat	West Germany PM	Denmark Mat	Denmark PM	Great Britain Mat	Great Britain PM
15 - 24	10%	34%	9%	35%	15%	22%	13%	20%
25 - 34	12	31	14	30	17	27	22	15
35 - 44	14	26	20	26	17	23	20	17
45 - 54	20	21	21	18	20	11	19	14
55 - 64	26	16	20	16	27	11	26	10
65 - 74	22	11	28	13	30	8	30	13
Total	17	25	17	24	21	18	22	15

Age Range in 1987	France Mat	France PM	Belgium Mat	Belgium PM	Italy Mat	Italy PM	Ireland Mat	Ireland PM
15 - 24	26%	16%	31%	19%	25%	17%	24%	14%
25 - 34	32	16	30	18	25	14	34	8
35 - 44	32	20	34	15	32	12	36	8
45 - 54	40	7	41	14	42	7	41	7
55 - 64	37	10	45	13	44	7	45	5
65 - 74	48	5	49	8	48	3	52	4
Total	33	14	38	15	35	11	37	9

Age Range in 1987	Spain Mat	Spain PM	Greece Mat	Greece PM	Portugal Mat	Portugal PM	European Community Mat	European Community PM	United States Mat	United States PM
15 - 24	22%	22%	29%	15%	38%	10%	20%	22%	25%	21%
25 - 34	28	20	37	12	47	7	25	21	18	15
35 - 44	42	12	47	6	50	6	30	16	22	14
45 - 54	55	5	53	5	54	6	34	19	33	19
55 - 64	60	3	56	2	63	4	39	9	24	15
65 - 74	61	3	62	4	70	3	41	7	29	11
Total	42	12	46	8	52	6	30	15	23	16

Sources: Combined results from Euro-Barometer surveys 25, 26, and 27 (carried out in Spring 1986, Fall 1986, and Spring 1987, respectively); United States data from survey sponsored by the European Community and carried out by the Gallup organization, in November 1987.

Note: Figures for European Community are weighted according to population of each country. Ns for each country are: Netherlands, 2,919; West Germany, 2,820; Denmark, 2,848; Britain, 2,930; France, 2,850; Belgium, 2,828; Italy, 3,116; Ireland, 2,921; Spain, 2,702; Greece, 2,726; Portugal, 2,768; United States, 1,300. Percentages do not add up to 100% because mixed types are omitted.

economically developed countries of Northern Europe; only Southern Europe still lags behind, and this region is changing rapidly.

The cohort differences are unmistakable in Figures 2-5 and 2-6, but there is clear evidence of significant period effects as well, and our interpretation of the cohort analysis will not be complete until we have accounted for them. It is not difficult to do so. When I formulated the battery

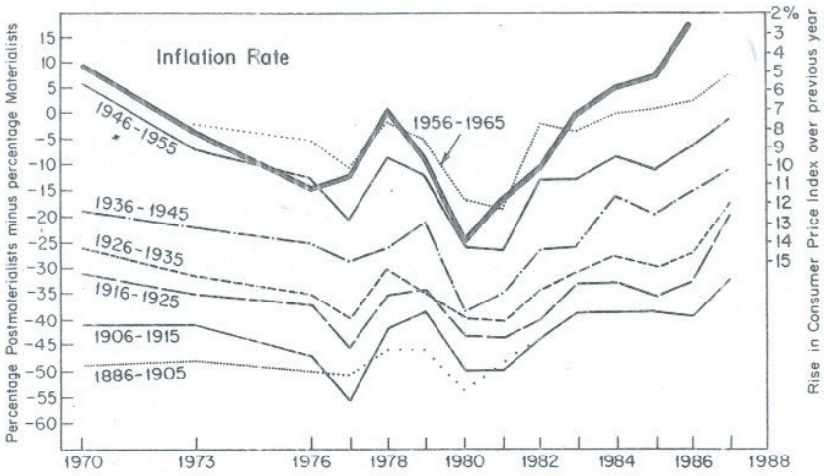

FIGURE 2-6. Value priorities of seven age cohorts and mean inflation rate across six West European countries, 1970–1987. Both the inflation rates and values indices from which these graphs were derived are weighted according to population of each nation.

of items first used to measure Materialist/Postmaterialist value priorities in 1970, I hypothesized that one's sensitivity to inflation would be a good indicator of Materialist priorities. Consequently, one of the two Materialist options in the four-item battery used here is "fighting rising prices." My expectation was that different age cohorts, whose socialization had been shaped by different historical experiences, would respond differently to this item, with the older cohorts more apt to give it a high priority.

When formulating these items in 1969, I did not anticipate the explosive worldwide inflation that would later take place, following the OPEC oil price shocks of late 1973 and late 1979, respectively. But the implications are clear: One would expect such inflation to enhance the chances that a high priority would be given to "fighting rising prices." The theoretically obvious interpretation of the period effects found in Figure 2-5, then, is that they reflect the two waves of inflation that impinged on Western Europe so dramatically in the mid-1970s and again at the start of the 1980s. Is this interpretation confirmed empirically?

Figure 2-6, which shows the answer, is identical to Figure 2-5 except that it also shows the mean inflation rate for the six nations from 1970 through 1987. The inflation rate is indicated by the rise in the Consumer Price Index during the year of the survey; high inflation rates are plotted as a downward movement of the inflation line so that there is the same

TABLE 2-5. VALUE PRIORITIES AND INFLATION RATES AMONG SIX WESTERN PUBLICS, 1970 - 1987

		% Mats.	% Postmats.	Percentage Difference	Inflation Rate
Netherlands:	1970 - 71	34%	13%	-21	4.2%
	1986 - 87	17	25	+ 8	.3
Britain:	1970 - 71	36	7	-29	6.4
	1986 - 87	22	15	- 7	3.4
Germany:	1970 - 71	44	10	-34	3.0
	1986 - 87	17	24	+ 7	0
France:	1970 - 71	41	11	-30	5.3
	1986- 87	33	14	-19	2.7
Belgium:	1970 - 71	32	14	-18	4.1
	1986 - 87	38	15	-23	1.3
Italy:	1970 - 71	35	10	-25	5.3
	1986 - 87	35	11	-24	5.8
Six nations, weighted mean:[a]	1970-71	39	10	-29	4.9
	1986-87	27	17	-10	2.7

Source: Inflation rates from European Community Eurostatistics reports.

[a]Weighted according to population of each nation.

polarity for the two sets of variables. In those years for which no survey data are available, the inflation rate is not plotted either.

Again, the fit between data and theory is remarkably good, so good that it is immediately apparent even from simply scanning Figure 2-6. Each of the two dips toward increased Materialism reflects a rise in inflation, and the upward movements of 1978–1979 and 1982–1987 reflect the abatement of inflation, with roughly a one-year lag. One's impression that the period effects result largely from changes in the inflation rate is confirmed by multiple regression analysis of the data in Figure 2-6.

Table A-4 (in the Appendix) shows the inflation rates that prevailed from 1970 to 1986 in each of the six nations surveyed from 1970 on. Table 2-5 sums up the values shifts from 1970 to 1987, in relation to the inflation each nation experienced. In five of these nations, by 1986 inflation had subsided to a level at or below where it was in 1970. In four of these nations (the Netherlands, Britain, West Germany, and France), we find impressive shifts toward Postmaterialism. In 1970–1971, Materialists were three or four times as numerous as Postmaterialists; by 1986–1987, the two groups were close to parity, with Postmaterialists actually moving ahead in the Netherlands and West Germany. Part of this shift can be at-

tributed to period effects favorable to Postmaterialism, but an even larger portion can be traced to population replacement, as we will see below.

In Italy, we observe a small net shift toward Postmaterialism in spite of the fact that in 1986 the inflation rate was still higher than in 1970. Here, intergenerational population replacement more than offset negative period effects. Only in Belgium do we observe a net shift toward Materialism. The Belgian deviant case has already been noted in chapter 1, and will be touched upon again in succeeding chapters. This phenomenon seems to be linked with a pervasive malaise in Belgian society during the 1980s. For the six nations as a whole, however, there was a pronounced net shift toward Postmaterialism. The economic turmoil of the 1970s and early 1980s inhibited, but did not stop, the shift toward Postmaterialism linked with intergenerational population replacement.

Not only overall, but on a nation by nation basis, there is an extremely close fit between inflation rates and short-term changes in our dependent variable. This is not a surprising finding, but it is important because it furnishes a substantive explanation of the period effects that baffled earlier investigators—and helps to sort out the impact of period effects, cohort effects, and life cycle effects.

In the mid-1970s and at the start of the 1980s, the world experienced drastic inflation, producing exceptionally strong period effects. By the mid-1980s, inflation rates in most of Western Europe had subsided to their 1970 levels; accordingly, the period effects have now subsided or even reversed their direction. Given the large intergenerational differences in value priorities that our analysis demonstrates, the effects of intergenerational population replacement should be manifest in the value priorities of the public. A great deal of population replacement has taken place since 1970—perhaps more than one realizes. In 1970, those born before 1906 and those born after 1945 were about equally numerous within our sampling universe (which includes all citizens 15 years of age and older). The pre-1906 cohort constituted 17 percent of the public, and the postwar cohort constituted 20 percent. By 1986, major shifts had occurred. The pre-1906 cohort had fallen to less than 5 percent of the public, whereas the postwar cohorts now constituted nearly 50 percent of the public. Are these demographic shifts reflected in the distribution of Materialists and Postmaterialists in Western Europe?

Very much so. In 1970–1971, within the six nations as a whole, Materialists outnumbered Postmaterialists by a ratio of almost 4 to 1. By 1988, this ratio had fallen to 4 to 3. The Postmaterialists were much closer to an even balance with the Materialists. Even in the United States, the change has been substantial. In 1972, Materialists outnumbered Postmaterialists by 3.5 to 1. In 1987, this ratio had fallen to only 1.5 to 1. Part of this shift

should be discounted because inflation was lower in 1988 than it had been in 1970–1971. Consequently, period effects are now working to reinforce cohort effects, conveying a somewhat exaggerated impression of how much intergenerational value change has taken place.

A twelve-item battery of questions designed to measure Materialist/Postmaterialist items was included in the Euro-Barometer surveys in 1973, 1978, and 1988 (for detailed information on the formulation of these questions, see chapter 3). This twelve-item values battery is much less sensitive to the effects of inflation than is the four-item battery. This reflects the fact that in the four-item battery, "fighting rising prices" is one of only two Materialist items, while in the twelve-item battery, it is one of six. Consequently, during periods when inflation is not a major problem, those with Materialist values can shift to one of the five other Materialist items in choosing their top priorities.

This is precisely what happened during the period from 1973 to 1988 (the earliest and most recent years in which the twelve-item battery has been administered in the European Community countries). As Table 2-6 indicates, in 1973 the goal of "fighting rising prices" was chosen by European Community publics as one of their top priorities more frequently than was any other goal. The next most frequently chosen goals were four other Materialist items: "economic growth," "the fight against crime," "maintaining a stable economy," and "maintaining order in the nation." In 1988, inflation had become a minor problem, and "fighting rising prices" fell from first to sixth rank. It was not replaced by a Postmaterialist goal, however. Instead, the various other Materialist goals took up much of the slack, so that the relative positions of Materialist versus Postmaterialist goals were almost unchanged from 1973 to 1988. At both the start and finish of this period, Materialist items held five of the top six positions, and (apart from the sharp drop of "rising prices") they even maintained roughly the same rank order, with "economic growth" moving up from second to first place, "the fight against crime" moving up from third to second place, and so on, down to "strong defense forces," which ranked last in both 1973 and 1988.

Apparently, one Materialist goal can substitute for another, as our theory implies. Nevertheless, the twelve-item battery also reveals a substantial shift from Materialist to Postmaterialist priorities—a shift that parallels the one shown by the four-item index but is of more moderate size. In 1973, Materialist choices outweighed Postmaterialist choices by almost 2 to 1. In 1988, they outweighed Postmaterialist choices by less than 1.5 to 1. The shift in polar types was even more pronounced. If we construct pure Materialist and Postmaterialist types, reflecting those whose top two priorities among these twelve items were exclusively Materialist or exclu-

TABLE 2-6. PRIORITIES OF WESTERN PUBLICS: 1973 VERSUS 1988
(Percentage choosing given goal as first or second most important out of twelve, among publics of nine nations belonging to European Community in 1973 and 1988)

1973			1988		
Goal	*Polarity*	*% Choosing*	*Goal*	*Polarity*	*% Choosing*
Fight rising prices	(M)	39%	Economic growth	(M)	28%
Economic growth	(M)	24	Fight crime	(M)	27
Fight crime	(M)	22	Stable economy	(M)	21
Stable economy	(M)	22	Maintain order	(M)	20
Maintain order	(M)	19	Fight rising prices	(M)	17
More say on job	(P)	17	Less impersonal society	(P)	18
Less impersonal society	(P)	16	More say in government	(P)	16
More say in government	(P)	12	Protect free speech	(P)	16
Protect free speech	(P)	11	More say on job	(P)	13
More beautiful cities	(P)	7	Ideas count	(P)	10
Ideas count	(P)	7	More beautiful cities	(P)	7
Strong defense forces	(M)	4	Strong defense forces	(M)	6
Materialist total		130			119
Postmat. total		70			80

Source: Based on representative national samples of publics of France, West Germany, Britain, Italy, Netherlands, Belgium, Luxembourg, Ireland, and Denmark interviewed in European Community surveys of September 1973 and April 1988 (Euro-Barometer survey 29).
Note: Percentages are weighted according to population of each country.

sively Postmaterialist, respectively, we find that in 1973 the pure Materialists outnumber the Postmaterialists by well over 3 to 1; in 1988 this ratio had fallen to barely 2 to 1.

There are various other ways in which we can control for period effects. For example, we can statistically control for inflation in multiple regression analysis. But regardless of whether we control for inflation or estimate the impact of cohort effects (as we do below), it is clear that intergenerational population replacement has brought about a major shift from Materialist to Postmaterialist values.

Needless to say, we cannot guarantee that inflation rates will remain at their present levels. Extraneous factors could set off a third wave of massive inflation that would have a predictable impact on these indicators. Nevertheless, it seems clear that, period effects being equal, the cohort effects demonstrated here create a powerful long-term tendency for the

publics of these societies to shift from Materialist to Postmaterialist priorities. Let us try to estimate the impact of these cohort effects more precisely.

The Effects of Generational Replacement upon Value Change

Analyses carried out by Abramson and Inglehart (1986, 1987) complement the foregoing findings. Unlike the cohort analyses above (which help distinguish among aging effects, birth cohort effects, and period effects), these analyses estimate the effect of population replacement on value change. Since births and deaths are well documented, they enable one to make precise estimates of how much value change would occur as a result of these demographic changes alone. To do so, one first creates (algebraically) a population in which *no* replacement occurs (see Abramson 1983, 56–61); this serves as a baseline for comparison with the actual population, in which demographic replacement *has* occurred. The first step in creating this baseline is to remove new cohorts from the calculations. Next, one must algebraically immortalize the older cohorts. To do this, we use the distribution of respondents in each cohort in our earliest surveys as our base, multiply the value scores found for each cohort in subsequent surveys by the number of respondents originally in that cohort, sum these products, and divide the sum of these products by the number of cases. This provides a population in which the effects of population replacement have been removed. It can then be compared with the actual value scores among the population. Differences between the actual result and the result with the effects of replacement removed are due to replacement. In the 1970 surveys, respondents with middle-class occupations were overrepresented, which tends to exaggerate the proportion of Postmaterialists; subsequent surveys are more representative. To partially offset this problem, the combined results of the 1970 and 1971 surveys are used as our baseline.

The results of this analysis demonstrate that population replacement affects value change quite markedly, though the actual changes that occurred differ widely from country to country. For the combined European sample, the data shown in Figure 2-7 indicate that replacement is the main force leading to the growth of Postmaterialist values. Figure 2-7 shows Abramson and Inglehart's (1986) estimates. The solid line shows the actual scores on our value index, calculated in the same way as in Figure 2-5. The broken line shows what those scores would have been if there had been no generational replacement. In 1980 and 1981, scores on this value index declined somewhat, largely as a result of the very high inflation prevailing

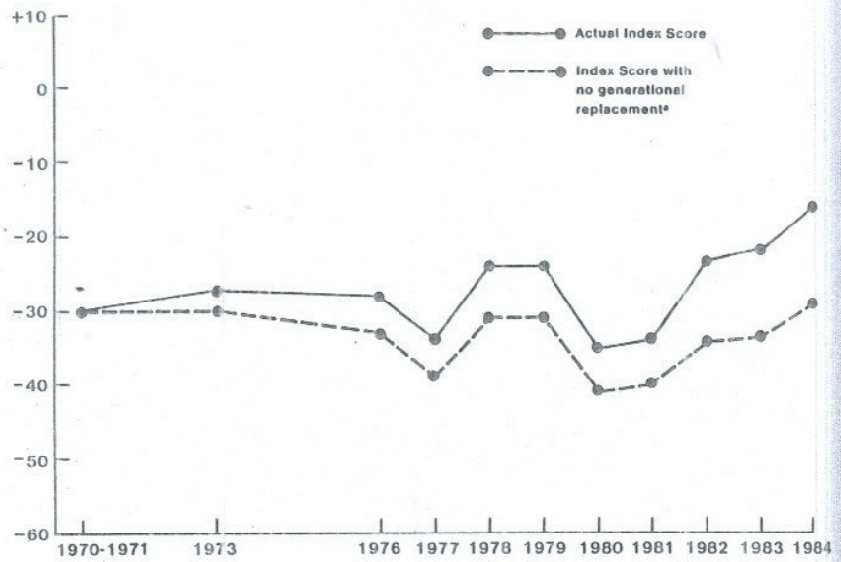

FIGURE 2-7. Percentage of Postmaterialists minus percentage of Materialists in combined sample of six West European publics, 1970–1971 through 1984.

Source: European Community Surveys. For the distribution of respondents by years of birth in all eleven survey years, see Abramson and Inglehart 1986.

[a] Assuming that no cohorts born after 1955 entered the adult population and that older cohorts did not diminish through death.

then—but they would have declined even more if there had been no population replacement. In more recent years, however, this decline is more than offset. By 1982, the value index was 7 points above the 1970–1971 starting point; in 1983 it was 8 points higher; and by 1984 it was 13 points above the 1970–1971 baseline. Without replacement, the 1982 score would have been 4 points lower than in the 1970–1971 survey; in 1983 it would have been 3 points lower; and in 1984 it would have been 2 points lower. Postmaterialism rose substantially, but virtually all of this change was due to intergenerational population replacement. In 1984, inflation rates were still higher than in 1970–1971, and without population replacement, there would have been no rise in Postmaterialism.

There will be considerable population replacement in coming years, but the process will slow down, mainly because of low birth rates since the mid-1960s. Between the end of 1970 and the end of 1985, 29 percent of the adult population was replaced. But during the years from 1985 to 2000, only 22 percent of the adult population will be replaced. Both future replacement and the slowdown of that replacement have clear implications for future trends in value priorities.

Abramson and Inglehart (1987) projected the future impact of replacement on West European values from 1985 to 2000. All those who will make up the adult public in 2000 have now been born, so we can calculate demographic shifts with confidence. The only important uncertainty is in estimating the future values of those cohorts that are still too young to have been interviewed. In all past surveys, the youngest cohort entering the adult population has been more Postmaterialist than the next older cohort. Nonetheless, a conservative first projection assumes that all cohorts born after 1965 will enter the adult population with a value score no more Postmaterialist than that of the 1956–1965 cohort. A second projection assumes that, as in all previous surveys, the cohorts entering the adult population will be slightly more Postmaterialist than the adjacent older cohort. Figure 2-8 shows these projections.

Both basic projections assume that cohorts maintain their 1985 levels of Postmaterialism. There will be fluctuations from year to year, of course. But, as our empirical evidence shows, three of the four cohorts that can be tracked over the fifteen years studied here registered virtually identical values scores in 1985 and 1970–1971. This projection of value shifts assumes that the net impact of short-term economic fluctuations from 1985 to 2000 will be similar to their impact from 1970 to 1985. This is a very conservative assumption, because the period effects from 1970 to 1985 were relatively negative, including the two worst recessions since the 1930s. The future could conceivably be even worse, of course. Economic collapse or uncontrollable inflation would affect the outcome—but it would do so in a predictable direction and even to a degree that is at least roughly predictable. The projection presented here simply assumes that economic conditions for the fifteen years from 1985 to 2000 will be roughly similar to those that prevailed during the far from rosy period from 1970 to 1985. The broken line in Figure 2-8 shows our projection based on this assumption. The value index rises slightly by 1990, somewhat more by 1995, and again by 2000. By the year 2000, the overall value index shows a rise of 6 points above the 1985 level purely as a result of generational replacement. This finding that there would be a gain in Postmaterialism is robust, and would obtain as long as young Europeans were no more Materialist than their elders—a finding observed in all survey years thus far.

Let us assume that the two new (and not yet surveyed or only partially surveyed) cohorts will be slightly less Materialist than the adjacent older cohorts. The dotted line in Figure 2-8 shows the overall value scores given these cohort values. While our results for 1990 scarcely differ from our first projection, by 1995 the overall value score will be somewhat higher.

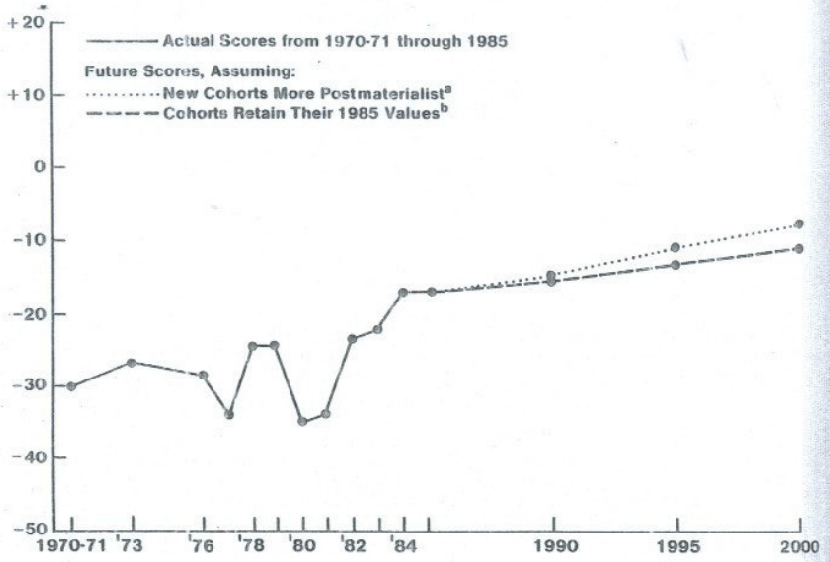

FIGURE 2-8. Projected percentage of Postmaterialists minus percentage of Materialists for six West European publics in 1990, 1995, and 2000.

Source: European Community surveys are used to measure the actual results from 1970–1971 through 1985. We used combined national samples of Germany, Britain, the Netherlands, France, Belgium, and Italy. Projections for 1990, 1995, and 2000 are based on national census projections.

[a] Assumes cohorts will retain their 1985 values, but that cohorts who enter the adult population will be more Postmaterialist than the adjacent older cohort.

[b] Assumes cohorts will retain their 1985 values, but that cohorts who enter the adult population will have the same values as do the 1956–1965 cohort.

By 2000, the overall score shows a 9-point gain over the 1985 value score, with Postmaterialists now being almost as numerous as Materialists.

Slowing rates of generational replacement lead to slower rates of value change. During the fifteen years from 1970 to 1985, there was a 13-point gain in the value index, solely as a result of generational replacement. The population replacement process is slowing down somewhat, but on the basis of our second assumption, we can expect the index to rise an additional 9 points between 1985 and the end of the century. If it rises by more (as now seems likely), the gains will be due to period effects conducive to Postmaterialism.

Even though it is slowing, replacement remains a long-term force pushing Postmaterialism upward. Extremely adverse economic conditions could cause Materialism to rise again, but even under these conditions, generational replacement would slow down any movement toward Materialism.

CONCLUSIONS

The unprecedented economic and physical security of the postwar era has led to an intergenerational shift from Materialist to Postmaterialist values. The young emphasize Postmaterialist goals to a far greater extent than do the old, and cohort analysis indicates that this reflects generational change far more than it does aging effects.

Both Americans and West Europeans became substantially more Postmaterialist from 1970 to 1988, and will probably continue to become more so, but the change created by replacement is relatively slow, for population replacement is gradual in advanced industrial societies, which have relatively low birth rates and death rates, and the decline in birth rates since the mid-1960s will further slow down replacement. Nevertheless, we estimate that almost exactly half the West European adult population (49.8 percent) will have been replaced during the twenty-nine years between the end of 1970 and the beginning of 2000.

Given the gradual impact of replacement, it seems likely that even by the year 2000 Materialists will still be about as numerous as Postmaterialists. The overall proportion of Postmaterialists would then be about twice as great as it was in 1970–1971, when only 1 West European in 10 was a Postmaterialist. Moreover, the key comparison is the ratio of Materialists to Postmaterialists. At the time of our first surveys, in 1970–1971, Materialists held an overwhelming numerical preponderance over Postmaterialists, outnumbering them by nearly 4 to 1. By 1988, the balance had already shifted dramatically, to a point where Materialists outnumbered Postmaterialists by only 4 to 3. This overstates the real long-term change somewhat, since it reflects a combination of intergenerational change *plus* period effects, which had become favorable by 1988. But, even when we discount these period effects, conservative projections based on population replacement alone indicate that by the year 2000 Materialists will outnumber Postmaterialists only narrowly. This may be a sort of tipping point in the balance between the two value types: As we will see in chapters 10 and 11, Postmaterialists are more highly educated, more articulate, and politically more active than Materialists. Consequently, their political impact will probably outweigh that of the Materialists on many issues. The effects of intergenerational population replacement are likely to have a profound effect on the values that prevail among Western publics. Subsequent chapters provide evidence of just how far-reaching these consequences are likely to be.