

# Inglehart's Materialism-Postmaterialism Concept: Clarifying the Dimensionality Debate Through Rokeach's Model of Social Values<sup>1</sup>

VALERIE BRAITHWAITE,<sup>2</sup> TONI MAKKAJ,  
AND YVONNE PITTELKOW  
*Research School of the Social Sciences  
The Australian National University  
Canberra, Australia*

This paper addresses an ongoing debate concerning the dimensionality of Inglehart's (1971, 1977, 1981, 1990) concept of materialism-postmaterialism. According to Inglehart, this concept is unidimensional, distinct from the traditional left-right political belief continuum, and central to explaining the changes taking place in the values of advanced industrial societies. To date, the debate has sought answers in different item sets, factor analytic solutions, and rotations. This paper approaches the problem through psychological models of social values. Materialism-postmaterialism, it is argued, involves a prioritizing of values from two orthogonal value orientations which have grown out of the work of Rokeach (1973): *national strength and order* and *international harmony and equality*.

Inglehart (1971, 1977, 1981, 1990) has had considerable impact on research into political culture and change through his value concepts of materialism and postmaterialism. Using psychological needs theory (Maslow, 1954), Inglehart coined these terms to explain the way in which political values rise out of individual needs during the process of socialization. Materialist values are the concern of those who have experienced economic or physical insecurity. Their basic needs for security and stability have been thwarted in the past, leading materialists to give priority to order and stability, and to economic and military strength. Those who have postmaterialist values have been exposed to greater security and, as a result, are oriented toward satisfying other needs, needs

<sup>1</sup>Our thanks to Janine Bush for assistance with library research and to Robert Lynd-Stevenson for assistance with data collection.

<sup>2</sup>Correspondence concerning this article should be addressed to Valerie Braithwaite, Research School of the Social Sciences, The Australian National University, GPO Box 4, Canberra, A.C.T. 2601, Australia.

associated with social bonds, self-esteem, and self-actualization. Consequently, postmaterialists are likely to place a higher value on ideas, equality of opportunity, greater citizen involvement in decision making at government and community levels, and environmental protection.

Inglehart conceptualizes materialism-postmaterialism as a single continuum with those choosing all materialist values at one end, those choosing all postmaterialist values at the other, and those choosing a mix of materialist and postmaterialist values in between. Such a view has been challenged by political scientists who have examined the question of dimensionality using different data sets, different item sets, and different methods of analysis (Bean & Papadakis, 1994; Flanagan, 1987; Hellevik, 1993; Van Deth, 1983). The conclusion from this work has been that materialist and postmaterialist values define two quite distinct dimensions. Endorsement of postmaterialist goals does not necessarily mean abandonment of materialist ones.

In a further development, the nature of the concepts of materialism and postmaterialism has come under critical scrutiny. Flanagan (1987) has redefined the two dimensions as "libertarian" (postmaterialist) and "authoritarian" (materialist). Hellevik (1993) has claimed to have supported Flanagan's position, deriving two dimensions labeled change versus stability and outer versus inner-oriented. Hellevik argued that materialism-postmaterialism was one diagonal through this two-dimensional space. Materialism represented the desire for stability and being outer-oriented, while postmaterialism represented the desire for change and being inner-oriented.

The arguments of both Flanagan (1987) and Hellevik (1993) are reminiscent of past debates over the structure of social attitudes (Kerlinger, 1984). Whether or not liberalism and conservatism represented two dimensions or the opposite poles of one dimension has spanned decades of research in social psychology. Hellevik's proposal to explain the materialism-postmaterialism dimension in terms of the two dimensions of change versus stability and inner- versus outer-directedness is strikingly similar to Eysenck's (1954) classic dimensions of radicalism-conservatism and toughmindedness-tendermindedness.

Different rotations of different item sets have limited utility in establishing the validity of constructs such as materialism and postmaterialism. Insights are particularly likely to be blurred by the very loose way in which values have been defined. Müller-Rommel (1983) has criticized Inglehart (1977) for conceptual confusion in measuring values through a set of attitude items. The lack of either a theoretical or operational distinction between attitudes and values continues to be a problem in work on materialism and postmaterialism, being particularly evident in the research of Hellevik (1993), and to some degree that of Flanagan (1987). If political values are cognitively organized in a different way from political attitudes, the practice of mixing attitudes and values in

factor analytic studies can produce inconsistent and ambiguous findings. Braithwaite (1995) has proposed such an explanation for the one versus two dimensionality debate over liberalism and conservatism.

### The Psychological Perspective

Given the importance of Inglehart's (1990) work in the area of social and cultural change, clarifying the nature of materialism-postmaterialism is a priority. This paper addresses this question from the perspective of the psychological study of values. The approach offers two advantages. First, through the work of Rokeach (1968, 1973), considerable progress has been made in differentiating the value and attitude domains at both a conceptual and empirical level. This clarification restricts values to a manageable number for empirical investigation.

Second, established value scales can serve as marker variables for exploring the construct validity of materialism-postmaterialism. While Inglehart derived his theory from psychology, these theoretical origins have not been the subject of much research interest. Within psychology, values have been conceptualized as socially acceptable manifestations of the kinds of basic human needs articulated by Maslow (Rokeach, 1973). The expectation, therefore, would be that the major dimensions of psychological values would correspond in some way to materialism-postmaterialism.

#### Differentiating Values and Attitudes

Values and attitudes can be differentiated using Rokeach's (1973) model of the value-attitude-belief system. The basic building block for Rokeach (1968) is the belief that

any simple proposition, conscious or unconscious, inferred from what a person says or does, capable of being preceded by the phrase "I believe that . . ." The content of a belief may describe the object of belief as true or false, correct or incorrect [descriptive]; evaluate it as good or bad [evaluative]; or advocate a certain course of action or a certain state of existence as desirable or undesirable [prescriptive]. (p. 113)

Rokeach proceeded to define values as prescriptive beliefs about desirable goals in life and modes of behaving that transcend specific objects and situations. Attitudes, on the other hand, focus on specific objects and comprise a set of beliefs that could be descriptive, prescriptive, or evaluative. Through

operationalizing his conceptual schema, Rokeach (1973, 1979, 1985) and his colleagues (Rokeach & Ball-Rokeach, 1989) were able to demonstrate the characteristics of centrality, durability, and directiveness that traditionally have been attributed to values.

Some have taken advantage of the distinctions that Rokeach has drawn to examine the way in which the value domain maps onto the attitude domain (e.g., Feather, 1979, 1984) and have postulated that the political value and political attitude domains are structured differently (Braithwaite, 1994). In general, however, researchers have not capitalized on Rokeach's model for differentiating attitudes and values. Values have continued to be regarded as generalized attitudes about the desirable, and researchers have assumed that the concepts of attitude and value are not readily distinguishable at the operational level.

### Selecting Value Scales as Marker Variables

Psychological studies of values in the past two decades have been dominated by the Rokeach Value Survey (1968, 1973). Inglehart (1985) used data from this survey in examining value stability over time and noted that Rokeach's items had more personal referents than his own which focused on sociopolitical priorities. Rokeach and Ball-Rokeach (1989) also noted that Inglehart had focused on a subset of the value domain, but observed similarities in the two approaches, particularly in relation to Rokeach's (1973) two value model of political ideology. Rokeach expected that his orthogonal value dimensions defined by freedom and equality would bear some relationship to Inglehart's notions of materialism and postmaterialism. Specifically, Rokeach (1973) postulated that materialism-postmaterialism was the diagonal passing through the low equality-low freedom and high equality-high freedom quadrants of his two value model.

Making empirical links between Inglehart's and Rokeach's models, however, is hampered by the measurement strategy favored by Rokeach. In order to achieve broad scope, Rokeach opted for economy in the measurement of each value, with the result that key sociopolitical dimensions are represented by single items accompanied by brief descriptors.

Research findings invariably confirmed the importance of Rokeach's item "equality (brotherhood, equal opportunity for all)" in differentiating political groups, but little support could be found for the hypothesized second dimension defined by "freedom (independence, free choice)" (Bishop, Barclay, & Rokeach, 1972; Cochrane, Billig, & Hogg, 1979; Jones, 1982; Linder & Bauer, 1979; Rokeach, 1973; Thanhauser & Caird, 1990). Critics pointed out that freedom was an ambiguous measure, meaning all things to all people (Cochrane et al., 1979) and that reliance on single item measures jeopardized reliability

and validity (Gorsuch & McFarland, 1972; Homant, 1970; Kitwood & Smithers, 1975; Mueller, 1974).

On the basis of these criticisms, Braithwaite (1979) reassessed the value domain defined by Rokeach through ratings of some 125-value items, the outcome being the development of a set of multi-item scales to represent the major value dimensions (Braithwaite, 1982; Braithwaite & Law, 1985; Braithwaite & Scott, 1991). Of this pool, 18 were sociopolitical values, 14 of which defined two orthogonal factors. Through factor analyses of these items across three data sets, two scales were developed to measure *international harmony and equality* and *national strength and order*.

Both scales have satisfactory internal consistency, have been validated against other value scales, and have been used successfully to predict voting behavior, social attitudes, and conservatism (Braithwaite, 1982, 1994; Braithwaite & Law, 1985; Braithwaite & Scott, 1991; Heaven, 1990a, 1990b, 1991). The scales are relatively independent of each other (Braithwaite, 1982, 1994; Braithwaite & Law, 1985). Where relationships have been found, they have tended to be positive rather than negative. In other words, holding a value orientation favoring national strength and order is not incompatible with holding a value orientation favoring international harmony and equality, and each scale makes an independent contribution to conservatism net of the other (Braithwaite, 1994). The scales have been conceptualized as the political component of higher order value dimensions corresponding to Fromm's (1949) authoritarian and humanistic conscience.

The justification for expecting correspondence between national strength and order and international harmony and equality and Inglehart's (1971, 1977) concept of materialism-postmaterialism is thus twofold. First, the measures share the common theoretical base that values reflect individual needs of the kind described by Maslow (1954). Second, the substance of the concepts overlaps. Materialism and national strength and order share an emphasis on security for the individual and the group. Postmaterialism and international harmony and equality are both concerned with the development of human potential for peaceful coexistence and participation.

While expecting correspondence between the scales, the question of dimensionality remains a problem. National strength and order and international harmony and equality are orthogonal, but materialism-postmaterialism according to Inglehart (1977) is unidimensional. The most likely explanation for this divergence is the measurement procedure. Inglehart's (1971) four-item index contains two materialism items (maintaining order in the nation, fighting rising prices) and two postmaterialism items (giving the people more say in important government decisions, protecting freedom of speech). Respondents are required to choose the two goals that are most important. Thus, they can choose two materialist goals, two postmaterialist goals, or any one of six

combinations of a materialist and a postmaterialist goal. Inglehart thereby forces respondents to prioritize their values. They cannot endorse all four goals equally strongly as they can when rating the values representing national strength and order and international harmony and equality.

This difference in method of measurement has important conceptual implications. For Inglehart (1971, 1977, 1990), the assumption made is that materialism and postmaterialism are prioritized or traded off and that, in general, both goals cannot be achieved simultaneously. In using the Social Values Inventory (Braithwaite, 1982; Braithwaite & Law, 1985), this conceptual restriction does not exist. The attainment of both material and postmaterial values is possible within this measurement model. The theoretical defense of this position is that incompatibility arises through characteristics of situations and restriction of options. Incompatibility is not a characteristic of the values themselves (Braithwaite, 1994).

### Hypotheses

If international harmony and equality and national strength and order are the basic and independent dimensions underlying the social value domain, as we contend they are, certain predictions can be made about what would happen when respondents are forced to choose between social goals that represent these two dimensions. Those whose commitment to international harmony and equality far outweighs their commitment to national strength and order would be expected to choose two postmaterialist values. Those whose commitments lie in the opposite direction would be expected to choose two materialist values. Finally, those who are no more strongly committed to one value orientation than the other would be expected to lie in Inglehart's mixed category. In other words, a difference in commitments to the two value orientations should be a stronger predictor of materialism-postmaterialism than either of the two value orientation scales considered separately.

A second hypothesis is derived from Müller-Rommel's (1983) contention that Inglehart (1971, 1977) is measuring attitudes not values. The question addressed in this paper is whether materialism-postmaterialism has more in common with the social attitude domain or the social value domain. Because of the vastness of the social attitude domain, some limitations had to be imposed on the testing of this hypothesis. Attitudes were measured toward five social issues that were being debated by political parties prior to the collection of the data (McAllister & Warhurst, 1988). It was anticipated that attitudes to these issues would fall along a left-right political dimension.

Casting some doubt on the likelihood of confirming this hypothesis was Inglehart's (1990) claim that the traditional left-right political continuum is

independent of materialism-postmaterialism. For Inglehart, however, the traditional left-right continuum is concerned mainly with income inequality. In the present study, income inequality is only one of the issues that is being assessed.

## Method

### *Sample*

One hundred and ninety-seven undergraduate psychology students completed a questionnaire measuring values, social and political attitudes, personality characteristics, and behaviors. Women comprised 47% of the sample. Ages ranged from 17 to 64 years, with a mean of 22.42 ( $SD = 6.72$ ).

### *Procedure*

Questionnaires were given to students to complete in their own time. Data collection was part of a class project in which all students were involved. Nevertheless, participation in filling out the questionnaire was voluntary. Responses were confidential.

### *Measures*

The questionnaire included the Social Values Inventory (Braithwaite, 1982; Braithwaite & Law, 1985), Inglehart's (1971, 1977) four-item materialism-postmaterialism index, and social attitudes indices taken from the 1987 federal election survey (McAllister & Mughan, 1987).

*Social values.* The Social Values Inventory required respondents to indicate the importance they would attach to each of 14 social goals (see Appendix 1). The instructions read as follows:

Although most of us do not directly affect the course of national affairs, we all have principles or standards that we prize highly in our society. We use these standards to make judgments about national policies and about world and community events, and at times, we may even use them to guide our actions (e.g., when we join certain organizations or when we vote in elections). Please indicate the extent to which you reject or accept each of the following as principles that guide your judgments and actions.

Respondents rated each social goal on a 7-point asymmetrical scale: 1 (*I reject this*), 2 (*I am inclined to reject this*), 3 (*I neither reject nor accept this*), 4 (*I am*

*inclined to accept this*), 5 (*I accept this as important*), 6 (*I accept this as very important*), 7 (*I accept this as of the greatest importance*).

The alpha reliability coefficients for the scales were consistent with previous research, .85 for international harmony and equality and .78 for national strength and order. Ratings were summed over the scale items and subsequently divided by the number of items. The mean for international harmony and equality in this sample was 5.50 ( $SD = 0.80$ ). The mean for national strength and order was 4.37 ( $SD = 1.11$ ). The scales were independent of each other, as expected from previous research ( $r = .05$ ).

*Materialism-postmaterialism.* Respondents ranked Inglehart's (1971) four original goals (maintaining order in the nation, giving the people more say in important government decisions, fighting rising prices, protecting freedom of speech) using the following instructions:

There is a lot of talk these days about what the aims of this country should be for the next 10 years. Below are listed some of the goals that various people have cited as high in priority. Would you indicate which of these you consider the most important by writing 1 in the space alongside the goal of your choice? Indicate the next most important with a 2 and so on, until each goal has a number to indicate the priority you would give it.

Ranks of the goals were used to assign respondents to one of three categories. If the first two rankings were postmaterialist values, respondents were classified as Group 3. If the first two rankings were materialist values, respondents were classified as Group 1. If one value was materialist and one postmaterialist, they were classified as Group 2. This system was consistent with that used by Inglehart. The materialist category was the least popular, accounting for 9% of the sample. The mixed category attracted a sizeable 62%. The remaining 29% were postmaterialist.

*Social attitudes.* The five indices taken from the 1987 election survey (McAllister & Mughan, 1987) covered income redistribution, crime deterrence, uranium mining, sex discrimination in the work force, and aboriginal benefits. Income redistribution and crime deterrence were measured using multi-item scales. The remaining indices were single items.

The income redistribution scale had an alpha reliability coefficient of .63 and was made up of the following items: (a) High income tax makes people less willing to work hard, (b) income and wealth should be redistributed toward ordinary working people, (c) too many people these days rely on government handouts, and (d) more money should be spent reducing poverty. Individuals responded to each item on a 5-point *strongly agree-strongly disagree*



continuum. Once rescored so that a high score indicated agreement with income redistribution, responses for each person were summed and divided by the number of items in the scale. The mean was 3.10 ( $SD = 0.77$ ).

The crime deterrence scale had an alpha reliability coefficient of .72 and comprised the following items: (a) The police should be given more power, (b) bring back the death penalty, and (c) people who break the law should be given stiffer sentences. Scale scores were calculated as above, producing a mean for crime deterrence of 3.20 ( $SD = 0.96$ ).

In response to whether women's job opportunities were worse than those of men with similar education and experience, 37% said that they were no worse, 54% said they were worse, and 9% said much worse. With regard to uranium mining, respondents distributed themselves across four options: mine and sell on the world market (8%), mine with restricted sale (42%), mine without sale outside Australia (8%), or leave in the ground (42%). Special benefits given by government to Australian aborigines were supported by 24%, opposed by 37%, and were dependent on the circumstances for 39%.

Intercorrelations among these indices were sufficiently high to justify combining them to form a left-right attitude scale. The alpha reliability coefficient for the composite scale was .74. The component attitudes intercorrelated between .26 and .55, and a principal components analysis produced one dimension accounting for 49% of variance. The five indices were rescored so that a high score represented a more liberal attitude, and each was standardized to a mean of 0 and standard deviation of 1 before summation. This procedure ensured that the scale of measurement did not contribute to one indicator playing a more important role than another in determining the final score. The validity of the measure was supported by its strong correlation with left-right party identification and by its correlations with values that have been associated previously with liberalism and conservatism (Braithwaite, 1994).

## Results

### *Bivariate Relationships*

Materialists, postmaterialists, and mixed types were compared in terms of their scores on international harmony and equality, national strength and order, the difference between international harmony and equality and national strength and order, and left-right attitudes. The mean scores for each of the groups are shown in Table I. One-way ANOVA was used to test for statistical significance among the means on each value or attitude dimension. *F* statistics showed differences on all four measures, with associated *t* tests consistently showing a difference between the postmaterialists and the other two groups.

Table 1

*Comparison of Materialists, Postmaterialists, and Mixed Types on Value Attitude Measures*

Value attitude measures	Materialists (N = 17)	Mixed (N = 117)	Post- materialists (N = 56)	F (2, 187)
International harmony and equality	5.19 (0.73)	5.44 (0.83)	5.72 (0.70)	3.75*
National strength and order	4.94 (0.81)	4.47 (1.10)	3.92 (1.09)	7.73***
Value difference	0.25 (0.87)	0.96 (1.28)	1.79 (1.27)	13.06***
Left-right attitudes	-1.15 (3.10)	-0.41 (3.35)	1.35 (3.60)	5.74**
Income redistribution	2.94 (0.70)	3.06 (0.79)	3.24 (0.74)	1.42

*Note.* Standard deviations are given in parentheses. Missing data reduced the sample size to 190 in each case except left-right attitudes where the sample size dropped further to 181 with associated *df* of 2, 178.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Postmaterialists showed greater concern about international harmony and equality, less concern about national strength and order, greater dominance of international harmony and equality over national strength and order, and a more liberal social attitude. Significant differences were not found between the materialist and the mixed group on any measure other than value difference.

The finding that attitudes of the left were more likely to be found among postmaterialists was contrary to Inglehart's (1990) prediction, although Inglehart specified that the left-right dimension which he had in mind was one based on income inequality. Income redistribution was part of the social attitude scale. A fairer test of Inglehart's position might focus, therefore, on this component scale alone. When postmaterialists were compared with materialists and the mixed group on income redistribution, Inglehart's prediction was confirmed. The means were not significantly different from each other (Table 1).

When the other attitude components were examined individually, only one failed to significantly differentiate postmaterialists and materialists, special benefits for aborigines. As with income redistribution, the trend was in the expected direction (47% of materialists said *yes* or *it depends* to special benefits compared with 71% of postmaterialists and 62% of the mixed group), but the effect was not strong enough to reach statistical significance. Since special benefits for aborigines could be thought of as a special case of

income redistribution, the finding provides further support for Inglehart's (1990) view that income inequality is not central to the concept of materialism-postmaterialism.

While the bivariate relationships are consistent with the hypothesized relationships, they are not sufficient to address the central questions of this paper: Is value difference a significantly stronger predictor than either of the individual value scales and are the value scales stronger predictors than the social attitude scale? These will be examined in the next section.

### *Multivariate Analyses*

An ordered probit model was considered appropriate for testing the hypotheses (Greene, 1991). This model is similar to latent regression models. We assume that there is an underlying, but nonobservable dimension (of materialism-postmaterialism) that is related to the independent variables (international harmony and equality and national strength and order). What is observed is the ordered position on this underlying materialist-postmaterialist dimension of materialists, mixed, and postmaterialists.<sup>3</sup> This model is consistent with the unidimensional assumption of Inglehart (1977). An assumption of normality of the error terms leads naturally to the use of the probit transformation.

The estimates from a model including the two value scales (Model A) and one including only the difference in values (Model B) are shown in Table 2. A likelihood ratio test (between nested models) showed that if the value difference score is in the model, neither value scale is important,  $\chi^2(1, N = 181) = 0.12$  for each test. This is consistent with the estimates shown in Table 2 (Model A) where the coefficients associated with the two values are approximately the same magnitude but of opposite sign. The model shows that increased support for international harmony and equality is associated with an increase in the probability of being a postmaterialist, while increased support for national strength and order is associated with an increase in the probability of being a materialist.

While the main hypothesis of the study was confirmed, the models performed poorly in correctly assigning individuals to the materialist, mixed and postmaterialist group. In particular, none of the materialists could be correctly assigned. They were allocated instead to the mixed category. This is consistent with the bivariate analyses in which the materialist and mixed groups could not be readily differentiated.

<sup>3</sup>If we denote  $y^*$  as a score on the underlying dimension, then a materialist will have  $y^* \leq 0$ , a mixed type will have  $0 < y^* < \mu$ , while a postmaterialist will have  $y^* \geq \mu$ . The parameter  $\mu$  is estimated under the model.

Table 2

*Predicting the Likelihood of Belonging to Materialist, Mixed, and Postmaterialist Groups Using Three Models Based on Commitment to International Harmony and Equality, National Strength and Order, and Left-Right Attitudes*

Variable	Model A		Model B		Model C	
	Coef- ficient	t ratio	Coef- ficient	t ratio	Coef- ficient	t ratio
International harmony and equality	0.34	2.79**	na	na	0.31	2.27*
National strength and order	-0.30	-3.38***	na	na	-0.27	-2.94**
Value difference	na	na	0.31	4.05***	na	na
Left-right attitudes	na	na	na	na	0.16	0.54
Constant	0.96	1.34	1.18	7.90***	1.03	1.39
R	2.13	12.20***	2.13	12.21***	2.13	12.15***

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

The second hypothesis was also tested using likelihood ratio tests between nested models. The question addressed was whether the left-right attitude scale was significant in the model, after the value scale scores were included. The estimates for this model appear in Table 2 (Model C). The likelihood ratio test comparing this model with one featuring only the value scales was not statistically significant,  $\chi^2(1, N = 181) = .22$ , confirming that left-right attitudes did not make a contribution after the value orientations had been taken into account.<sup>4</sup>

### Discussion

The purpose of this study was to clarify the nature of Inglehart's (1971) four-item measure of materialism-postmaterialism through examining relationships with other value and attitude measures. As hypothesized, materialism-postmaterialism was linked with the two social value orientation scales,

<sup>4</sup>The left-right scale was significant when the value scales were not included in the model.

national strength and order and international harmony and equality and the difference in strength of commitment to these value orientations emerged as the best predictor of materialism-postmaterialism. The left-right attitude scale was also related to materialism-postmaterialism. Further analyses, however, demonstrated that the left-right scale could not explain variation in materialism-postmaterialism above and beyond that predicted by the value scales. Inglehart's four item index had more in common with the value orientation scales than with the general measure of left-right attitudes.

These findings would suggest that measurement with the Inglehart (1971) battery is taking place at the value rather than the attitude level of analysis, if it were not for the poor performance of the model in assigning individuals to the materialist, mixed, and postmaterialist groups. A number of explanations for this poor performance are worthy of further investigation.

Measurement error with the four-item battery cannot be discounted. Inglehart (1990) has acknowledged that relying on only four items makes the index "excessively sensitive to short-term forces" (p. 131). If measurement error is the problem, the 12-item index, with its broader coverage of social goals, should be related more strongly to the value orientation scales than the four-item index. In factor analytic studies of ratings of the 12-item index (Bean & Papadakis, 1994), the factors that emerge overlap strikingly with the value orientation scales. The postmaterialism factor defined by more say in government, more say in jobs, free speech, appreciation of ideas, an aesthetically pleasing environment and a more humane society sits comfortably alongside international harmony and equality. The materialism factor defined by order, economic growth, defense, stable economy, fighting crime, and rising prices overlaps notably with national strength and order (Appendix).

Measurement error with the four-item index also may have been exacerbated in this study because of the select nature of the sample. Our university sample comprised only 9% materialists and 29% postmaterialists, compared with Bean and Papadakis' (1994) estimates for the Australian population of 27% materialist and 13% postmaterialist. Inglehart (1990) has argued theoretically and shown empirically that postmaterialists are most likely to be among the well-educated, the economically privileged, and the young. This may, in itself, explain the low proportion of materialists. A further factor, however, may be that "fighting rising prices" is a less valid measure of materialism in a university setting than "maintaining a high rate of economic growth."

A third explanation for the poor predictive power of the value scales is that materialism-postmaterialism, international harmony and equality, and national strength and order are not all dimensions of the value domain. It is reasonable to argue that if they are value dimensions, they should have counterparts in the vast value literature of the past 60 years. This is not obviously the case for

materialism-postmaterialism, although there are a number of studies to support two orthogonal dimensions of the type represented by national strength and order and international harmony and equality.

Lipset (1979) has referred to equality and achievement as "the core of the American creed" (p. xxxiii). Following Lipset's model, Katz and Hass (1988) have measured two independent dimensions which they label as the "Protestant ethic," defined by individual achievement, devotion to work and discipline, and "humanitarianism-egalitarianism," defined by the democratic ideals of equality, social justice, and concern for others' well-being. In a study of the values thought to underlie judgments of fairness in society, Rasinski (1987) failed to find support for his hypothesized four-factor model. Instead two factors emerged. The first factor was labeled "proportionality," expressing a sentiment toward rewarding individual contribution to society and withholding benefits from those who do not contribute. The second factor, "egalitarianism," represented societal concern about equal access to basic services, equal treatment of all members of society, and the redistribution of wealth.

Although evidence of empirical overlap among these two-dimensional models is wanting, there is at least consistency in the themes. If materialism and postmaterialism do not reflect these themes, or if their connections are weak, the question that must be asked is, "Where do materialism and postmaterialism fit in value space?"

One approach is to conceptualize the materialism-postmaterialism dimension, not as a value dimension, but rather as a general, centrally important attitude orientation. Many of the studies that have grown out of Inglehart's work have more in common with classic attitude research than value research. Flanagan's (1987) three-dimensional structure and Hellevik's (1993) two-dimensional structure are not dissimilar from the social attitude structure proposed by Eysenck (1954, 1975). Eysenck's expansion of his original two-factor theory of social attitudes to include a third factor accommodates materialism-postmaterialism well.

Further support for this line of argument comes from the differences in the way in which the value orientation scales and the materialism-postmaterialism index relate to the attitudinal measures in the present study. Values have been conceptualized as principles that transcend specific objects and situations but which shape and guide the attitudes and beliefs that individuals adopt in particular contexts. In the political debate about social issues preceding a federal election, one would have expected underlying value orientations to come into play in influencing attitudes. Links have been established between attitudes to the five social issues and the value orientation scales of national strength and order and international harmony and equality (Braithwaite, 1994). Materialism-postmaterialism, however, does not relate significantly to some

rather central sociopolitical attitudes, specifically those relating to income redistribution. This suggests that materialism-postmaterialism may not be part of the broad value umbrella, but rather part of a less abstract conglomerate of attitudes and beliefs.

One way of testing this possibility is through setting conditions for conferring status as a major value orientation, and empirically testing for the realization of these conditions. Thus, the empirical challenge might be to find a role for materialism-postmaterialism that is different from, yet as overarching as, the value orientations of social justice and achievement that follow the Lipset (1979) tradition. The direction for future work would involve systematic mapping of the value and attitude domains as separate entities. Central to this endeavor would be the development of instruments that effectively distinguish the constructs operationally so that attitudes are object- and situation-focused, while values are transcending. The major value dimensions can then be defined as those that account for major attitude dimensions in the most parsimonious way. Thus, materialism-postmaterialism can only lay claim to value status if it accounts for attitude dimensions that cannot be accounted for by other more established value orientations, and only if materialism-postmaterialism can account for a variety of attitude positions. If neither condition can be met, materialism-postmaterialism may be best conceptualized as a generalized attitude.

A final consideration in interpreting the results of this study is the validity of our underlying argument about the way in which people choose among Inglehart's (1971) four goals. We have argued that through forcing respondents to choose a limited number of goals (two from a list of four), the researcher is forcing respondents to trade off two value orientations that people do not necessarily regard as incompatible, values oriented toward individual security (national strength and order) and values oriented toward sharing with and empowering others (international harmony and equality). We have proposed that the trade-off will take place in the following way: Those who strongly favor international harmony and equality over national strength and order will choose two postmaterialist goals; those who favor national strength and order over international harmony and equality will choose two materialist goals; and those who are equally attracted to both value orientations will choose one of each (the mixed category). Confirmation of the difference hypothesis supports our argument, but this is not to say that there are not other strategies being employed by respondents to choose among Inglehart's goals. These mixed strategies have been observed previously in the ranking of the Rokeach (1968) Value Survey (Braithwaite, 1979). In choosing their first goal, for instance, respondents may choose the second to maximally complement the first. Others may forget their first choice and select the second as the most important from the remaining list of goals. Such differences in strategy introduce noise into our

model of the way in which individuals prioritize two socially desirable value orientations. This may account for the poor fit between international harmony and equality and national strength and order on the one hand, and materialism-postmaterialism on the other.

Central to Inglehart's 4-item index and his 12-item index is the notion of a simple ranking of values involving the prioritizing of one value over another. Rokeach (1979) also was committed to conceptualizing values in this way, as a simple hierarchy that was stable and enduring and that guided actions and appraisals. The merits of this approach to value measurement, particularly in the domain of sociopolitical values, may need to be reassessed for two reasons. First, the majority of the population are identified as neither materialist nor postmaterialist: Most want to have their cake and eat it, too (Bean & Papadakis, 1994; Dalton, 1988; Inglehart, 1990; Papadakis, 1990). Second, the discourse of trade-offs is not the only discourse taking place in the political arena, and increasingly it is being regarded as the least desirable. In areas of policy formulation, regulation, crime prevention, and education, the adoption of positions and trade-offs is being increasingly discouraged and replaced by notions of dialogue, negotiation, and the search for innovative solutions that yield winning results for all parties (Fisher & Ury, 1981). Inglehart's methodological practice of forced choice may be dated for the 1990s and may threaten the ecological validity of his work. In one sense, Inglehart's measurement technique may be a casualty of the cultural change which he has sought to describe and document over the past 20 years; a change from considering safe and limited options provided by authority, to thinking creatively and expansively as equal participants in decision making.

#### References

- Bean, C., & Papadakis, E. (1994). Polarized priorities or flexible alternatives? Dimensionality in Inglehart's materialism-postmaterialism scale. *International Journal of Public Opinion Research*, 6, 264-297.
- Bishop, G. F., Barclay, A. M., & Rokeach, M. (1972). Presidential preferences and freedom—equality value patterns in the 1968 American campaign. *Journal of Social Psychology*, 88, 207-212.
- Braithwaite, V. A. (1979). *Exploring value structure: An empirical investigation*. Unpublished doctoral dissertation.
- Braithwaite, V. A. (1982). The structure of social values: Validation of Rokeach's two value model. *British Journal of Social Psychology*, 21, 203-211.
- Braithwaite, V. A. (1994). Beyond Rokeach's equality-freedom model: Two dimensional values in a one dimensional world. *Journal of Social Issues*, 50, 67-94.



- Braithwaite, V. A. (1995). *The value orientations underlying liberalism-conservatism*. Manuscript submitted for publication.
- Braithwaite, V. A., & Law, H. G. (1985). Structure of human values: Testing the adequacy of the Rokeach Value Survey. *Journal of Personality and Social Psychology*, *49*, 250-263.
- Braithwaite, V. A., & Scott, W. A. (1991). Values. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 661-753). San Diego, CA: Academic.
- Cochrane, R., Billig, M., & Hogg, M. (1979). Politics and values in Britain: A test of Rokeach's two-value model. *British Journal of Social and Clinical Psychology*, *18*, 159-167.
- Dalton, R. J. (1988). *Citizen politics in western democracies*. Chatham, NJ: Chatham House.
- Eysenck, H. J. (1954). *The psychology of politics*. London, England: Routledge and Kegan Paul.
- Eysenck, H. J. (1975). The structure of social attitudes. *British Journal of Social and Clinical Psychology*, *14*, 321-331.
- Feather, N. T. (1979). Value correlates of conservatism. *Journal of Personality and Social Psychology*, *37*, 1617-1630.
- Feather, N. T. (1984). Protestant ethic, conservatism, and values. *Journal of Personality and Social Psychology*, *46*, 1132-1141.
- Fisher, R., & Ury, W. (1981). *Getting to yes: Negotiating agreement without giving in*. Boston, MA: Houghton Mifflin.
- Flanagan, S. C. (1987). Value change in industrial societies. *American Political Science Review*, *81*, 1303-1319.
- Fromm, E. (1949). *Man for himself: An enquiry into the psychology of ethics*. London, England: Routledge & Kegan Paul.
- Gorsuch, R. L., & McFarland, S. G. (1972). Single vs. multiple-item scales for measuring religious values. *Journal for the Scientific Study of Religion*, *11*, 53-64.
- Greene, W. H. (1991). *Econometric analysis*. New York, NY: Macmillan.
- Heaven, P. C. L. (1990a). Human values and suggestions for reducing employment. *British Journal of Social Psychology*, *29*, 257-264.
- Heaven, P. C. L. (1990b). Economic beliefs and human values: Further evidence of the two-value model? *The Journal of Social Psychology*, *130*, 583-589.
- Heaven, P. C. L. (1991). Voting intention and the two-value model: A further investigation. *Australian Journal of Psychology*, *43*, 75-77.
- Hellevik, O. (1993). Postmaterialism as a dimension of cultural change. *International Journal of Public Opinion Research*, *5*, 211-233.
- Homant, R. (1970). Denotative meaning of values. *Personality*, *1*, 213-219.

- Inglehart, R. (1971). The silent revolution in Europe: Intergenerational change in post-industrial societies. *American Political Science Review*, *65*, 991-1017.
- Inglehart, R. (1977). *The silent revolution*. Princeton, NJ: Princeton University Press.
- Inglehart, R. (1981). Post-materialism in an environment of insecurity. *American Political Science Review*, *75*, 880-900.
- Inglehart, R. (1985). Aggregate stability and individual-level flux in mass belief systems: The level of analysis paradox. *The American Political Science Review*, *79*, 97-116.
- Inglehart, R. (1990). *Culture shift in advanced industrial society*. Princeton, NJ: Princeton University Press.
- Jones, C. H. (1982). College students' values and presidential preference in the 1980 election. *Psychological Reports*, *52*, 886.
- Katz, I., & Hass, R. G. (1988). Racial ambivalence and American value conflict: Correlational and priming studies of dual cognitive structures. *Journal of Personality and Social Psychology*, *55*, 893-905.
- Kerlinger, F. N. (1984). *Liberalism and conservatism: The nature and structure of social attitudes*. Hillsdale, NJ: Lawrence Erlbaum.
- Kitwood, T. M., & Smithers, A. G. (1975). Measurement of human values: An appraisal of the work of Milton Rokeach. *Educational Research*, *17*, 175-179.
- Linder, F., & Bauer, D. (1979). Interpersonal perception of the values freedom and equality. *Perceptual and Motor Skills*, *48*, 167-170.
- Lipset, S. M. (1979). *The first new nation: The United States in historical and comparative perspective* (2nd ed.). New York, NY: W. W. Norton.
- Maslow, A. H. (1954). *Motivation and personality*. New York, NY: Harper & Brothers.
- McAllister, I., & Mughan, A. (1987). *Australian election survey, 1987* [electronic data file]. Canberra, Australia: Social Science Data Archives, Australian National University.
- McAllister, I., & Warhurst, J. (1988). *Australia votes: The 1987 Federal Election*. Melbourne, Australia: Longman Cheshire.
- Mueller, D. J. (1974). A test of the validity of two scales on Rokeach's Value Survey. *Journal of Social Psychology*, *94*, 289-290.
- Müller-Rommel, F. (1983). Die postmaterialismuskussion in der empirischen sozialforschung: Politisch und wissenschaftlich überlebt oder noch immer zukunftsweisend? *Politische Vierteljahresschrift*, *24*, 218-228.
- Papadakis, E. (1990). Minor parties, the environment and the new politics. In C. Bean, I. McAllister, & J. Warhurst (Eds.), *The greening of Australian politics* (pp. 33-53). Melbourne, Australia: Longman Cheshire.

- Rasinski, K. A. (1987). What's fair is fair—or is it? Value differences underlying public views about social justice. *Journal of Personality and Social Psychology*, *53*, 201-211.
- Rokeach, M. (1968). *Beliefs, attitudes and values*. San Francisco, CA: Jossey-Bass.
- Rokeach, M. (1973). *The nature of human values*. New York, NY: Free Press.
- Rokeach, M. (1979). From individual to institutional values: With special reference to the values of science. In M. Rokeach (Ed.), *Understanding human values: Individual and societal* (pp. 47-70). New York, NY: Free Press.
- Rokeach, M. (1985). Inducing change and stability in belief systems and personality structures. *Journal of Social Issues*, *41*, 153-171.
- Rokeach, M., & Ball-Rokeach, S. J. (1989). Stability and change in American value priorities, 1968-1981. *American Psychologist*, *44*, 775-784.
- Thannhauser, D., & Caird, D. (1990). Politics and values in Australia: Testing Rokeach's two-value model of politics—a research note. *Australian Journal of Psychology*, *42*, 57-61.
- Van Deth, J. W. (1983). Ranking the ratings: The case of materialist and post-materialist value orientations. *Political Methodology*, *9*, 407-431.

## Appendix

*International Harmony and Equality*

- A good life for others (improving the welfare of all people in need)
- Rule by the people (involvement by all citizens in making decisions that affect their community)
- International cooperation (having all nations working together to help each other)
- Social progress and social reform (readiness to change our way of life for the better)
- A world at peace (being free from war and conflict)
- A world of beauty (having the beauty of nature and the arts: music, literature, art, etc.)
- Human dignity (allowing each individual to be treated as someone of worth)
- Equal opportunity for all (giving everyone an equal chance in life)
- Greater economic equality (lessening the gap between the rich and the poor)
- Preserving the natural environment (preventing the destruction of nature's beauty and resources)

*National Strength and Order*

- National greatness (being a united, strong, independent, and powerful nation)
- National economic development (having greater economic progress and prosperity for the nation)
- The rule of law (punishing the guilty and protecting the innocent)
- National security (protection of your nation from enemies)