The application of Inglehart's materialism/postmaterialism index in non-industrialised countries: a critique

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This article makes three central claims. The first is that the operationalisation of Ronald Inglehart's "materialist/postmaterialist dimension" cannot be transported unchanged from the industrialised western context of its origin to the non-industrialised world. The second claim is that an important dimension of the current values analysis strategy of Taylor, Kotzé and others in South Africa is theoretically incoherent. These theorists expanded Inglehart's dimension to include a "pre-materialist" cluster of values in order to deal with values which they find important but which are not covered in the materialist/postmaterialist dimension. However, this is intended to be a universal dimension and cannot be adapted in this way. The third claim is that one can learn much from the South African attempt to adapt the materialist/postmaterialist dimension. In fact, it points to the need for an analytical strategy appropriate to the socio-economic conditions of developing nations. Both minimal and more comprehensive changes are proposed.

Die toepassing van die Inglehart materialisme/postmaterialisme-indeks op onontwikkelde lande: 'n kritiek

Hierdie artikel maak drie aansprake. Die eerste is dat die operasionalisering van Ronald Inglehart se "materialisme/postmaterialisme-indeks" nie ongewysig uit die ontwikkelde westerse konteks van oorsprong na die onontwikkelde wêreld oorgedra kan word nie. Tweedens word betoog dat die huidige waarde-analise-strategie van Taylor, Kotzé en ander in Suid-Afrika teoreties onsamehangend is. Hulle het die "materialisme/postmaterialisme-indeks" uitgebrei om 'n pre-materialisme waardegroepering in te sluit om waardes te verreken wat volgens hulle nie ingesluit kan word onder die materialisme/postmaterialisme-dimensie nie. Die materialisme/postmaterialisme-dimensie is bedoel om 'n universele dimensie te wees en kan nie op hierdie wyse aangepas word nie. Die derde aanspraak is dat daar heelwat geleer kan word uit die Suid-Afrikaanse poging om die materialisme/postmaterialisme-indeks aan te pas. Hierdie Suid-Afrikaanse aanpassing dui in der waarheid op die noodsaak van 'n analitiese strategie wat toepaslik is vir die sosio-ekonomiese toestande van ontwikkelende lande. Sowel geringe as meer omvattende verandering word voorgestel.

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♦his article makes three central claims. The first is to reject the idea that the operationalisation of Ronald Inglehart's "materialist/postmaterialist dimension" — with its twelve-item index — can be transported unchanged from the industrialised and western context of its origin to the non-industrialised world. The issues of development in non-industrialised contexts, critical to any global values analysis, cannot be analysed with this instrument. The materialist/postmaterialist dimension is Inglehart and his colleagues' operationalisation of Maslow's theory of motivation for values analysis. It has been used in Europe since 1971 and its index cannot be extended to survey the rest of the world without significant adaptation. The second claim is that the current values analysis strategy of Taylor, Kotzé and others in South Africa is theoretically incoherent. They have expanded the materialist/postmaterialist dimension to include a "pre-materialist" cluster of values in order to deal with values they consider important which are not covered in Inglehart's dimension. But the materialist/postmaterialist dimension is intended to be universal and cannot be adapted in that way. This article's third claim is that one can nevertheless learn much from the South African attempt to adapt the dimension. In fact, it is possible to gain some perspective on what needs to be adapted in the materialism/postmaterialism dimension's operationalisation, for it to survive its application in the rest of the world, outside its original European context. However, a values analysis sufficiently sensitive to the critical developmental issues of the non-industrialised world may require more than modification of the materialist/postmaterialist dimension by the addition of a number of new items. An alternative is investigated here, with reference to some of the arguments of Amartya Sen and to the basic thrust of the South African adaptation of the dimension.

In order to make these claims, the article includes three components. The first investigates the manner in which Inglehart and his colleagues have transported the materialist/postmaterialist dimension to contexts outside its original conceptualisation and operationalisation. However, some basic concepts informing Inglehart's materialist/postmaterialist index must be explained first. These concepts have their origin in work done by Inglehart and a series of associates since 1971. To a great extent, Inglehart and his colleagues have availed

themselves of ideas from Maslow's work on motivation. Because these ideas are so central, they must also be explained. Only then will we be able to focus on how Inglehart and his colleagues have dealt with the issue of the materialist/postmaterialist dimension's "translatability" and its main supporting index of twelve items. Secondly, the article investigates the conceptualisation of "pre-materialism" by Taylor, Kotzé and Lategan, showing how the South Africans wish to advance their own cause *contra* the materialist/postmaterialist index. A critique of the conceptual and theoretical inconsistency of their approach is then presented. In the third component of the article, some tentative perspectives are offered on measures that could improve the operationalisation of the materialist/postmaterialist dimension outside western, industrialised contexts, along with a more significant reconceptualisation of the analysis itself.

1. Key concepts in Inglehart's project

Inglehart's theory was born before the advent of the World Values Survey. He has argued since 1971 that value change in post-industrial societies indicates a shift away from "materialist" towards "post-materialist" values. He has constructed his argument and the resulting test on two hypotheses. His theory of value change holds that "people tend to place a high priority on whatever needs are in short supply" and that "people tend to retain a given set of value priorities

- The World Values Survey has an interesting history. It grew out of work done by scholars like Jacques-René Rabier, Karlheinz Reif and Anna Melich in the context of the European Community and the Euro-Barometer surveys from 1970 onwards. Ron Ingelhart also played an important role in the formative years of these surveys. But the World Values Survey also draws on work done by scholars like Ruud de Moor, Jan Kerkhofs, and Jacques-René Rabier in the context of the European Value Systems Study Group. The first World Values Survey was done in 1990-91.
- Inglehart (1997: 113-4) counters critique that his focus on the materialism/ postmaterialism dimension makes for a "unidimensional" theory of value change (Buerklin *et al* 1994) by referring to the many other dimensions that he has investigated (religion, politics and sexual norms). The critique is based on a misinterpretation of Inglehart's work. However, the main focus of Inglehart's work has indeed been on this particular dimension.

throughout adult life, once it has been established in their formative years" (Inglehart 1977: 22-3). These two hypotheses are called the "scarcity hypothesis" and the "socialisation hypothesis", respectively.³

When going "beyond this simple explanatory scheme", Inglehart finds the work of Abraham Maslow "particularly interesting, for it suggests a specific *direction* in which value change will move under given conditions" (Inglehart 1977: 22, his emphasis). The implication is that positive change in people's economic welfare will create a greater emphasis on postmaterialist values. However, since 1977, Inglehart has not found it necessary to expand on or go deeper into Maslow's theory. The details of Maslow's argument and the thrust of what he wanted to achieve are not important to Inglehart's project. At the same time, Inglehart retains the basic scheme, reiterating the reference to Maslow in all his major publications (Inglehart 1977: 22 ff; 1990: 133; 1999: 33).

There is nothing abnormal about the bland reference to Maslow in most of Inglehart's work. His interpretation of Maslow is more or less the standard one in which Maslow's hierarchy of needs is set out. The relevant point is that physiological needs and physical safety have to be satisfied before most individuals are able to focus their attention on "self-actualisation" needs:

Top priority is given to the satisfaction of physiological needs as long as they are in short supply. The need for physical safety comes next; its priority is almost as high as that of sustenance needs, but a hungry man [sic] will risk his life to get food. Once an individual has attained physical and economic security, he may begin to pursue other, non-material goals. These other goals reflect genuine and normal needs — although people may fail to give them attention when deprived of the sustenance or safety needs. But when at least the minimal economic and physical security are present, the needs for love, belonging, and esteem become increasingly important; and

- 3 The socialisation hypothesis is not contested in the South African critique of Inglehart's work. Although one could find important differences in the ways in which socialisation takes place in various societies, this is not at issue in this article. The over-arching idea that socialisation plays an important role in value formation is relatively uncontroversial.
- 4 Reviewers point to Inglehart's relatively unsophisticated theoretical perspective on the problem of human agency (cf Dowd 1991: 1275 and, by implication, Berman 1997: 104-5).

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later, a set of goals related to intellectual and aesthetic satisfaction looms large. There does not seem to be any clear hierarchy within the last set of needs, 5 which Maslow calls 'self-actualization needs' (Inglehart 1977: 22).

Maslow (1970: 22) argues that there are countless needs and desires but that some seem not to demand "further justification or demonstration", making them "ultimate needs". He claims that these fundamental or ultimate needs are universal, that they are neither equal nor isolated from one another, and that they are dynamic (Maslow 1970: 25). His conclusion is that the classification of these needs is possible and necessary in order to provide an integrated perspective on human motivation. Inglehart uses this classification of ultimate needs as a constant point of reference in his conceptualisation of value change.

Maslow's theory is well suited as a basis for the first of the two hypotheses in Inglehart's theory of value change. There are two reasons for this. The first is that Maslow's theory is a theory of motivation.⁶ A theory of motivation complements the now generally accepted minimal definition of values as general orientations guiding behaviour (Ester *et al* 1993; Van Deth & Scharbrough 1995: 28).

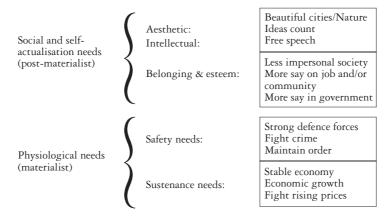
The second reason why Maslow's theory is well suited to Inglehart's project is that it provides a coherent and hierarchical series of ultimate needs. These are translated into a series of aspects about which people are making choices in terms of the scarcity principle as formulated by Inglehart. These choices are then further translated by Inglehart into a four-item battery (expanded since 1973 to a twelveitem battery⁷, Inglehart 1977: 39-41) for an analysis⁸ delivering a result in terms of which a finding can be made as to how populations may be placed in terms of the materialism/postmaterialism axis and

- 5 Inglehart (1990: 144-57) argues that Japanese and Chinese data (from the 1970s and early 1980s, respectively) show that the arrangement of the various aspects of self-actualisation is not globally consistent.
- 6 However simple Maslow's argument may sound today in terms of the theoretical question of defining human agency.
- 7 The items and concepts used in the materialism/postmaterialism dimension have been constant since 1973. They are given in the table which follows, taken from Inglehart (1977: 42):

how change takes place on that axis. For Inglehart and his colleagues, this battery has been a very important aspect of the World Values Survey, as is also clear from their continuous interpretation of generations of results on the materialist/postmaterialist continuum (cf Inglehart 1977: 39-53 and 1990: 130-61; Abramson & Inglehart 1995: 9-24; Inglehart 1997: 108-59).

2. The scarcity principle applied to non-western and developing countries: a shifting argument

Can Maslow's model and the scarcity principle be applied universally? If so, how? Inglehart uses the model in different contexts. Initially, the context was Europe (Inglehart 1971); then it included the USA, becoming "western societies" (Inglehart 1977). It was further expanded to include Japan and Hong Kong, becoming "advanced industrial society" (Inglehart 1990), and ultimately it became 43 societies making up "70% of the world's population" (Inglehart 1997), or alternatively a "global perspective" (Abramson & Inglehart 1995). Is it possible to talk about scarcity in universal terms? Is Inglehart successful in doing so?



8 The analysis amounts to counting the postmaterialist answers and the materialist answers and thus defining the relative importance of materialism and postmaterialism.

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In Maslow's own intellectual project, the theory of hierarchical need-satisfaction is the basis of the theory of motivation. However, this theory of motivation is embedded in a larger project. Maslow wanted to provide a "new image of man" for the social sciences because he felt that the social sciences in general and psychology in particular were dominated by a "profound despair and cynicism" which denies the "possibility of improving human nature and society, or of discovering intrinsic human values" (Maslow 1970: x). This image of man was expressly humanistic and universalistic, and in the Preface to the second edition of his seminal Motivation and Personality he notes that his argument "within the family of psychologists" has turned out to be an argument of greater significance in that it was a "rather a local manifestation of a new Zeitgeist" (Maslow 1970: x). The universalism of this view is of interest. Maslow clearly intended to develop a theory of motivation with universal application. Inglehart is thus quite correct in assuming that, if Maslow's theory of motivation is valid, one should be able to use it in any context. The hierarchy of needs providing motivation and influencing value formation should find universal application. If one accepts Maslow's model, the real question is how it is to be applied across cultures and contexts.

Any comparative study of social phenomena across many societies is fraught with difficulties of translatability and context. It would therefore not be surprising if Inglehart encountered difficulties in the comparative enterprise of applying the scarcity principle. However, very few of the well-known critics and discussants of Inglehart's project have dealt with these issues⁹ outside the European and/or industrial

9 Clarke & Dutt (1991), Clarke et al (1999), Davis et al (1999), Davis & Davenport (1999), Duch & Taylor (1993, 1994, including discussion on Russian values), Marks (1997). Van Deth (1983) would count as such serious critics and discussants whose interest in Inglehart's work is limited to its European and American application. Flanagan's (1979, 1982a, 1982b, 1987) critique of the methodology of ranking values rather than rating them and his proposal that this would result in a different values dimension for Japan rates as an exception. He also calls into question the items appropriate in a values analysis and eventually also the conceptualisation of values used by Inglehart (specifically whether Maslow is an appropriate point of reference for a values analysis). The relevance of this debate to our purposes is limited by the fact that Japan is an industrial society.

social contexts. The South African adaptations of the scarcity principle and the needs-values hierarchy are the only recent sustained and concerted engagement of these issues that could be found.

However, it is only fair to look at discussions by Inglehart himself relating to this issue. His position seems to have undergone a subtle and more or less unannounced shift. From a situation in which the materialist/postmaterialist dimension and the scarcity and socialisation principles are the main drivers and orientation points for analysis in the initial western and industrialised country surveys, new dimensions have arisen in the move to developing and non-western societies. Investigating the actual universal application of the materialist/postmaterialist index could shed some light on its applicability outside the western, industrial context.

Three principal instances seem to require investigation in terms of the development of Inglehart's claims as to the validity of the materialist/postmaterialist dimension and the twelve-item battery of indicators outside the industrialised world. The first point of contact with a non-industrial context (at that time) was mainland China, in a small study by Ho done in 1984. Inglehart's interpretation of the unexpected results is interesting. The second instance is the first detailed discussion of methodology after the 1990-1991 World Values Survey. This survey was the first major attempt at surveying a large number of non-western and non-industrialised or hardly industrialised countries. Abramson & Inglehart's Value change in global perspective (1995) is the first book explaining the methodological issues encountered when transporting the survey from its context of origin to the whole globe. The third instance was the publication of *Modernization* and Postmodernization in 1997, as Inglehart reviews the methodological issues under a new heading, namely that of the book's title. Our interest is in Inglehart's views on the translatability of the twelve-item battery of indicators for the materialist/postmaterialist dimension.

2.1 China

An early point at which the translatability of the twelve-item battery became an issue was in Inglehart's discussion of the data provided by Ho in a small survey done in the People's Republic of China in 1984.

Ho used a modified¹⁰ materialist/postmaterialist scale to provide an interpretation of the values of people in a region near Hong Kong. Inglehart believed that he could compare the data with data generated in Hong Kong by means of the twelve-item battery. However, the results were confusing and Inglehart responded with a new interpretative framework.

According to Inglehart's analysis, the difference between the Hong Kong survey and Ho's survey of Chinese from the People's Republic is that the patterns exhibited by age cohorts in the two contexts are diametrically opposited. In the Hong Kong survey, the pattern found in western industrialised countries was repeated. In the Chinese survey, however, the young, rather than the old, exhibit materialist values. This did not quite make sense in terms of the expectations guiding the model. Inglehart dealt with this quandary by upending the interpretation, arguing that the materialist values exhibited by the young can only properly be contrasted with so-called "pre-materialist values" exhibited by the older generation. The conclusion is that a second factor can be identified as a "materialist/ pre-materialist dimension" (Inglehart 1990: 156). Although the items from which these conclusions were drawn are not carbon copies of the usual scale used for the materialist/postmaterialist dimension, the conclusion is that materialism can be properly contrasted with a prematerialist set of values.

This conclusion has to be carefully considered. How does the prematerialist set of values relate to the materialist/postmaterialist conceptualisation? Materialism and postmaterialism refer to the needs posited by Maslow and the scarcity hypothesis. This simply means that physiological and material needs take priority over self-actualisation needs when their satisfaction is at risk. By contrast, the poles of the new dimension are said to be "social duty" and "personal gratification", referring to pre-materialism and materialism, respectively. Does this imply that materialism means not only the prioritisation of physiological and material needs but also doing it in an individualist manner? This indeed seems clearly implied by the juxtaposition of

¹⁰ The items "more say in government decisions" and "fight rising prices" were deemed too sensitive and not relevant to the context, respectively (Inglehart 1990: 155).

collectivist and personal aims (Inglehart 1990: 156). Inglehart does not propose to extend the materialist/postmaterialist dimension in a linear way. However, he does retain the concept of materialism as one end of the new dimension. This new dimension is also relegated to a secondary level. He does not argue the case fully but the sudden announcement of another dimension is curious at this stage. It is clear that a non-industrialised context may have forced Inglehart to adapt his model. It is also clear that the problems start with the operationalisation of the materialist/postmaterialist dimension in the twelve-item battery in non-industrialised countries.

2.2 "In the global perspective"

Abramson & Inglehart's (1995) introduction of the methodology and results of the expansion of the World Values Survey to a large number of countries not considered industrialised, western or European does not provide much insight into methodological considerations. Their *Value change in global perspective* (1995) would have been the first opportunity to do so in a detailed manner as it was the first book published after the inclusion of a large number of such societies in the 1990-91 survey, which also used the full twelve-item battery for the inference of the materialist/postmaterialist dimension.

The first methodological issue dealt with can be categorised as an issue of reliability rather than of validity. Abramson & Inglehart (1995) note that even questions that do not make sense will be answered in cultures where public compliance/harmony is important. They proceed to "solve" this problem by saying that the answers should then be random, but because this seems not to be the case, the questions must then actually be meaningful and the answers thus reliable (Abramson & Inglehart 1995: 99-100).

This response does not take the problem seriously enough because it does not account for all the possible reasons why the answers in such situations are not found to be random. If one considers the relevant items, the problem in understanding may not necessarily be simple comprehension of all the words and terms used in the phrase to which the respondents are asked to respond. It may be that, on average, a large number of items do include a term or word that the respondents recognise and feel they can respond to. That would result

in less-than-random answers. It may also be that there is a further complication: that women or younger members of a community do not feel free to voice their own opinions in any form. For instance, "Having more say in a community" may be understood but may not be a question to which women or younger men have the freedom to respond as individuals (much as Ho evaluated the sensitivity of asking anybody about the desirability of "more say in government" in China). In fact, not all societies have the same notion of what it means to answer a question in a questionnaire. In some communities, people do not perceive themselves as having individual opinions about all things in their community and in many cases they would feel it proper rather to answer on behalf of the community or in terms of what they thought the community should answer or would answer if asked as a whole or through its leadership.

This leads to a second issue: the comprehension of items to which people respond, in other words, what sense people have made of the items. Obviously, the question is whether everybody makes the same sense of items. Abramson & Inglehart (1995) do not claim that the sense made by all respondents in 40 different countries is the same. A difference which had already emerged in western societies was the relative priority of "more beautiful cities and the countryside". This was intended as a post-materialist indicator but turned out to be ambivalent for the materialist/postmaterialist dimension (Abramson & Inglehart 1995: 102). Overall, it is claimed that people in western societies made the same sense of the items in all surveyed countries and that this was confirmed over time with successive surveys (1995: 103). The materialist/postmaterialist dimension and the twelve-item battery that formed its indicator base was thus believed to hold true across western nations and over time. It was then claimed that "the same structure applies" in three of four Latin American countries surveyed in 1990-91 (Abramson & Inglehart 1995: 110; also Inglehart & Carballo 1997: 34-46).11

11 By "structures" Inglehart refers to the number of preferences for the items he designated as being materialist and postmaterialist, respectively. These are then added to give a picture of a country as materialist or postmaterialist (or "mixed").

However, the situation is different in ex-socialist countries. The relative priority of "economic growth" as an indicator of materialist values "did not work". Abramson & Inglehart (1995: 111) interpreted this surprising result as an indicator for "breaking free from the massive and sclerotic state bureaucracy and turning the economy over to individual initiative". The only other item that created problems regarded by Abramson & Inglehart (1995: 115) as relevant was the recurring issue of the meaning of the relative priority of "more beautiful cities and the countryside". It presented ambivalent results similar to those of the group of western societies surveyed in 1981-83. However, these inconsistencies were all smoothed out with seemingly plausible explanations and the firm conclusion:

Although cross-national differences in the structure of values are interesting, the weight of the evidence suggests that the core meaning of materialism/postmaterialism is similar across this wide range of societies (Abramson & Inglehart 1995: 116).

It is conceded, however, that the degree of "crystallisation" in the various countries is not the same (not always being the first principal component in analysis and explaining less than 20% of the variance in many poorer countries). The conclusion is that "the materialist/post-materialist dimension is significantly less crystallised in poor countries than in rich ones" (Abramson & Inglehart 1995: 117). ¹² In Abramson & Inglehart's (1995) view, this does not seem to detract much from the conclusion that the twelve-item battery reliably measures the materialist/postmaterialist dimension. ¹³ The only exceptions would be the two items already discussed, ie the priorities of "economic growth" (in ex-socialist countries) and "more beautiful cities and the countryside" (Abramson & Inglehart 1995: 121).

Because insight into change over time is one of the most important benefits of the repetition of the materialist/postmaterialist dimension, one cannot expect changes in the items used. The question is whether the necessary continued use of these items does not create a

- 12 The next methodological aspect dealt with is the question posed by Flanagan (1987) as to the appropriateness of rating rather than ranking. This debate is marginal to our concerns.
- 13 They do note that the standard of surveying in developing societies does not match that of Western Europe or the United States (Abramson & Inglehart 1995: 122).

false world. The items initially formulated refer to industrialised western societies. It makes little sense for Inglehart to consider only the application of the existing indicators and assess only the reliability and validity of these indicators. While one understands the necessity of continuing with an index of indicators that has provided data in the past, one wonders why Inglehart does not consider forming a new set of items that may be tested against the existing index. The consequence of his not doing so is an insulated approach. Of course it is important to apply the existing index consistently. However, after seeing results indicating relatively more mixed and less crystallised results in developing countries, the researchers did not even consider forming a new set of items that could be tested against the existing index. This means that societies recently added to the surveys which do not conform to the expectations contained in the index are not given a voice to challenge the assumptions of the index in any significant way. Thus the world of the materialist/postmaterialist dimension remains the limited, industrial, developed world of its origin.

However, the publication of *Modernization and Postmodernization* (1997) seems to indicate a shift in the approach to the conceptualisation of Inglehart's values analyses based on the World Values Survey. We shall now investigate what this means for the specifics of the materialist/postmaterialist dimension and its operationalisation.

2.3 "Modernisation and postmodernisation"

Modernization and postmodernization (1997) was not the result of a new conceptualisation of the World Values Survey. Its data and measurement instruments are still primarily the same as those used by Abramson & Inglehart (1995). But regarding the materialist/postmaterialist dimension and critique on it, it announces that:

[s]ome of the conceptualization underlying this debate is outdated: evidence from the World Values surveys indicates that the shift towards materialist/postmaterialist values is only one component of a much broader cultural shift.

This shift is said to include aspects like religious outlook and sexual norms and to "display large generational differences [that] are strongly correlated with Postmaterialist values" (Inglehart 1997: 6-7).

Inglehart uses the term postmodernisation¹⁴ to describe this change. The new terminology is important because it is meant to indicate non-linear change. Rather than the continuation and intensification of modernisation, the concept "postmodernisation" is meant to indicate a new direction of change. Postmodernisation comes after modernisation in a temporal sense but the direction of value change is different. Modernisation is understood to refer to the increase of economic capabilities through industrialisation and of political capabilities through bureaucratisation; postmodernisation is understood as a de-emphasis on instrumental rationality and an increase in equality and democracy (Inglehart 1997: 5-6).¹⁵

Inglehart (1997: 5) still believes that the shift from materialist to postmaterialist values (closely associated with "successful" modernisation and industrialisation, ie economic and political stability and safety) is important. However, it is no longer the most important dimension of value change. The basic claim remains that "coherent cultural patterns are closely linked with economic development" but there are now two processes at work, namely modernisation and postmodernisation.

Even though the debate on any characterisation of current change in industrialised countries is interesting in itself, the focus in this article has to be on the changes analysed in industrialising or modernising countries. There is precious little argumentation on this issue because Inglehart's focus is usually on the shift occurring from an industrialised base.

The most important aspect dealt with in *Modernization and post-modernization* that is relevant to developing countries is the shift from religious authority to state authority. This is understood (with due reference to Max Weber) to develop in tandem with secularisation, due to the scientific world-view's taking hold and a sense of security's

- 14 Inglehart (1997: 7-27) makes it clear that he is not arguing the case of postmodern intellectuals for them and that he does not consider the West necessarily to be the leading force in either of these changes (either modernisation or postmodernisation).
- 15 The most succinct summary of the items used to define the different axis of the new conceptualisation is found in Inglehart & Baker 2000: 24.

following on successful economic development. It is also parallel to the erosion of ascribed traditional authority, due to the development of rational organisation (Inglehart 1997: 72-4).

A more complex model of value change now replaces the previous dependence on the materialist/postmaterialist dimension and the twelve-item battery for depictions of change. According to the new theory and the results gained in terms thereof, value change now happens along two dimensions at the same time. On the one hand, you have a survival/well-being axis and on the other, there is a traditional authority/secular-rational authority axis. This more sophisticated model of value change seems to have a much better chance of charting value change in developing countries than the bland materialist/postmaterialist dimension.

However, the survival/well-being dimension is tested primarily by means of the materialist/postmaterialist dimension (Inglehart 1997: 35), with the addition of The Bradburn Affect Balance scale, items grouped as the Achievement Motivation Scale and items grouped as Reject Outgroups as well as the Subjective Well-Being Index (Inglehart 1997: 389-91). However, even though these additional scales¹⁶ provide interesting comparisons to the results of the basic materialist/postmaterialist dimension and other dimensions of the data, the original dimension is still the mainstay of the survival/well-being axis.

The result of this operationalisation of the concepts of modernisation and postmodernisation is not quite satisfying. It is clear that the traditional authority/secular rational authority axis and the items used in it are designed to analyse the change from non-modern to modern (and maybe postmodern) value-patterns. It seems that Inglehart found his means of dealing with quandaries when he first encountered them in analysing the Chinese data. Because of its fundamental dependence on the materialist/postmaterialist dimension, however, the survival/well-being axis measures value change in terms only appropriate to industrial societies. The apparent neat symmetry of the two axes obscures the suspicion that the survival/well-being

¹⁶ One might ask whether these indices are in fact values, since they reflect on emotions rather than on general orientations of desirability.

axis measures with a conceptualisation designed to capture change within industrialised societies while the traditional authority/secular rational authority axis is designed to measure value change across a broader spectrum of social conditions.

This is ultimately the problem of the whole Inglehart oeuvre when seen from the vantage point of an industrialising or developing country. The items supposed to provide the data for the materialist/postmaterialist dimension do not relate as well to the developing world as Inglehart supposes and thus only one dimension of the new modernisation/postmodernisation scheme (traditional authority/secular-rational authority) is designed to provide a perspective on the developing world. Very few alternatives to Inglehart's model have been produced in developing societies or with developing societies as their primary aim. Therefore, the results produced by the South Africans working within the ambit of the World Values Survey who have taken it upon themselves to change its conceptualisation and operationalisation call for investigation.

3. The South African argument

The South African argument at issue was first systematically proposed by Taylor, then taken up by Lategan and most recently continued by Kotzé & Lombard. The argument is that "the materialist/postmaterialist continuum is too narrow to capture the full spectrum of values prevalent in an emerging economy" (Lategan 2000: 414). More specifically, it is asserted that

preliminary results would indicate that (especially in rural areas) provision for a 'pre-modernist' dimension should be made if values and value shifts are to be measured in a meaningful way in this context (Lategan 2000: 413).

17 This is confusing in that there is no consistency in reference to the materialist/postmaterialism and the modernist/postmodernist dimensions (even though it is stated that one is more comprehensive than the other). When looking at the concrete steps taken to deal with the problems the South Africans have with the World Values Survey, it appears that it is fair to take their principal objection to relate to the materialist/postmaterialist dimension rather than to the modernist/postmodernist dimension.

What is the basis of this assertion? Lategan himself does not provide a substantial argument to this conclusion; reference is made to Taylor's research.

As Taylor's work is the basis of Lategan's conclusions and of Kotzé & Lombard's (2002) subsequent analysis, some overview of her intentions and basic theoretical presuppositions is needed. Poverty is the main focus of her analysis of the context of values in South Africa (Taylor 1998: 2). She does not claim that poverty is unique to the South African situation (Taylor 1998: 4), but her whole approach implies that poverty is fundamental to any attempt to understand that situation. This is the basis for her conceptualisation of a value continuum of pre-materialism, materialism and post-materialism. She sees the emphasis on poverty and the notion of a pre-materialist set of values as an explicit critique of Inglehart's application of the materialist/postmaterialist continuum outside the industrialised world (Taylor 1998: 6, 11).

The importance of Maslow to Inglehart's conceptualisation of the materialist/postmaterialist dimension requires us to consider Taylor's approach to Maslow. It is peculiar because she commends Inglehart for his "pioneering" work on the application of Maslow's values hierarchy to "political and economic issues" (Taylor 1998: 13). She can do so only because she skirts the problems of the universality of the needs defined by Maslow and in particular the conversion of those needs by Inglehart into items indicating values. The mechanism is the simple transposition of the safety and security needs and the associated materialist values to

demands for the goals of the Industrial Revolution as they emphasize concerns for law and order, the fight against crime and inflation, security, economic growth and employment, etc (Taylor 1998: 14).

This is then followed by the bland assertion that "Pre-materialism assumes a pre-materialist state where the value goals are basic needs such as water, shelter, land, food, clothing and education" (Taylor 1998: 14).

Taylor then uses an index for values based on the Inglehart twelve but expanded to eighteen, including shelter provision, water provision, adequate clothing, schooling for all, land distribution and food provision. ¹⁸ Comparatively higher scorings on these items in the new eighteen-item battery are said to indicate "pre-materialist" values.

This is further elucidated with continued reference to the Maslovian background to Inglehart's materialism/postmaterialism dimension. According to Taylor, Inglehart assumes that the "basic physiological needs begin with concerns for the economy and security" and that these may not be "relevant in a society like South Africa where even more basic needs like water and food are in short supply for many citizens" (Taylor 1998: 40). This is illustrated in a diagram categorising physiological needs exhibiting two components, ie needs relating to safety and security and to sustenance and economic security. The six items Inglehart relates to the materialist cluster of values (strong defence force, fighting crime, maintaining order, a stable economy, economic growth and fighting rising prices) are listed here. Another category is then created and denoted as "subsistence needs", with survival relating to "pre-materialist" values (itemised as food, land, clothing, water, education and shelter).

Kotzé & Lombard (2002: 5) go further as they also subject Inglehart's interpretation of the twelve indicators to critique. They argue:

[T]he inadequacy of a dimension without a pre-materialist index does not, however, simply rest with the fact that some fundamental needs are not represented by the existing items, but that certain post-materialist items are wrongly interpreted to express certain prematerialist or materialist needs, thereby skewing the results towards increased post-materialism, when this is not the case.

The details of this argument are not fundamentally important because the conclusion is the same. A pre-materialist category is called for on the basis of the argument that the twelve-item index does not deliver reliable or valid results for a developing society.

The issues of poverty in a not fully industrialised country require more careful thought when it comes to the choice of indicators in a values survey. The necessary aspects for a better methodological and

18 Taylor (1998: 14) makes reference to Bob Mattes as having taken the decision to include six new items in the South African version of the battery normally used in the World Values Survey to analyse the materialist/post-materialist dimension. However, there is as yet no published argument for the change other than that provided by Taylor.

theoretical argument are available but have to be rearranged in a more logical and theoretically consistent way in order to develop an approach adequate to the particular context. Glossing over the distinction between indicators and basic universal concepts leads to a problematic conclusion.

To call for the definition of a new cluster of values called "prematerialist", located on a continuum with materialist and postmaterialist values, is not in itself problematic. What is problematic is to say that one is retaining the Maslow-Inglehart conceptualisation but, at the same time, finding it necessary to use additional indicators that point to a new concept. This critical distinction between indicators and concepts is not dealt with carefully enough by Taylor and her colleagues. If they agree that the Maslovian hierarchy of needs is a universal scheme that may be translated into clusters of values in terms of Inglehart's scarcity principle, they have to be consistent in their application of the universal notions formulated in terms of that scheme. This does not permit the definition of pre-materialist values somehow prior to the materialist values defined in terms of basic economic and security needs. In terms of Maslow's theory, nothing comes prior to these needs; in terms of Inglehart's materialist/postmaterialist dimension, values relating to these needs are materialist values. The outlined method of dealing with Taylor's problems with the indicators in the Inglehart index is incoherent. One either has to accept the concepts and adapt the indicators or re-conceptualise and define new indicators.¹⁹

A constructive assessment of Taylor's approach to the relationship between the indicators chosen by Inglehart for the materialist aspect of the materialist/postmaterialist dimension reveals that the problem and a partial solution are clear. The indicators for materialism chosen by Inglehart relate to industrial society and were formulated for such

¹⁹ On a different level, there is the question of whether the notion of "prematerialism" makes any sense at all when the indicators all relate directly to material conditions of everyday life. If the notion of pre-materialism is to make logical sense, it has to mean that there is a set of values that is less materialist or different from materialist values.

a society.²⁰ Those aspects that Taylor and her associates deem necessary in a list of important indicators for values in South Africa are important because the South African situation is a mixed condition of industrial and non-industrial dimensions in the same context. But to deduce from that very important concern that there may now be an additional aspect to the conceptual framework makes nonsense of the credence given to Maslow and Inglehart's use of the Maslovian hierarchy from which to develop a values dimension.

It is clear that introduction of the category of pre-materialism was motivated by important concerns. These concerns are not unique to the South African situation and they thus pose questions relating not only to the Inglehart index but to the materialist/postmaterialist dimension as such. However, the strategy employed by the South African researchers is conceptually indefensible. One would rather look towards a different strategy for dealing with the problems of applying the Inglehart model to the South African situation. This will be done in the next section.

4. Towards an alternative model

This article has investigated a very specific aspect of a research and survey strategy. When exploring alternatives, there are two basic options: to evaluate the possibilities of amending the specific aspect of the existing strategy, or to take a more fundamental view and evaluate the strategy itself. The result of this investigation of the evolution of the Inglehart model and its application to South Africa has indicated that the materialist/postmaterialist dimension and, at the very least, its operationalisation in the twelve-item index require change. Even though a massive data-base exists, containing important and valuable information, the critical issue of the appropriateness of the items supporting the materialist/postmaterialist dimension remains.

20 Whether "industrial society" is the right concept to use is a matter of ongoing debate, but it would go beyond the scope of this article to argue whether it is better to distinguish between pre-industrial, industrial and post-industrial societies (as Inglehart and a whole host of social theorists do) or between precapitalist, industrial capitalist and informational capitalist societies (as Castells and a whole host of predominantly Marxist or neo-Marxist theorists do).

We may propose both a simple but limited solution and a more complex, potentially fruitful solution.

4.1 Refinement

If one aims to make use of the massive data-sets that the World Values Survey has generated for comparative purposes, it is important not to change the indicators or the basic conceptualisation. This would then imply the type of approach that Taylor and her colleagues have attempted. The task becomes a sensible refinement or adaptation of the relevant aspects, continuing the existing process and adding a few new aspects in order to produce a more appropriate result.

To refine the indicators supporting the materialist/postmaterialist dimension one could create a materialist indicator cluster A and a materialist indicator cluster B, such that A refers to indicators relevant in predominantly non-industrialised conditions and B to indicators relevant in predominantly industrialised conditions. The materialist values inferred from these different sets of indicators would then be the same, or almost so. The reasoning guiding such an approach would be that the means to basic economic and physical security in industrialised and non-industrialised societies are not the same. In an industrialised society the issues include the availability of jobs, the state of the national economy (prices, growth stability) and the type of order brought about by the state (defence, public order and crime-fighting). In a non-industrialised economy the state is often less able to influence the economy or provide social security. In such situations much of the economy is local (land, food and water

21 However, such a context no longer exists anywhere in the world in any "pure" form. What we have in South Africa is a mixed situation of small, non-industrialised communities in the broader context of a proportionally highly industrialised modern society which is itself situated in the still broader context of globalisation and the development of a global network society in which industrial production has changed with the emergence of a knowledge economy and the mode of production that Castells calls "informational capitalism". In addition, these contexts have been increasingly interpenetrating ever since colonisation took root in the form of migrant labour, disenfranchisement and land-grabbing.

are primary) and not dependent on the structures and relations of capital, labour or industrial technology.²²

The practicalities of this limited change approach would be the retention of the existing index, the addition of one or two sets of parallel indices in which the new items are posed alongside the old, and careful analysis of the results in terms of a categorisation of a materialism A and a materialism B. This should enable analysts in developing contexts to distinguish whether people are materialist in the sense that they value the well-being that industrial society can offer or the well-being that a subsistence/non-industrial economy can offer. One would then also be able to separate the materialists from the post-materialists in a more satisfactory way, rather than by confusing materialists of the non-industrialised type with postmaterialists — as indicated by Kotzé & Lombard (2002) in their analysis of the results of the standard World Values Survey. The conclusions would be important in all the senses argued by Kotzé & Lombard (2002), and would not mislead policy-makers as to the true priorities of the poorest sector of the population. However, the question of whether the notion of a materialist/postmaterialist dimension can and should be used in a developing society is posed by development theory itself.

4.2 Re-conceptualisation

Even though Inglehart briefly used the notion of pre-materialism, this was not sustained possibly because it is not consistent with the basic conceptualisation guiding the application of the materialist/post-materialist dimension. Inglehart, however, has shown a sensitivity to the need for a broader canvas on which to depict value change on a global scale.

The introduction of the double movement of modernisation and postmodernisation as a "non-linear" depiction of main trends in value change in our time (with a survival/well-being axis as well as a tradi-

22 If one were to accept this course of action, the "education" item does not quite make sense as a need in the non-industrialised context. It fits the context of a mass, industrialised society better than that of a non-industrialised small-scale society. Its use by Taylor (1998) may well indicate sensitivity to the mixed nature of the social circumstances of South African society.

tional authority/secular-rational authority axis) is Inglehart's (1997) latest characterisation of global value change. Modernisation is taken to mean "industrialization, occupational specialization, bureaucratization, centralization, rising educational levels, and beliefs and values that support high rates of economic growth", while postmodernisation is taken to mean "a rising emphasis on the quality of life and democratic political institutions" (Inglehart 1997: 67). This model characterises change in terms of three societal phases (traditional, modern and postmodern). The model also holds that each of these phases can be characterised in terms of its "core societal project" (survival in a steady state economy, economic growth, and subjective well-being); its individual values (religious and communal norms, achievement motivation, and postmaterialist-postmodern values), and its authority system (traditional, rational-legal, and a de-emphasis of both) (Inglehart 1997: 76).

The fundamental question now is whether the characterisation of change on a global scale based on a double movement modernisation/postmodernisation model is correct or useful. This is indeed a fundamental question for social theory and empirical analysis alike and one which can enjoy only a very limited exploration here. Even though one may be very uncomfortable with the phases defined by Inglehart, and especially with the characterisation of these phases and the assumption of evolutionary change from one phase to the next, ²³ this aspect cannot be investigated here. In terms of the focus of this article, the question has to be limited to asking whether the concept of survival/well-being, as one of the two dimensions on which Inglehart measures value change, is appropriate and useful. This brings us back to the key issue of this article. It has been argued that the materialist/postmaterialist dimension was overburdened when applied outside

23 What is disconcerting in the model is the claim that it is non-linear while the only dimension of non-linearity actually profiled is the nature of authority structures. On the level of political economy suggested in the three-phase model, one also wonders at the idea of survival being an issue orientating value-formation in traditional societies but not in either of the other two "phases" of social change. This would imply that survival is not a major issue in modernity or postmodernity and thus that the model is both very linear and inattentive to the interrelatedness of the economies of different societies.

the context of its original conceptualisation in a European, industrialised world. If a new conceptualisation of the issues relevant in this dimension were to be proposed, what routes would be worth exploring?

The aspect of conceptualisation that concerns us requires a revision of the model to capture the values of people in situations of severe material deprivation and marginalisation. In attempting to find developmental concepts that will deal with the issues of material deprivation, survival and well-being one may adduce Amartya Sen's theory of functionings and capabilities (Sen 1984, 1988, 1993, 1999) as an appropriate and fruitful framework for analysis of issues in developing countries. This theory comes from the context of a social theory very different from the ideas of Inglehart.

The concern with "what people can and cannot do" (Sen 1984: 497 and 1993: 32) and the idea of "development as freedom" (Sen 1999) emanate from the everyday life of the poor, marginalised people studied and reflected on by Sen and other alternative development theorists. ²⁴ Their theory was developed in diametrical opposition to modernisation theory as the model for development and is one response to the "impasse" in development theory (Schuurman 1993), an impasse which results from the failure of grand theories of modernisation and dependency to provide good policy and appropriate explanations.

The notion of a standard of living is a very useful point of entry into Sen's work. This idea has been an important guideline in development as it enables us to set criteria and develop goals in development theory and practice. Rather than the more "subjective" measure of utility or the more "objective" measure of income, commodities and opulence, Sen (1988: 5-17) proposes that the standard of living be measured "in the living" and that this means measuring what people can do and be. This draws on but goes beyond the basic needs approach because it places needs in the context of asking why parti-

24 Here I would like to thank one anonymous reviewer and the editor for stimulating me to think about the value of alternative development theories for conceptualising value change on a global scale. The exploratory remarks made here must be followed up by a much more expanded discussion of alternative development theory as a framework for value change analysis. cular needs exist and what people want with the commodities that satisfy those needs (Sen 1988: 24-9).

In Sen's (1999: 87-8) view, the advantages of the focus on functioning and capability are that poverty can be defined in terms of deprivations that are intrinsically important rather than instrumentally important;²⁵ that it allows for the definition of capability deprivation in terms other than "lowness of income", and it enables us to deal with the variable relation between low income and low capability. This removes the debate on the standard of living from the subjectivist and objectivist results of other strategies. But our concern here is with values analysis. The benefits of Sen's approach to values analysis lie on two levels.

The first level is the focus on intrinsic motivation. When the focus of a strategy of values analysis is not on commodities and the relative evaluation thereof²⁶ but rather on the reasons why these commodities are seen as more or less important, a much richer analysis of values can be made. In analysing values one aims for the elucidation of the general orientations guiding behaviour. Interpreting what people say about commodities²⁷ in terms of what capabilities and functioning they facilitate and thereby arriving at the intrinsic value of those commodities is useful. One may still ask about commodities and their relative importance but one also aims for the deeper structure of motivation for the relative importance of particular commodities, by posing questions about the connections between particular commodities and various possible deeper motivations (the capabilities which these commodities facilitate).

The second level of benefits from a Sen-like theoretical approach is the escape from the linear assumptions of modernisation theory. Sen would categorise value change in terms of the issues motivating

- 25 The same motive drives Manfred Max-Neef's (1991) distinction between universal and limited needs and between particular and unlimited satisfiers.
- 26 One needs a broad understanding of "commodities" here, including all things and services that function to satisfy a particular need and that play a role in principle always interchangeable with other commodities in making up the capability structure of an individual.
- 27 In terms of the South African adaptation of the materialist/postmaterialist index one would ask about prices, growth, stability, defence, public order, crime-fighting, education, shelter, clothing, land, food, and water.

people in everyday life. Obviously, there is no analysis that is not guided or informed by assumptions about tendencies and directions of change, and in that sense any theory will have to be judged by the value of the results it generates. However, if the focus is on an analytical framework that is useful in a developmental context, it does not take much thought to see that it would be prudent to keep our distance from theories built on the thesis of modernisation, which has been discredited in development studies²⁸ and that alternatives should be investigated. Sen's approach is a sensible one which goes beyond both objectivism and subjectivism by putting together a framework in terms of everyday life.²⁹ The result is that the apparently self-evident dimension of survival and well-being (with the deeper assumptions of modernisation making up the implicit content of the dimension) may be placed in a more fundamental framework of the actual being and doing of people.

4.3 Conclusion

An analysis that takes the development issues of non-industrialised contexts into account in a general analysis of values across the world would be much more useful than what we have. Currently, Inglehart claims to be able to categorise nations and societies in terms of the modernisation/postmodernisation matrix. Even if the validity of much of the conceptualisation is accepted, this article makes a case for a more appropriate and context-sensitive analysis because some of the most important issues in global society and global interaction, namely the marginalisation and poverty of people outside of (or adjacent to) the industrialised context, cannot be adequately investigated with the current instrument. Even though the conceptualisation of the adaptations made by the South African investigators does not quite work out, their argument for adaptation is clear.

- 28 The debate about development theory and practice raised by Schuurman (1993) and followed up in Norgaard (1994), Booth (1994) and Leys (1996) starts with a discussion of the failings of modernisation theory and other grand theories, before attempting to introduce new, alternative theories that are explicitly not grand!
- 29 The convergence between Sen and Giddens is evident if one explores Giddens's theory of structuration and his aim of moving beyond mere human action and structural perspectives on it (Giddens 1984).

Müller/Inglehart's materialism/postmaterialism index

In investigating the role of survival issues in value formation and change, a values analysis which is designed to avoid the assumptions of modernisation in its conceptualisation will be more effective in its analysis and interpretation as it will not force a linear idea of developmental change onto the subject matter. This means that it can be more open to diverse and changing trajectories of change than would be possible in a modernisation framework. In addition, development would not then be defined in terms of a normative theory of western capitalism, which would be another imposition of the West in developmental contexts. In this regard, Sen's notion of development as freedom seems to be a useful alternative and worth exploring further on both the empirical and the theoretical levels.

Bibliography

ABRAMSON P R & R INGELHART

1995. Value change in global perspective. Ann Arbor: University of Michigan Press.

BERMAN S

1997. The life of the party. *Comparative Politics* October 1997: 101-22.

BOOTH D (ed)

1994. Rethinking social development: theory, research & practice. Harlow: Longman.

BUERKLIN W, M KLEIN & A RUSS 1994. Dimensionen des Wertewandels: Eine empirische Längschnittanalyse zur Dimensionalität und der Wandlungsdynamik gesellschaftlicher Wertorientierungen. *Politische Vierteljahresschrift* 35(4): 579-606.

CLARKE H D & N DUTT

1991. Measuring value change in western industrialized countries: the impact of unemployment. *American Political Science Review* 85: 905-20.

CLARKE H D, A KORNBERG, C McIntyre, P Bauer-Kaase & M Kaase

1999. The effect of economic priorities on the measurement of value change: new experimental evidence. *American Political Science Review* 93(3): 637-47.

DAVIS D W & C DAVENPORT

1999. Assessing the validity of the postmaterialism index. *American Political Science Review* 93(3): 649-64

DAVIS D W, K M DOWLEY & B D SILVER

1999. Postmaterialism in world societies: is it really a values dimension? *American Journal of Political Science* 43(3): 935-62.

DE MOOR R (ed)

1995. Values in western societies. Tilburg: Tilburg University Press.

Dowd J J

1991. Review article of culture shift in advanced industrial society. *American Journal of Sociology* 96(March): 1274-6.

DUCH R M & M A TAYLOR

1993. Assessing the validity of the postmaterialist index. *American Political Science Review* 93(3): 649-64

1994. Postmaterialism and the economic condition. *American Journal of Political Science* 38(3): 815-24.

Flanagan S C

1987. Value change in industrial societies. *American Political Science Review* 81(4): 1289-319.

GIDDENS A

1986. *The constitution of society*. Berkeley: University of California Press.

Müller/Inglehart's materialism/postmaterialism index

Granato J, R Inglehart & D Leblang

1996a. Cultural values, stable democracy, and economic development: a reply. *American Journal of Political Science* 40: 680-96.

1996b. The effect of cultural values on economic development: theory, hypothesis, and some empirical tests. *American Journal of Political Science* 40: 607-31.

INGLEHART R

1971. The silent revolution in Europe: intergenerational change in post-industrial societies. *American Political Science Review* 65: 991-1017.

1977. *The silent revolution*. Princeton, New Jersey: Princeton University.

1990. Culture shift in advanced industrial society. Princeton, New Jersey: Princeton University Press.

1997. Modernization and postmodernization. Princeton, New Jersey: Princeton University Press.

INGLEHART R & P R ABRAMSON 1999. Measuring postmaterialism. American Political Science Review 93(3): 665-77.

INGLEHART R & W E BAKER 2000. Modernization, cultural change, and the persistence of traditional values. *American Sociological Review* 65(1): 19-51.

INGLEHART R & M CARBALLO 1997. Does Latin America exist? (and is there a Confucian culture?): a global analysis of cross-cultural differences. *Political Science and Politics* 30 March: 34-46.

INGLEHART R & J-R RABIER 1986. Political realignment in advanced industrial society: from class-based politics to quality-of-life politics. *Government and Opposition* 21 Autumn: 456-79.

JOUBERT D

1992. Reflections on social values. Pretoria: HSRC.

KLUCKHOHN F R & F L STRODTBECK 1961. *Variations in value orientations*. Evanston, Illinois: Row Peterson & Company.

KOTZÉ H J & K LOMBARD 2002. Revising the value shift

2002. Revising the value shift hypothesis: a descriptive analysis of South Africa's value priorities between 1991 and 2001. *Comparative Sociology* 1(3): 1-25.

Lategan B C

2000. Extending the materialist/post-materialist distinction. Some remarks on the classification of values from a South African perspective. *Scriptura* 75: 409-20.

LEYS C

1996. The rise and fall of development theory. Bloomington: Indiana University Press & London: James Currey.

MACINTOSH R

1998. Global attitude measurement: an assessment of the World Values Survey Postmaterialism Scale. *American Sociological Review* 63: 452-64.

Marks G

1997. The formation of materialist and postmaterialist values. *Social Science Research* 26: 52-68.

Maslow A H

1970. *Motivation and personality*. New York: Harper & Row.

Max-Neef M

1991. Human scale development: conception, application and further reflections. New York: Apex.

NORGAARD R B

1994. *Development betrayed*. London: Routledge.

Nussbaum M & A Sen (eds)

1993. *The quality of life*. Oxford: Clarendon Press.

RESCHER N

1969. *Introduction to value theory*. Englewood Cliffs, New Jersey: Prentice-Hall.

ROKEACH M

1973. The nature of human values. New York: Free Press.

Schuurman F J (ed)

1993. Beyond the impasse. London: Zed Books.

SEN A

1984. Resources, values and development. Oxford: Blackwell.

1988. The standard of living. Cambridge: Cambridge University Press.

1993. Capability and well-being. Nussbaum & Sen (eds) 1993: 30-53.

1999. Development as freedom. Oxford: Oxford University Press.

TAYLOR H

1998. Squaring the circle. Unpubl MA thesis. Stellenbosch: University of Stellenbosch.

Van Deth J W

1983. The persistence of materialist and post-materialist value orientation. *European Journal of Political Science* 9: 407-31.