The importance and motivational content of money attitudes: South Africans with living standards similar to those in industrialised Western countries

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Long neglected in psychological research, money attitudes influence consumer decision-making and information processing, and may be active whenever consumers contemplate money situations or exchange relations. This study focused on the money attitudes of 221 urban South Africans whose standards of living are similar to those in industrialised Western countries. A recently developed pan-cultural theory on human values is used to gain insights into the fundamental motivations of money attitudes. The results suggest that money attitudes and value priorities have predictable and theoretically meaningful relations and provide evidence supporting the nomological validity of the revised Money Attitude Scale (MAS). Confirmatory analyses support the five-factor structure of the MAS scale and the hypothesised structure of the Portrait Values Questionnaire. Five new money attitudes are proposed for future research to broaden the scope of the MAS and refine its measurement.

Few things in life are invested with as much meaning as money. Its sacred allure is derived from associations with philanthropy, power, prestige, security and social desirability; its profanity from more sinister associations with anxiety, distrust, evil and social conflict (Belk & Wallendorf, 1990). People think about it, sing about it, dream about it and weave it into their children’s fairy tales. Yet, despite such prominence, money has been neglected in consumer psychology research (Furnham & Argyle, 1998). By the mid-1990s, psychologists had made only limited systematic progress in exploring the structure of money attitudes, identifying basic sociodemographic correlates and understanding the role of money attitudes in exchange relations and...
consumer behaviour (Furnham & Argyle, 1998; Medina, Saegert & Gresham, 1996; Roberts & Jones, 2001). Furthermore, there has been virtually no progress outside Western industrialised countries.

The globalisation of financial services and commerce has changed all that and has focused increasing attention on money attitudes (Lim, 2003). New research is exploring the relationships between money attitudes and compulsive buying (Furnham & Okamura, 1999; Hanley & Wilhelm, 1992; Hayhoe & Leach, 1999; Roberts & Jones, 2001; Roberts & Sepulveda, 1999b), credit card use (Hayhoe & Leach, 1999; Norvilitis, Szablicki & Wilson, 2003; Roberts & Jones, 2001) and innovative consumer behaviour (Burgess, Battersby, Gebhardt & Steven, in press), as well as a more extensive range of sociodemographic, cultural and attitudinal correlates (Lau, 1998; Lim, 2003; Roberts & Sepulveda M., 1999a).

The context of research is also expanding into emergent consumer markets (ECMs), such as China (Lau, 1998), Singapore (Lim, 2003), Mexico (Roberts & Martinez, 1997; Roberts & Sepulveda M., 1999a, 1999b) and South Africa (Burgess, Battersby, Gebhardt & Steven, in press; Rousseau & Venter, 1999). Following Burgess (2003), the term ECM refers precisely to middle-income, middle-human development countries undergoing rapid socio-political and economic change that is propelling them to a higher general standard of living. ECM research is important because the populations of just 15 ECMs will comprise 58% of the world’s total population by 2015 (viz. China, India, Indonesia, Brazil, Russian Federation, Mexico, Philippines, Vietnam, Iran, Egypt, Turkey, Thailand, Columbia, Republic of Korea and South Africa).

The rapid increase in money attitudes research, especially in ECMs, is exciting but it is also a cause for concern. Measurement issues have not been prominent in money attitudes research. The literature continues to be characterised by a plethora of money attitudes scales. Scale reliability, validity and measurement invariance have received little attention. Nomological relations with more widely researched and validated constructs, such as values and personality, remain largely unexplored. Such issues must be addressed if progress is to be made in understanding money attitudes and the influence of money attitudes on human behaviour (Anderson & Gerbing, 1982; Bagozzi & Heatherton, 1994; Caprara, Barbaranelli, Bermúdez, Maslach & Ruch, 2000; Jarvis, MacKenzie & Podsakoff, 2003; Podsakoff, MacKenzie, Lee & Podsakoff, 2003; Steenkamp & Baumgartner, 1998; Van de Vijver & Leung, 1997).

The present research addresses the urgent need to explore the structure of money attitudes and the reliability and validity of money attitude scales. First, it assesses the factorial structure of Yamauchi and Templer’s Money Attitude Scale (MAS) (Gresham & Fontenot, 1989; Yamauchi & Templer, 1982), using confirmatory factor analysis. The five dimensions purportedly measured by the scale have not always been differentiated in previous tests but the use of exploratory factor analysis limits the utility of those findings (cf. Preacher & MacCallum, 2003). Second, the present research examines the relationship between money attitudes and a comprehensive
set of values identified in a recent pan-cultural theory on human values. Values are centrally held beliefs about desirable end-states and modes of conduct that transcend situations, act as fundamental motivational goals and guide the evaluation and selection of behaviours (Rokeach, 1973; Schwartz, 1992). Values are especially useful in exploring attitudinal structures because values underlie attitude importance (Boninger, Krosnick & Berent, 1995; Homer & Kahle, 1988). Moreover, the circular structure of values implies a nomological net of relations from which the fundamental motivations of money attitudes can be better understood (Gurtman, 1992a). Third, this study focuses on an ECM population with living standards similar to those of populations in the more industrialised countries in which most money attitudes research has been conducted. The research context is important because of the size and growing importance of ECMs in world commerce and their unique consumer characteristics, which include rapid socio-economic and political change and geodemographic and cultural diversity.

Money may be the common currency of transition in the ECM context. Many ECM consumers have transited from agrarian/feudal lifestyles to modern ‘digital age’ lifestyles in less than the span of one generation. Their money experiences are novel and often include informal sector exchange relations in which money, barter and other exchange media have played complex and interchangeable roles. ECM transition presents consumers with the potential for rapid changes in living standards, symbolic consumption opportunities and lifestyle complexity that affect their attitudes about money, its uses and its conservation. This is why researchers argue that the validity and boundary conditions of theories developed elsewhere must be tested before previous findings can be generalised to ECM contexts, even when ECM consumers have comparable living standards (e.g. McCrae, 2000; Steenkamp & Burgess, 2002).

**MONEY ATTITUDES**
According to two recent reviews (Medina et al., 1996; Roberts & Jones, 2001), Yamauchi and Templer’s (1982) MAS, as revised by Gresham and Fontenot (1989), and Furnham’s (1984) Money Beliefs and Behavior Scale (MBBS) are the two most popular scales for measuring money attitudes. The reviews conclude that both scales measure similar underlying dimensions and the MAS is preferable because it is shorter (29 items versus 60 items, respectively), has been developed and used in more ethnically-diverse contexts and has demonstrated acceptable Cronbach alpha internal reliabilities in its sub-scales. In addition, the psychometric properties of the MBBS are less well known and its internal reliabilities have been inconsistent across studies.

The MAS measures five money attitudes: power/prestige, retention/time, distrust, anxiety, and quality (arranged by decreasing eigenvalues as reported by Yamauchi and Templer, 1982). People scoring high on MAS-power/prestige view money as a symbol of success and use it to impress and influence others. To them, money is a tool to achieve power over their environment and others. They use it to impress others,
seek status, gain recognition and buy things that advance their economic, social and political position in life. Scoring high on MAS-retention/time indicates a concern that plans be made for the future so that money can be retained. People who score high on this dimension believe that money is a resource that should be conserved through purposeful planning. MAS-quality concerns the perception of money as a medium that can be exchanged for quality goods. People high on MAS-quality believe that money is a vehicle for attaining the quality goods associated with modernity and the good life. Similar to MAS-power/prestige, MAS-quality is self-directed but it differs in that it concerns buying the best and paying more to get quality brands and products without necessarily relying on the opinions of others or seeking their approval or recognition. People with high scores on MAS-distrust approach money, money situations and exchange relations with suspicion and doubt. They distrust the motives of others and complain about the cost of things. They hesitate to spend money and leave major purchases wondering if they could have achieved a better price elsewhere. MAS-anxiety concerns the role of money as a source of anxiety and protection from it. People high on MAS-anxiety are anxious about money and in money situations. They approach exchange relations with hesitancy, worry and nervousness and are very concerned about financial security.

Despite its popularity, the structure of the MAS remains ambiguous. Yamauchi and Templer (1982) identified five money attitude dimensions using exploratory factor analysis. They disregarded one dimension, MAS-quality, because it was comprised of items that were intended as measures of MAS-power/prestige and it did not differ motivationally from MAS-power/prestige in respect of factor loadings or nomological relationships with external variables. Gresham and Fontenot (1989) amended the MAS to improve its measurement of the original five dimensions. However, their exploratory factor analysis results suggested instead that MAS-distrust and MAS-anxiety should be combined, leaving four dimensions. Notwithstanding these ambiguities about its structure, researchers report that the amended MAS performs acceptably, including in ECM countries such as South Africa (Rousseau & Venter, 1999) and Mexico (Roberts & Martinez, 1997; Roberts & Sepulveda M., 1999a, 1999b).

VALUES

Although not the focus of this article, personal values were employed in the present research to assess the motivational content of money attitudes. Personal values have been related to traits and attitudes (e.g. Allen, Ng & Wilson, 2002; Bilsky & Schwartz, 1994; Burgess, 1992; Homer & Kahle, 1988; Rokeach, 1973; Winter, John, Stewart, Klohnen & Duncan, 1998) and are frequently used to explain cross-cultural differences in consumer behaviour (e.g. Beatty, Kahle & Homer, 1991; Bond, 1991; Burgess & Blackwell, 1994; Burgess & Steenkamp, 1999; Daughfous, Petrof & Pons, 1999; Yau, 1992).
Social psychologist, Shalom Schwartz, arguably has conducted the most important programmatic stream of values research in cross-cultural psychology. Building on the work of Rokeach (1973), he has refined the values concept, proposed a new theory on the content and structure of human values, developed new values scales, and produced consistently supportive results in studies of more than 200,000 respondents in more than sixty-five countries and on every inhabited continent (see Schwartz 1992, 1994; Schwartz et al., 2001).

According to the theory, values are desirable, trans-situational goals that vary in importance and serve as guiding principles in people’s lives. The content aspect of the theory identifies ten distinct and comprehensive value constructs, which are differentiated by the motivational goals each value expresses. These values were derived from an analysis of universal requirements with which all individuals and societies must cope. Table 1 provides definitions of each value construct in terms of its central goal and lists exemplary values. The structural aspect of the theory describes the

<table>
<thead>
<tr>
<th>Value type</th>
<th>Definition</th>
<th>Exemplary values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>Social status and prestige, control or dominance over people and resources.</td>
<td>Social power, authority, wealth</td>
</tr>
<tr>
<td>Achievement</td>
<td>Personal success through demonstrating competence according to social standards.</td>
<td>Successful, capable, ambitious</td>
</tr>
<tr>
<td>Hedonism</td>
<td>Pleasure and sensuous gratification for oneself.</td>
<td>Pleasure, enjoying life</td>
</tr>
<tr>
<td>Stimulation</td>
<td>Excitement, novelty and challenge in life.</td>
<td>Daring, varied life, an exciting life</td>
</tr>
<tr>
<td>Self-direction</td>
<td>Independent thought and action – choosing, creating and exploring.</td>
<td>Creativity, curious, freedom</td>
</tr>
<tr>
<td>Universalism</td>
<td>Understanding, appreciation, tolerance and protection for the welfare of all people and nature.</td>
<td>Broadminded, social justice, equality, protecting the environment</td>
</tr>
<tr>
<td>Benevolence</td>
<td>Preservation and enhancement of the welfare of people with whom one is in frequent personal contact.</td>
<td>Helpful, honest, forgiving</td>
</tr>
<tr>
<td>Tradition</td>
<td>Respect, commitment, and acceptance of the customs and ideas that culture or religion provide.</td>
<td>Humble, devout, accepting my portion in life</td>
</tr>
<tr>
<td>Conformity</td>
<td>Restraints of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.</td>
<td>Politeness, obedient, honouring one’s parents or elders</td>
</tr>
<tr>
<td>Security</td>
<td>Safety, harmony, and stability of society, of relationships, and of self.</td>
<td>Social order, clean</td>
</tr>
</tbody>
</table>
dynamic relations among the ten values. The motivational continuum gives rise to a circular dynamic structure (see Figure 1) that captures the notion that the pursuit of different value types can be compatible or in conflict, depending on the proximity of values along the continuum. The closer any two values in either direction around the circular relations among the ten values, the more similar their underlying motivations. The more distant any two values, the more opposed their underlying motivations. This implies a circular structure in which the direction and magnitude of correlations among the ten value constructs produce an integrated structure that can be summarised by two orthogonal dimensions: self-enhancement versus self-transcendence opposes power and achievement values to universalism and benevolence values, openness to change versus conservation opposes self-direction and stimulation values to security, conformity and tradition values. Hedonism values share elements of both openness and self-enhancement.

![Figure 1. Schwartz's model of relations among motivational value types and higher-order domains](source: Adapted from Schwartz (1992))

Schwartz’s (1992) theory provides a systematic basis for research into consumer motivations and theory building that is especially appealing for ECM research. The content element of the theory provides a comprehensive and nearly universal set of
detailed motivational value types that transcend situations and relate logically to attitudes and other less centrally-held beliefs. The structural aspect of the theory provides a nomological net of relations (cf. Cronbach & Meehl, 1955; Gurtman, 1992a) by which the fundamental motivations of other constructs can be understood more fully. As the pursuit of any value has consequences that may be compatible or in conflict with the pursuit of other values, any construct related to one value should have a predictable pattern of relations with the other nine values in the nomological net, producing a sinusoid pattern of relations (i.e. similar to a sine curve). This is because, as one moves along the circular structure of values from the value (e.g. tradition) with the most positive relations with a money attitude (e.g., MAS-retention/time), value relations with that money attitude should decrease monotonically (i.e., in a consistent trend without reversing direction) in both directions around the circular structure of values until reaching the opposite side of the circle, where the most negative relations should be found (e.g., hedonism).

Taken together, the content and structural elements of the theory allow researchers to derive predictions about value relations with other variables that need not be generated from existing knowledge. For instance, hedonism and achievement motivate compliance with internal requirements. Conformity and tradition, which are located in opposition in the value structure, motivate compliance with external expectations. The relative importance of these values can be used to predict how a consumer considering a new car purchase will weigh social status, recognition, pleasure and enjoyment of driving a new car against commitments to take care of others and pay existing bills. Also, the relations of a money attitude such as MAS-retention/time should have similar relations with conformity and achievement, as it has with tradition and hedonism, respectively.

HYPOTHESISED RELATIONS OF MONEY ATTITUDES AND VALUES

This section presents the theoretical motivation for hypotheses concerning the relationship between money attitudes and values, commencing with MAS-anxiety.

Money Anxiety

Individual responses to environmental cues have been linked to state anxiety (a temporary mood state), trait anxiety (a personality characteristic reflecting susceptibility to anxiety) and social anxiety (an increased concern about one’s impression on others) (reviewed by MacLeod & Mathews, 1988; Mansell, Clark, Ehlers & Chen, 1999; Mansell, Ehlers, Clark & Chen, 2002; Mogg, McNamara, Powys, Rawlinson, Seiffer & Bradley 2000). Anxiety appears to influence values and attitudes through a reinforcing process; anxiety leads to behaviours that intensify one’s commitment to a desired value and then, through self-perception, dissonance reduction or justification processes, people modify their values to match their behaviour and thereby increase
the importance of the values they acted to promote (Boehnke, Schwartz, Stromberg & Sagiv, 1998; Schwartz, Sagiv & Boehnke, 2000). MAS-anxiety focuses on money as a source anxiety and protection from it. Money becomes a source of anxiety when one feels disempowered or lacking in competence in money situations and when it leads to undesirable evaluations by others, whether near or distant. Recent work on values and worries has related anxiety positively to power, achievement and hedonism, and negatively to universalism and benevolence (Boehnke et al., 1998; Schwartz et al., 2000). Hedonism is not a focus of MAS-anxiety (but rather of MAS-quality) and is not expected to be related.

$H_1$: MAS-anxiety will be positively related with power and achievement. It will be negatively related with benevolence and universalism

**Money Distrust**

Trust, generally, is conceptualised as an expectation that another person will behave in a certain way (reviewed by Wrightsman, 1991). Interpersonal trust is very important in exchange relations, especially in the early stages and when people are unfamiliar with their exchange partners (Andaleeb, 1992). MAS-distrust concerns hesitancy, doubt, and suspicion in money situations, which is rooted not only in distrust of others but distrust of one’s own ability to succeed in exchange relations. Distrust may derive from personality, social norms, social learning or expectations of systemic justice based on rules dictated by legislative or regulatory institutions (Johnson & Grayson, 2000; Rotter, 1967, 1971). Distrust has positive relations with dominance and hostility (Gurtman, 1992b). Consequently, we expect MAS-distrust to be positively correlated with power and achievement. As it also encompasses distrust in one’s own ability to act and think independently and be venturesome in money situations and novel contexts (Medina, Saegert & Gresham 1996), it should have negative relations with openness-to-change values.

$H_2$: MAS-distrust will be positively related with power and achievement and negatively with self-direction and stimulation

**Money Power/Prestige**

MAS-power/prestige is a self-directed attitude that is focused on money’s instrumental role in attaining external recognition, social status, achievement and personal control and dominance over others. Although its focus is on personal advantage, the content of MAS-power/prestige can only be achieved through behaviours that lead to outcomes valued by others. Medina et al. (1996) posit that high relative importance of the family would reduce scores on MAS-power/prestige. Family remains important in South Africa and large, nationally representative studies of South African values consistently show that family security has high relative importance (e.g. Burgess, 2002). Thus, MAS-power/prestige should be related positively to self-enhancement
values, especially power, and should be negatively related to self-transcendence values and with security and self-direction.

$H_3$: MAS-power/prestige will be related positively to power and achievement, and negatively related to benevolence, universalism, security and self-direction

**Money Quality**
MAS-quality concerns the personal experience of joy and pleasure consumers derive from ‘quality’ goods and the services that money can buy. Money situations often activate multisensory, imaginary and emotive aspects of hedonic consumption, which can be construed from past experiences or idealised fantasies and be related to centrally held values (O’Shaughnessy & O’Shaughnessy, 2002; Richins, 1994). These may produce quality perceptions that derive from tangible characteristics such as product design elements or aesthetics (Schmidt & Simonson, 1997), intangible characteristics such as novelty, status or country-of-origin associations (Batra, Ramaswamy, Alden, Steenkamp & Ramachandar, 2000; Oliver, 1997; Zeithaml, 1988) or the experiential aspects of consumption (Hirschman & Holbrook, 1982; Holbrook & Hirschman, 1982). A Western country-of-origin is equated with high quality in ECMs, and purchases of Western goods are often made to express achievement, social status and global consumer identity (Batra et al., 2000). MAS-quality should be related positively to openness to change, especially hedonism and stimulation and self-enhancement values, and negatively with conservation and self-transcendence, especially conformity and benevolence.

$H_4$: MAS-quality will be related positively to hedonism, stimulation and self-direction and also with power and achievement. It will have negative relations with conformity and tradition and also with benevolence and universalism

**Money Retention/Time**
MAS-retention/time is concerned with the conservation of money through budgeting, self-control, the delay of gratification and the pursuit of parsimony and utilitarian consumption. Its basic conservation motives seek to restrain spending, in order to attain stability of self and relations with others, who may be relationally near or distant (cf. Schwartz, 1992). MAS-retention/time should be related most positively to conservation and most negatively to openness to change, especially to hedonism.

$H_5$: MAS-retention/time will be related positively to tradition and conformity values. It is related negatively to hedonism, stimulation and self-direction.

**COVARIATES**
The analyses control for the effects of sociodemographic variables linked to money attitudes by previous research. These include age (in years), membership of previously disadvantaged culture or ethnic groups that were denied participation in, or were largely ignored by, the formal financial sector during the apartheid era (Asian, black
and coloured), education (years of formal schooling), gender (male) and household characteristics (number of children and household income in ZAR ’000s).

**METHOD**

**Sample**

A leading marketing research company drew an area-, income- and standard of living-stratified probability sample of 250 people residing in South Africa’s three major metropolitan areas, namely, Cape Town, Durban and Johannesburg (including Soweto, the East Rand and the West Rand). Trained interviewers conducted in-home personal interviews in the respondents’ language of choice. The research company captured the data and administered quality controls, which included a 10% random check back with respondents for quality assurance. The selection criteria included the South African Advertising Research Foundation (SAARF) (2001) Living Standard Measure classification (LSM). The LSM is a component of SAARF’s annual study of media and product consumption, funded by a national levy on all advertising through the South African Marketing Industry Trust.

Respondents were classified on the basis of 20 standard LSM indicators, which included three financial product indicators (i.e., ownership of a bank account, credit card, or whole life policy) among measures of dwelling characteristics (e.g., type, electrification, water supply, flush toilet and washing machine) and ownership of possessions (e.g., television, radio, motorcar, fridge/freezer, microwave oven and dishwashing soap). Interviews were closed immediately and a new sampling point was assigned if a respondent was not responsible for financial decision-making, was classified below LSM 7, was employed by an advertising agency, marketing research company or financial institution, or reported a household income below ZAR15 000 per month (approximately US$1 500 at the time). People in LSMs 7–10 comprise almost one-quarter of South Africa’s population and one-third of the population of the three provinces from which the sample is drawn. Only 20.3% of the sample were 50 years of age or older (M=40.7, SD=9.7) and 38% had a tertiary qualification. The racial composition of the sample (Asian 10%, black 25%, coloured 11% and white 54%) was consistent with the expected LSM 7+ racial composition ($X^2=2.97$, 3 df, $p>0.39$).

Value scales are subject to response bias (Schwartz, 1992). Following Schwartz, Melech, Lehmann, Burgess, Harris, and Owens, (2001), respondents who chose the same response for 21 of the 29 PVQ items or who chose the same response for 14 or more consecutive items were dropped from the analysis. The respondents excluded on the basis of these criteria were no different from the retained sample in age, gender, race or home language ($p>0.10$), and the proportion of the sample excluded did not differ from that dropped by Steenkamp and Burgess (2002) in their study (11.6% versus 10.6%, $p > 0.38$). The final sample consisted of 221 respondents and was gender-balanced (51% male).
Measures
The survey instrument was designed in English and rendered into Afrikaans, South seSotho, isiXhosa and isiZulu, using generally accepted cross-cultural back-translation procedures (van de Vijver & Leung, 1997). Money attitudes were measured on a 5-point scale (never, not really, sometimes, most times, always), using Gresham and Fontenot’s (1989) revision of the MAS. Values were measured using a new, shortened values scale, the 29-item PVQ (Schwartz, Lehmann & Roccas, 1999) on a 6-point scale (not at all like me, not like me, a little like me, somewhat like me, like me, very much like me). Both scales were reproduced in their original form.

The results in some 5% of the total samples studied by Schwartz and his colleagues (in sub-Saharan Africa, India, Malaysia and the rural areas of some less-developed nations) using the Schwartz Value Survey deviated considerably from the theorised structure of relations (Schwartz et al., 2001). These results suggest that the theory may not hold universally and, more specifically, that it may not capture the value priorities of populations in some ‘non-Western’, less-developed countries (cf. Renner, Peltzer & Phaswana, 2003). An alternative explanation is that the Schwartz Value Survey may be an inappropriate scale in such research contexts. The PVQ was developed for contexts in which literacy, numeracy and cognitive processing capacity may be of concern. The PVQ shows impressive convergent and discriminant validity in multitrait, multimethod analyses with the Schwartz Value Survey and research with the alternative instrument has yielded structures similar to the theorised structure in a representative national sample of Black South Africans ($p<0.01$, $n = 2000$) and a sample of 13- to 14-year-old Ugandan girls entering the eighth grade at eight schools ($p<0.001$, $n = 840$), among others (Schwartz et al., 2001). Burgess (2002) reports confirming PVQ results in four studies of large representative South African national samples. Thus, the problematic results observed in ECM contexts appear to be attributable to measurement method.

Scale Reliability and Validity
Schwartz’ theory posits that the value types and higher-order domains represent fuzzy partitions on a circular continuum of values rather than discrete clusters. As the confirmatory factor analysis procedure is not appropriate for analysing such a structure, the reliability and validity of the PVQ was assessed following the configural verification approach recommended by Schwartz (1992). The approach advocates structural assessment using smallest space analysis (Gutman, 1968), a non-metric multidimensional scaling technique (cf. Borg & Shye, 1993).

Although previous research suggests that the sample may be too small for smallest space analysis to discriminate the hypothesised structure (cf. Schwartz, 1992), the hypothesised structure emerged with only 3 of the 29 items located in regions other than expected. Openness to change and self-enhancement emerged as expected but the value types were not differentiated clearly within these regions. Security emerged
as a separate region and as a self-transcendence value. Schwartz et al. (2001) sug-
gest that similar findings in previous African research on values may indicate that
the continuing socio-political and economic transition to a non-racial democracy
influences South Africans to associate security more with the pursuit of justice and
equality rather than preserving the status quo. These small differences are consistent
with the theory and previous samples of this size using the Schwartz Value Survey
(Schwartz, 1992).

To assess the reliability of the five-factor MAS scale, confirmatory factor analyses
were conducted on the item covariances, using the maximum likelihood estimation
method in LISREL 8.53. Given the inconsistency in previous tests of MAS factorial
structure, three competing models were tested. Model 1 tested the original five-factor
structure identified by Yamauchi and Templer (1982) \(X^2 = 791.51, 395 \text{ df}, p < 0.001,\)
Root Mean Square Error of Approximation (RMSEA) = 0.068, Expected Cross-
Validation Index (ECVI) = 4.23, Tucker-Lewis Index (TLI) = 0.90, Comparative Fit
Index (CFI) = 0.91]. Model 2 tested Yamauchi and Templer’s (1982) final four-factor
structure, combining MAS-quality and MAS-power/prestige \(X^2 = 1058.67, 399 \text{ df}, p < 0.001,\)
RMSEA = 0.087, ECVI = 5.41, TLI = 0.85, CFI = 0.87). Model 3 tested
Gresham and Fontenot’s (1989) four-factor structure, combining MAS-anxiety and
MAS-distrust \(X^2 = 826.39, 399 \text{ df}, p < 0.001,\) RMSEA = 0.070, ECVI = 4.35, TLI =
0.89, CFI = 0.90). \(X^2\) difference tests \((\Delta X^2)\) suggest that the fit of Model 1 is superior
to the other two models \((p < 0.001)\]. Further examination of Model 1 revealed that
one item from the MAS-distrust scale (0.37) and one item from the MAS-anxiety
scale (0.21) had unsatisfactory standardised loadings. Modification indices and re-
siduals suggested these items loaded better on MAS-power/prestige and MAS-qual-
ity, respectively. The items were dropped and model fit improved significantly \(X^2 =
687.32, 340 \text{ df}, p < 0.001,\) RMSEA = 0.068, ECVI = 3.72, TLI = 0.90, CFI = 0.91,
\(\Delta X^2 = 104.19, 55 \text{ df}, p < 0.001\).

RESULTS

General
Sample means and standard deviations are reported in the margins of Table 2. The
mean ratings of MAS-retention/time \((M=3.76)\) and MAS-quality \((M=3.17)\) are high-
est and MAS-power/prestige \((M=1.78)\) is lowest. The standard deviations are similar,
varying between 0.70 and 0.89. The mean ratings of values are consistent with ex-
pectations and previous research. Benevolence \((M=5.44)\) and security \((M=5.38)\) are
the most important values. Power \((M=3.20)\) is lowest. At the level of value domain,
self-enhancement values \((M=3.73)\) are least important and self-transcendence values
\((M=5.25)\) are most important.
Tests of Hypotheses
The hypotheses were tested in a series of regression analyses in which money attitudes were regressed on each value type (or value domain) and the covariates. A series of tests is required because of the multicollinearity problem implied by the circular structure of value interrelations. The covariates were included in each regression equation. The results of these analyses are summarised in Table 2. The sinusoid pattern of relations emerges as expected (see Figure 2).

Table 2. Summary of Money Attitude Relations with Values and Descriptive Statistics

<table>
<thead>
<tr>
<th>Value types and domains</th>
<th>Anxiety</th>
<th>Distrust</th>
<th>Power/ prestige</th>
<th>Quality</th>
<th>Retention/ Time</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-direction</td>
<td>-0.06</td>
<td>-0.22</td>
<td>-0.21</td>
<td>0.01</td>
<td>-0.17</td>
<td>4.84</td>
<td>0.79</td>
</tr>
<tr>
<td>Stimulation</td>
<td>-0.08</td>
<td>-0.09</td>
<td>0.01</td>
<td>0.12</td>
<td>-0.03</td>
<td>4.19</td>
<td>1.10</td>
</tr>
<tr>
<td>Hedonism</td>
<td>-0.08</td>
<td>-0.07</td>
<td>-0.06</td>
<td>0.07</td>
<td>-0.20</td>
<td>4.67</td>
<td>1.01</td>
</tr>
<tr>
<td>Achievement</td>
<td>0.11</td>
<td>0.14</td>
<td>0.25</td>
<td>0.04</td>
<td>-0.07</td>
<td>4.25</td>
<td>1.10</td>
</tr>
<tr>
<td>Power</td>
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<td>0.11</td>
<td>0.22</td>
<td>0.09</td>
<td>0.01</td>
<td>3.20</td>
<td>1.33</td>
</tr>
<tr>
<td>Security</td>
<td>-0.09</td>
<td>-0.19</td>
<td>-0.23</td>
<td>0.14</td>
<td>0.04</td>
<td>5.38</td>
<td>0.61</td>
</tr>
<tr>
<td>Tradition</td>
<td>0.05</td>
<td>0.05</td>
<td>-0.04</td>
<td>-0.08</td>
<td>0.22</td>
<td>4.56</td>
<td>0.87</td>
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<tr>
<td>Conformity</td>
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<td>-0.04</td>
<td>-0.09</td>
<td>-0.25</td>
<td>0.10</td>
<td>4.49</td>
<td>0.84</td>
</tr>
<tr>
<td>Benevolence</td>
<td>-0.27</td>
<td>-0.03</td>
<td>-0.51</td>
<td>-0.24</td>
<td>0.13</td>
<td>5.44</td>
<td>0.58</td>
</tr>
<tr>
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<td>0.00</td>
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<td>-0.16</td>
<td>0.05</td>
<td>5.06</td>
<td>0.73</td>
</tr>
<tr>
<td>Openness-to-change</td>
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<td>-0.11</td>
<td>0.15</td>
<td>-0.14</td>
<td>4.51</td>
<td>0.79</td>
</tr>
<tr>
<td>Self-enhancement</td>
<td>0.21</td>
<td>0.19</td>
<td>0.35</td>
<td>0.11</td>
<td>-0.02</td>
<td>3.73</td>
<td>1.05</td>
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<tr>
<td>Conservation</td>
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<td>-0.11</td>
<td>-0.28</td>
<td>-0.26</td>
<td>0.36</td>
<td>4.81</td>
<td>0.06</td>
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<tr>
<td>Self-transcendence</td>
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<td>-0.02</td>
<td>-0.53</td>
<td>-0.29</td>
<td>0.12</td>
<td>5.25</td>
<td>0.59</td>
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<tr>
<td>M</td>
<td>2.84</td>
<td>2.77</td>
<td>1.78</td>
<td>3.17</td>
<td>3.76</td>
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<td>SD</td>
<td>0.89</td>
<td>0.78</td>
<td>0.70</td>
<td>0.74</td>
<td>0.80</td>
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Notes: Reported are unstandardized regression coefficients. See text for information on covariates included in the analyses. *p < 0.001, †p < 0.01, ‡p < 0.05, ‡‡p < 0.10

The hypotheses generally were confirmed. MAS-anxiety is related positively to power and negatively to benevolence. The relationships with achievement (p≤0.098) and universalism (p≥0.10) are in the hypothesised direction. MAS-distrust is related positively to achievement and power and negatively to self-direction. The relationship with stimulation (p≤0.085) also is in the expected direction. MAS-distrust is related negatively to security (p≤0.098), which was not hypothesised.
Figure 2. Sinsuoid pattern of relations of money attitudes and values

MAS-power/prestige is related positively to power and achievement and negatively to benevolence, universalism, security and self-direction, as hypothesised. MAS-quality is related positively to stimulation and power and negatively to conformity and benevolence. The relationship with universalism ($p<0.077$) is in the expected direction. Hypothesised relationships with hedonism, achievement and tradition are not statistically significant ($p>0.10$) but are in the hypothesised direction. Finally, MAS-retention/time is related positively to tradition and negatively to hedonism and self-direction. However, the expected relationships with conformity and stimulation are in the hypothesised direction, but not statistically significant ($p>0.10$).

DISCUSSION AND RECOMMENDATIONS FOR FUTURE RESEARCH

Structure of the MAS
This study examined the factorial structure of money attitudes and the nomological relations of money attitudes and value priorities in a sample of South Africans with
standards of living that are similar to those in industrialised Western countries. The results support the original five-factor MAS structure proposed by Yamauchi and Templer (1982) and reveal theoretically meaningful and predictable relationships between money attitudes and value priorities. Notwithstanding minor adjustments, the results confirm the reliability and validity of the MAS-scale and its five-factor MAS structure. Support for the five-factor MAS structure is noteworthy. Alternative four-factor structures proposed by Yamauchi and Templer (1982), and Gresham and Fontenot (1989) have been very influential and little work has been done to test competing structural hypotheses. More confirmatory research is needed.

**Comparative importance of money attitudes**
The paucity of representative national studies and inconsistent reporting of MAS results, especially as regards MAS dimensionality, discourage between-country comparisons. A recent study of Anglo- and Mexican-Americans also reported that MAS-power/prestige was the least endorsed money attitude for both groups (Medina et al., 1996). Following Gresham and Fontenot (1989), Medina, Saegert and Gresham (1996) combined MAS-anxiety and MAS-distrust scale items to form one dimension, which was rated highest by both groups. The mean ratings of MAS-anxiety and MAS-distrust in the current research are approximately one full point less than the highest money attitude on the 5-point scale (see Table 2).

International and local comparisons for the values results are facilitated by the much wider availability of comparative results and consistency in method and reporting. These results are consistent with previous studies of large representative South African samples by Burgess (2002), which reported remarkable consistency in value scores across different samples and years. Although not directly comparable, because the present study focuses on a defined sub-population, the results are consistent with those of Burgess (2002), with the mean importance of values differing from those of the nationally-representative White and Black sub-populations in 2001 by less than half-a-point and often by less than one-tenth of a point on the 6-point scale. The relative ordering of the ten values by people from the four major Apartheid legacy groups generally is consistent with findings in the West (Schwartz & Bardi, 2001), with the exception of the finding for security, which is similar to previous African research (Schwartz et al., 2001). These results provide further evidence that the PVQ is a useful tool in ECM environments, albeit with a population that is much better educated than the general population in this case.

**Nomological relations with values**
The nomological net of value relations proposed by the Schwartz theory provides new and theoretically meaningful information about underlying money attitude motivations. These motivational differences help explain distinctions in the MAS factors that Yamauchi and Templer (1982) and Gresham and Fontenot (1989) could not
detect. MAS-anxiety and MAS-distrust differ in the values they oppose. MAS-anxiety is related negatively to benevolence, which suggests that it causes people to reduce their concern for the welfare of close others, become more critical and less forgiving in their assessments of others and less honest and helpful in social relations. MAS-distrust opposes openness to change. This suggests that people high on MAS-distrust will be less likely to trust themselves enough to engage in novel and perceptibly risky exchange relations, preferring instead the tried and trusted. MAS-power/prestige and MAS-quality differ in compatibility and conflict with self-direction, stimulation, achievement and conformity. When people high in MAS-quality are compared to those high in MAS-power/prestige, they will be more likely to prefer exchange relations and products that are novel, creative and modern. Although they will prefer contemporary and inventive solutions, their engagement in exchange relations will not be motivated by a desire to demonstrate personal mastery or competence in financial affairs.

It is noteworthy that the relations of MAS-distrust and security are consistent with the interpretation that South Africans associate security more with the pursuit of justice and equality than in other world regions (see Schwartz et al., 2001). The research context—consumers in an ECM with living standards similar to those in the West—is important. The advent of globalised electronic media and Internet communications enables many Western firms to target ECM consumers. The visible elements of marketing programmes suggest that these firms often assume that living standard similarity is a good indicator of homogeneity in consumer attitudes and preferences. The results suggest that this may not be a good assumption. Future research should focus on the comparative importance of money attitudes in ECMs and the West, taking care to focus on the varied rates of change, and on the domain-specific expression of money attitudes in the consumer context.

**Proposed new money attitudes**

Although competing confirmatory factor analyses supported the five-factor model originally identified by Yamauchi and Templer (1982) and provided support for the reliability and validity of the MAS scale, nomological relations with values priorities highlighted important opportunities to refine the MAS and broaden its scope.

The first opportunity concerns MAS-retention/time. Consumers exchange three main resources during purchases: monetary value, temporal value and cognitive processing capacity (Blackwell, Miniard & Engel, 2001). Money may be exchanged for the other two resources. ECM consumers with a Western standard of living are often members of a thinly stretched managerial and professional class that works under great time pressures due to wider spans of control. The nature of work in contemporary ‘down-sized’ organisations may be decreasing discretionary time in Western societies as well. Such consumers often pay for services that have the consequence of increasing their discretionary time. MAS-retention/time should be refined to include two money attitudes with differentiated domain-specific focus. _MAS-conservation_ could
focus on the retention of money through purposeful preparation for the present and future. It would have its maximal positive relations with tradition and conformity and its maximal negative relations with hedonism and stimulation. **MAS-time/simplicity** could focus on the role of money in simplifying life and reducing its frustrations by facilitating increased discretionary time and reduced cognitive complexity. It would have its most positive relations with power, achievement and hedonism, and its most negative relations with universalism and benevolence.

There are three opportunities to broaden the scope of the MAS. First, money facilitates increased stimulation in life by allowing consumers to engage in exploratory behaviours, such as the pursuit of adventure, disinhibition, escape from boredom, fantasies, novelty, sensory stimulation and thrills (Holbrook & Hirschman, 1982; McAlister & Pessemier, 1982; Raju, 1981; Steenkamp & Baumgartner, 1992; Zuckerman, 1994). **MAS-stimulation** would be most positively related to the pursuit of stimulation values, compatible with self-direction and hedonism and opposed to conservation. Second, money helps one achieve self-transcendence by facilitating unity of self and society, spiritual well-being, philanthropy, the upliftment of disadvantaged others, social equality and addressing social problems, such as social justice, conflict resolution and environmental degradation (i.e., ubuntu-related goals). **MAS-spirituality** would address these broader issues of spirituality and humanity. It would have its maximal positive relations with universalism, be compatible with self-direction and benevolence and be in conflict with self-enhancement. Third, money assists in achieving autonomy by facilitating financial independence, self-exploration, artistic and scientific pursuit, and the understanding of life. **MAS-autonomy** would correlate most positively with self-direction and be compatible with stimulation and universalism and opposed to power. The utility of the MAS will be greatly enhanced by reliable and valid measures of these new money attitudes. Work in Western economies and ECMs is needed urgently.

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