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On the Role of Materialism in the Relationship Between Death Anxiety and Quality of Life

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ABSTRACT

The role of death anxiety as a factor in consumption behavior has received considerable attention recently. While death anxiety and materialism have been examined together, as have materialism and quality of life, the relationship between the three concepts simultaneously has not been tested. The purpose of this paper was to examine the three constructs in a single structural equation model to determine their direct and indirect relationships. It was shown that death anxiety did affect materialistic values which then influenced quality of life perceptions. There was no direct effect for death anxiety and quality of life.

INTRODUCTION

The influence of different aspects of the experience of death on consumer behavior has been investigated for about 10 years. This stream of research first dealt with the painful subject of the death of a spouse (Gentry et al. 1995a). This research analyzed what Gentry et al. (1995b) referred to as liminality, the state of vulnerability throughout the transition period during which a person is experiencing the trauma caused by the death of a beloved subject. Another death related subject has been the disposition of special possessions (Lastovicka and Fernandez 2005; Young and Wallendorf 1989). Stevenson and Kates (1999), for example, analyzed the meaning of the "last gift" in the specific context of dying from AIDS. Finally, and more recently, marketers examined the importance of a new psychosocial theory dealing with death called Terror Management Theory (TMT) (Greenberg et al. 1990; Greenberg et al. 1992). This research examined various consumption implications in marketing and new ways of understanding classical consumer research topics like conspicuous consumption and materialism (Arndt et al. 2004b). These studies broadly show that death saliency can precipitate forms of materialism. However, if death anxiety (DA) could be considered as a new variable in materialism, then much remains to be known about the strength, nature, and consequences of this relationship.

Conceptually and empirically, DA has typically been considered as a psychological state. Although Kasser and Sheldon (2000) demonstrated that materialism can be enhanced when a mortality related situation is induced in individuals, it is still not clear that DA, as a trait, can be a good predictor of materialism. In addition, Richins and Dawson's (1992) values approach to materialism, while it has received considerable empirical support in several different contexts, has not been tested in relation to DA. In their approach, materialism is characterized as a three dimensional construct with happiness, success, and centrality as the three values dimensions.

Finally, while DA and materialism have been examined together, as have materialism and quality of life (QOL) (see for example Arndt et al. 2004a; Rindfleisch and Burroughs 2004), the relationship between the three concepts simultaneously has not been tested. Is there a direct or indirect relationship between DA and quality of life? Could materialism be considered as a whole or partial mediator between DA and quality of life? Questions like these remain to be answered. The purpose of this paper is to examine the three constructs in a single structural equation model to determine their direct and indirect relationships. We will first examine DA and its related coping behaviors and then propose hypotheses relating the three constructs.

The Concept of Death Anxiety

Since the first studies carried out by Feifel (1995), more than a thousand papers have dealt with the definition, causes, and behavioral consequences of DA. For instance, the two American journals, *Journal of Death and Dying: Omega* and *Death Studies* are entirely dedicated to this topic. Considering the huge volume of available literature about DA, this field of study is very important in thanatology. From the various definitions and reviews extant, we will first introduce the primary characteristics of DA, and then we will offer a working definition of the concept as used in this paper. This is not with the intention of providing a unifying definition, but to provide clarity within the discussion that follows.

While many authors qualify DA as an emotional reaction, Neimeyer (1994) is more precise and defines DA as a set of attitudes held by a person faced with death. The attitudes are characterized by negative feelings such as fear, anxiety, and discomfort. One should note that the concept currently includes a range of emotional reactions of varying intensity. More recent attempts to define DA refer to anxiety about the idea of a state during which the self does not exist (Tomer and Grafton 1996).

Dimensionality of the construct is also at issue. While the first studies introduced DA as a one dimensional construct, attempts are now made to distinguish between several sub-dimensions (see review by Neimeyer 1997-1998). Neimeyer (1994) suggests that, while an overall anxiety about the idea of ceasing to be is likely, anxiety can be broken down into several sub-dimensions depending on the type of death-related thought (destruction of the body, physical and mental condition, etc.) upon which one is focused.

The nature of DA is also an unresolved issue. DA could be considered either as a state or as a trait. Dickstein (1972) and Neimeyer (1994) consider it as a personality trait that can slightly change according to one's position in the individual life cycle. The considerations mentioned above led us to define DA operationally as a set of negative emotional reactions of variable intensity induced by the idea that the self does not exist (Urien 2003; Urien 2007).

Variables Affecting Death Anxiety

Everyone may experience DA, but to varying degrees. Many studies have tried to determine the socio-demographic and psychological profile of persons who show a more or less anxious tendency when confronted in some way with death. Pollak (1980), in a review of the literature, tried to structure the studies related to DA and highlight the important contradictions in the results.

Contrary to what one might intuit, however, death awareness and its related anxiety are not restricted to the elderly. The first studies on DA had been based on the assumption that the elderly, who are approaching the end of their lives, feel more anxious about death. This assumption has been called into question by various empirical studies (Rigdon et al. 1979). This prompted Gesser et al. (1987) to propose a nonlinear relationship between age and DA. Other studies have shown that older adults are less concerned about death than other ages (Neimeyer et al. 1988; Neimeyer and Van Brunt 1995), and anxiety becomes more stable at the end of life (Fortner and Neimeyer 1999). The interpretation of this result is still open. One of the suggested explanations is based on the psychosocial theory by Erikson (1963). This states that, over their lives, people progress through a series of stages, or crises. By the end of their lives, throughout the last stage, the elderly can attain ego

integrity in the acceptance of their own deaths. But this is only a tendency. Indeed, individual differences do exist inside this age group depending on whether the retrospective vision of one's life focuses on missed opportunities and numerous failed objectives or leads to the conclusion that life was rich and full with few regrets.

Culture and religion can also affect DA. Cross-cultural empirical studies, focusing on the comparison of Western and Eastern cultures (mainly Chinese, Malayan, and Indian cultures) show that the Western cultures are generally more anxious than the Eastern cultures (McMordie and Kumar 1984; Schumaker et al. 1991; Westman and Canter 1985). An important explanation can be found in the systems of Eastern religious beliefs. Buddhism and Hinduism are examples of religions beginning with the precept that the most effective manner to overcome death is to accept it as the first element of life (Schumaker et al. 1991; Weisz et al. 1984). However, beyond the religious confession, the role held by religiosity appears also important. A comparative study (Schumaker et al. 1991) shows, paradoxically, that the Japanese (Eastern culture) appear overall more anxious about death than Australians (Western culture). One possible explanation is that the intensity of beliefs and religious practices is particularly low in Japan.

Coping Behavior and Death Anxiety

We now turn to the behavioral mechanisms involved in the adaptation to DA. When individuals are confronted with the idea of their own death, various theories have shown that they develop means through which the preservation of the self ensues. The means can be direct, taking the form of physiological necessities, and/or indirect, taking the form of symbols. Only the symbol forms have been the subject of investigations by researchers in DA. In this respect, two major theoretical consequences have resulted. The first was the development of Terror Management Theory (TMT) (Solomon et al. 1991) which deals with self-esteem and faith in a cultural worldview. The second is evidenced by the development of several theories dealing with the extended self and generativity.

Terror Management Theory: A Broad Outline

Related to Becker's (1973) earlier theory of the denial of death, TMT constitutes one of the main psychosocial theories published in the past fifteen years. First identified by Greenberg, Pyszczynski, and Solomon (1990; 1992), this theory states that DA is the emotional manifestation of the fundamental instinct of self-preservation. Preservation of the self may be fulfilled through direct means (e.g., remaining healthy, avoiding bad food), but also, and more importantly, through symbolic means related to the individual's culture. To be more precise, there are two symbolic and closely linked self-preservation mechanisms. The first is unflinching support of the worldviews and values of one's culture, and the second is increasing one's self-esteem—a goal which may be reached by adopting culturally valued behaviors.

While culture can offer immortality through religion, it also contributes to creating a cultural framework or "worldview" composed of values clearly identifiable by individuals. Indeed, faith allows us to feel at one with other people from the same culture, and this makes us feel like we belong to a structure larger than ourselves. As for adaptation grounded on self-esteem, the more individuals subscribe to and respect the values of their culture, the more their self-esteem increases and the less anxious they feel about their own deaths. Experimental studies have shown that behavioral adaptation can lead, among other things, to materialism, conspicuous consumption, and greed. Of these, materialism is the adaptive behavior upon which the present study is focused.

Regarding materialism as an adaptive behavior, Arndt et al. (2004b) concluded that, after the terrorist attacks of September 11, 2001, Americans started buying more houses, cars, electrical appliances, furniture, etc. This resulted in an increase in annual consumer spending of 6% between October and December of 2001. Data analyzed on the basis of Terror Management Theory showed that, following the attacks, Americans had to come to terms with death saliency that was subtly present in the fringes of their consciousness. To do this, they needed to increase their social standing within their own culture by behaving in agreement with cultural values such as materialism, that is, according to Bredemeyer and Toby (1960) and Fromm (1976), a value strongly anchored in the American culture. Such behavior can enhance self-esteem and relieve DA by engendering a kind of symbolic immortality (Tomer 1994).

To test this notion, Mandel and Heine (1999) found a higher interest in the purchase of luxuries under mortality salience conditions, and Kasser and Sheldon (2000), demonstrated that individuals with enhanced mortality salience expected more material wealth. Money itself, far from being considered in its utilitarian role as a means of exchange, would constitute "a new ideology of immortality" (Solomon et al. 2003). Arndt (2004b) demonstrated that a situation with mortality salience enhanced individuals' greediness for money. Kasser and Sheldon (2000) and Dechesne et al. (2003) similarly demonstrated that respondents under the mortality salience condition developed greediness toward money. According to Arndt et al. (2004b), money, and its associated possessions, provides a means for humans to distance themselves from the realization that they are destined for death. This suggests that death anxiety could intensify materialistic desires in people for whom such material pursuits are a salient barometer of self-worth.

Thus, the evidence extant suggests that there is a direct link between DA and materialism in the sense that material acquisitions might increase security of individuals by providing answers to their existential insecurity and sense of mortality. By behaving according to their cultural worldview, people have a feeling of comfort and security in daily life, and the accumulation of possessions, which will live on after one's death, allows the individual to live on through them. It is worth noting that humanistic theories also suggest that people focused on making money and amassing wealth try to overcome feelings of insecurity. As argued by Kasser and Sheldon (2000), Maslow believed that security and safety needs concern an avoidance of harm and danger. These are concepts associated with death buttress.

Materialism and Quality of Life

Arndt et al. (2004b) also suggest that when materialism is activated as a dominant cultural worldview at the expense of intrinsically oriented goals, individuals' assessment of their personal well-being is diminished. This is consistent with a significant amount of research suggesting similar consequences amongst high materialists. Belk (1985), for example, found that the traits of possessiveness, envy, and non-generosity are negatively correlated with satisfaction and happiness in life. Richins and Dawson (1992) found that materialism was negatively related to satisfaction with income, family life, and life as a whole. They also found a negative correlation between materialism and self-esteem. Sirgy's (1998) reasoning about this result is that materialistic people tend to engage in upward social comparisons involving remote referents who have a high standard of living. This leads to dissatisfaction with their own standard of living that spills over to cause dissatisfaction with life in general. As a result, people motivated by extrinsic goals (finan-

cial success, social recognition, and appealing appearance), rather than intrinsic ones (affiliation, community feelings, etc.) experience lower perceptions of well-being.

Numerous studies have confirmed the potentially negative consequences of materialism and Mick (1996), as a result, has labelled materialism a "dark side" variable. It has also been argued that the consequences of materialism extend beyond the individual and impact society as well (Bredemeier and Toby 1960). Burroughs and Rindfleisch (2002) argue that materialism stands in opposition to collective oriented values, and that those who have collective values will experience diminished perceptions of well-being. Kahle, Beatty, and Homer (1986) found, for example, that materialists consider personal financial security an important value and interpersonal relations as less important.

Thus, we may be able to distinguish between two types of subjective well-being, or QOL. One relates to aspects of well-being that affect individuals directly and a second that affects them indirectly through their community. These are similar to what Sen (1999) refers to as growth led (economic) and support led (cultural) development. He argues that the latter is a necessary condition for the former to be effective. These characterizations of DA, materialism, and QOL lead to the following set of hypotheses on the relationship between the constructs.

- H1: Death anxiety is positively related to materialism. As DA increases, measures of materialistic values will increase.
- H2: Materialism is directly related to QOL. Specifically, materialism is negatively related to both personal well-being and social well-being.
- H3: Social well-being is positively related to personal well-being.

METHODS

Sample and procedures

This study was carried out on convenience sample of American students in a large public university. The final sample size was 283. The sample was 41% female with an average age of 20.3 and 40%. The student sample was considered appropriate here for two reasons. First, death anxiety, materialism, and quality of life are pertinent concepts for young adults. Second, this approach also allows for control of the possible influence of age differences. The questionnaire was distributed and completed in class, and all participation was voluntary.

Following the procedures set forth by Anderson and Gerbing (1988), we tested each measurement model independently before testing the causal model. Thus, for each scale an exploratory factor analysis (EFA) was first carried out, and then a confirmatory factor analysis (CFA) was performed. As fit criteria we used the comparative fit index (CFI), Bollen's incremental fit index (IFI), and the root mean square of approximation (RMSEA).

Death Anxiety Scale

With the aim of better understanding individual differences in DA together with their causes and consequences, DA and related scales have been developed over the last decade by researchers such as Neimeyer (1994). For example, the Death Concern Scale (Dickstein 1972) is composed of 30 items and two dimensions: a dimension representing the conscious contemplation of death and a second dimension representing a negative evaluation of the first. However, only the second factor is regarded as specifically characterizing DA. The first dimension does not correspond to a negative emotional reaction toward death but to the conscious thoughts of the

first. In an analysis of this scale, Klug and Boss (1976) showed that it could be reduced to 14 items, and the factor relating specifically to DA consisted of 5 items. Urien (2001), using CFA, confirmed that the five items found by Klug and Boss (1976) composed a factor relating to DA. It is important to add that DA, as measured by these five items, is considered here to be a general measure. This short version of the DA scale was used in the final questionnaire with three additional buffer items to reduce response bias. Results of the CFA for this DA scale indicated that the uni-dimensionality of the short scale was supported. The fit statistics were all well above the cut-off scores suggested by Hair et al. (1998) with CFI=.99, IFI=.99, and RMSEA=.057. The items all loaded significantly on the single dimension intended with all factor loadings above .5. Coefficient alpha for the scale was .85 indicating high reliability.

Materialism Scale

Materialism has been argued to be a personality trait (Belk 1985) or values related to material goods (Richins and Dawson 1992). Measurement scales have been developed for both perspectives, but the approach most frequently taken is that materialism reflects a set of values. Richins and Dawson (1992) developed and validated a measurement scale, called the material values scale (MVS), that has been validated and used extensively for the last decade. Richins (2004) also developed a short form of the MVS that was used in this study. It contains nine items used to measure each of three constructs, success, happiness, and centrality.

CFA of the MVS scale indicated that the *a priori* dimensions were supported. The fit statistics for the three factor model were CFI=.98, IFI=.98 and RMSEA=.051 which were all well within the cutoff scores suggested by Hair et al. (1998). The items all loaded significantly on the dimensions intended with all factor loadings above .5. Coefficient alpha for the sub-scales were .82 for success, .68 for centrality, and .83 for happiness. In addition, similar to the original scale, the correlations between the dimensions were significant indicating the possibility of a second order factor model. A second order model was tested and found to satisfy all fit criteria as well. Thus, materialism was entered into the structural equation model as a second order factor model with three first order factors.

Quality of Life Scale

For purposes of measuring individual perceptions of QOL, a variation of the Personal Wellbeing Index (PWI) was used. The scale contains eight items measuring different domains of well being. One of the items is a measure of overall satisfaction with one's life. In this application, a seven point Likert scale was constructed to be consistent with the rest of the items in the questionnaire.

While the PWI is typically used as a single dimension with summated ratings, the instrument was subjected to factor analysis and yielded a two factor solution with three items measuring social well-being (safety, security, and community) and five items measuring personal well-being (overall, health, standard of living, achievement, and personal relationships). The two factor model was subjected to confirmatory factor analysis and found to satisfy all of the fit criteria specified with CFI=.96, IFI=.96, and RMSEA=.074. Individual items loaded significantly on their respective latent constructs with all factor loadings above .5. Coefficient alpha for the two sub-scales were .80 for personal QOL and .69 for social QOL. Thus, for the QOL measure, a two dimensional construct was used with the first dimension measuring personal QOL and the second measuring social QOL. These two dimensions are supported by Sen (1999) who argues that there are two paths

to enhancing one's QOL. These roughly equate to the personal and social dimensions of QOL used here. The rationale is that before one can be confident of their personal well-being, there must be social institutions that offer protection for both the individual and their material assets. Thus factors such as community and safety precede personal well-being.

CAUSAL MODEL

The proposed causal model, presented in Figure 1, was tested in the final phase of the study. In the proposed model, it was hypothesized that DA would have a direct influence on materialism. Moreover, as supported in the literature, we hypothesized a path between materialism and the two dimensions of quality of life: a path from materialism to social quality of life and another path from materialism to personal quality of life. In addition, the relationship between DA and materialism was hypothesized to be positive. A direct relationship between materialism and QOL was also hypothesized, but these relationships were hypothesized to be negative. The structural model was tested for overall fit, and the results were acceptable with CFI=0.95, IFI=0.95 and RMSEA=0.048. The analysis of the causal model partially confirmed the hypotheses established. The paths from DA to the second order materialism factor, from materialism to personal quality of life, and from social quality of life to personal quality were all significant. However, the path from materialism to social quality of life was not. In addition, the path coefficients, shown in Figure 1, were all in the predicted directions. The path from DA to materialism was positive, from materialism to personal QOL was negative, and from social QOL to personal QOL was positive. The exception to the hypotheses was, again, the path from materialism to social QOL which was negative as predicted, but not significant.

Finally, to know whether materialism could be considered as a mediating factor between death anxiety and the different factors of quality of life, as suggested by Baron and Kenny (1986), we first used the Lagrange multiplier test to determine if there was a direct relationship between death anxiety and quality of life. Mediation refers to a process by which an independent variable exerts influence on a dependent variable through an intervening variable, or mediator. The first condition indicating a mediation relationship is that the independent variable has a significant effect on the dependent variable. The results indicated that the univariate increment of the Lagrange multiplier test was not significant. Because the first condition was not satisfied, materialism could not be considered as a mediator but only as an intermediate variable between death anxiety and quality of life.

SUMMARY AND CONCLUSIONS

Researchers are consistently seeking new and more complete explanations for existing consumer behavior. Materialism, as a type of consumer behavior, has received significant attention as a part of that agenda. Within the study of materialism, multiple perspectives have been incorporated including the negative consequences of materialism *per se*, the antecedents of materialism, the social and personal outcomes of materialism, and, more recently, the positive personal attributes of materialism. One of the recently introduced constructs considered an antecedent of materialism is death anxiety. It was argued that, because of existential difficulties with death, consumers might adopt consumption strategies that attempt to circumvent their inevitable demise. Growing evidence suggests that this might be the case as DA appears to increase certain aspects of materialism.

Another research stream suggests that materialism as a mode of consumption behavior has consequences for individual percep-

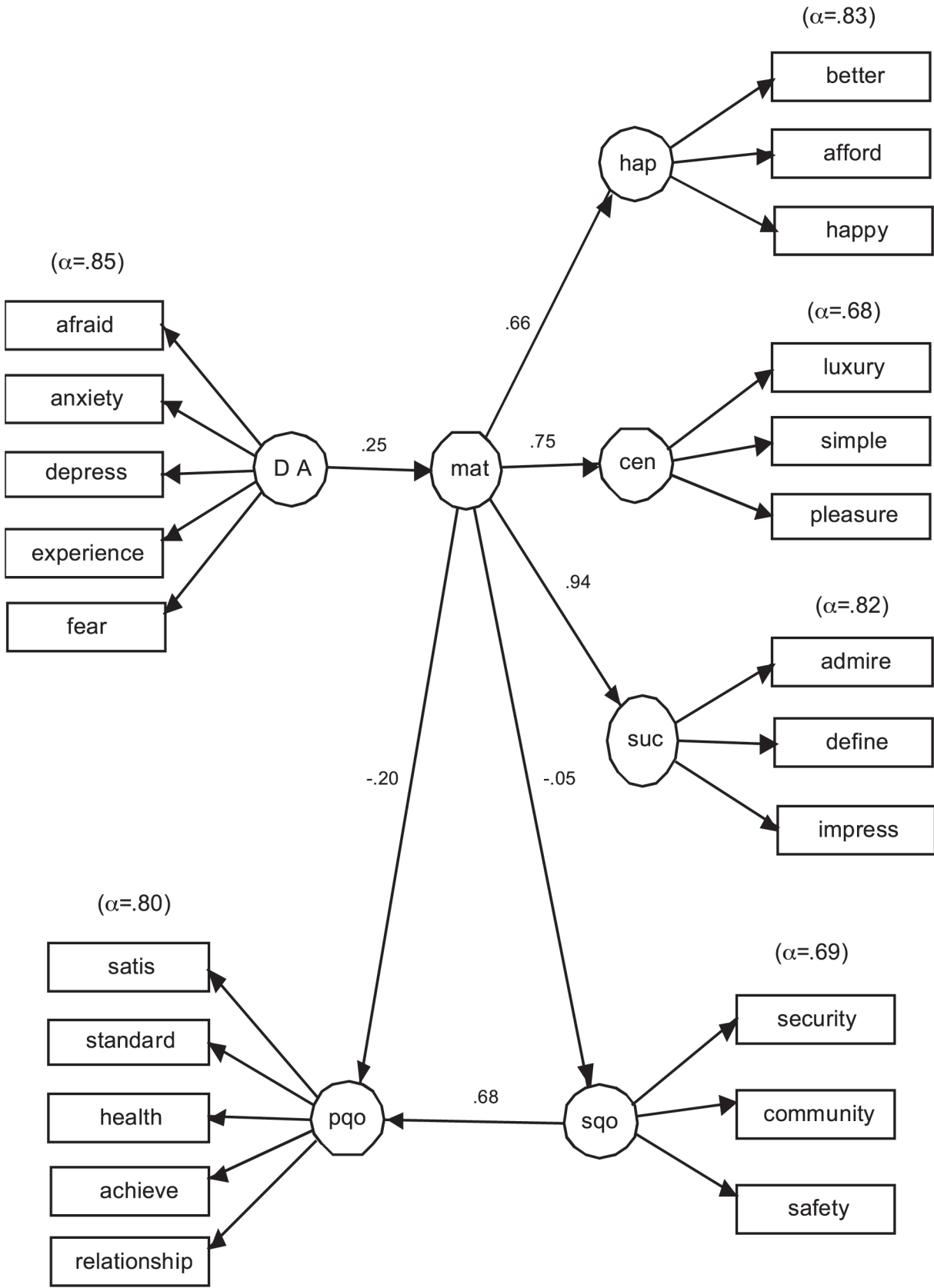
tions of subjective well-being. Substantial research has addressed this issue and found fairly consistently that, while consumers believe that increasing their material possessions will enhance their perceptions of well-being, quite the opposite appears to be the case. Those who believe in the positive relationship between material possessions and QOL seem to be disappointed with their lives in general. Thus, the ideology of consumption suggesting that increased level of material possessions will lead to happiness, is increasingly called into question.

Taking the above results together suggests a causal sequence linking DA, materialism, and QOL. The purpose of this paper was to examine this causal sequence empirically. The results of the study were consistent with previous research on DA and materialism within the US context. But within this research, DA and materialism were considered to be durable dispositions (traits or values). Individuals who experience higher levels of DA showed higher tendencies toward materialism as measured by a reduced form of the MVS. Because the results of the study were consistent with the limited research linking DA and materialism within the US context, this research adds to our knowledge of the relationship. However, we have to be cautious about the conclusions. Although mortality salience situations increase as we age because, as we get closer to our own death, the deaths of relatives (family, friends, etc.) tend to be more frequent, it does not necessarily mean that as we get older, we are more materialistic. Actually, Belk (1985) demonstrated that, as we get older, products and status possessions become less important to our self-image. Rindfleisch and Burroughs (2004) call for further investigation of the discrepancy between TMT concepts and materialism empirics. One possible explanation for the discrepancy is that death anxiety is considered a personality trait in the present study. And many previous empirical studies have shown that death anxiety is somewhat lower on average in senior citizens because of increases in generativity. Then, the more we age and approach death, the less we fear death, and consequently, materialistic tendencies are reduced. Indeed death anxiety, as a trait, slightly and slowly decreases and thus moderates the causal link between a mortality salience condition and materialistic tendencies. As for the link between DA and QOL, the effect is indirect. The effect of DA on QOL was only through the materialism construct. Consequently, materialism could not be considered as a mediator but only as an intermediate variable.

Another contribution of the research relates to the conceptualization and assessment of QOL. In the measure of QOL, it was found that there are two types of QOL, personal and social. While it was hypothesized that materialism would be negatively related to both personal and social QOL, this was not the case. As with previous research, the path from materialism to personal QOL was negative, but the path to social QOL was not. This suggests that individuals who are materialistic are less satisfied with their personal lives as a whole, and this is consistent with previous research. Materialism did not, however, have an effect on social QOL. This suggests that one's perception of community, safety, and security are not directly related to materialistic values. Rather, this aspect of QOL is rooted in other aspects of life than possessions. Consistent with the theory proposed, however, social QOL was directly related to personal QOL.

It was argued that an important character of personal QOL is its security. It is well known that in competitive market societies such as the US, one's well-being is never assured. The vagaries of the market can modify one's opportunities and fortunes very quickly, and the inhabitants of such societies are well aware of this. Because of this character of market societies, feelings of insecurity can rise even as one's success increases. Fromm (1976) addresses

FIGURE 1
Proposed Model of Death Anxiety, Materialism, and Quality of Life



this issue directly in this notion of “characterological having” in which individual well-being is tied directly to what is possessed. While materialism can serve to reduce perceptions of subjective personal well-being, increases in social QOL, unrelated to materialism, increase feelings of security. This yields the paradoxical condition alluded to by Fromm (1976) who argued that, in competitive market societies, individuals can only become secure in their insecurities.

What the results of this study suggest is that among the many factors that may support materialism, DA is a contributing factor in the US. This belies practical philosophy in market societies. While individuals pursue material possessions with almost religious fervor (Bredemeier and Toby 1960), that which they really seek escapes their grasp. The suggestion that materialism has become a religion in the US, takes on enhanced meaning in this context.

The conflation of standard of living with QOL and the juxtaposition of both with immortality suggests that consumption has, in some small sense, taken on the role of religion as an intervention between life and death.

While the conclusions for the present study are only tentative because of its exploratory nature, they are consistent with both previous empirical research and conceptual models of materialism going back more than forty years. The study is certainly limited by the student sample and even more so by the single culture examined. But the results suggest that there is sufficient justification to pursue further research in different ways: 1) While it has been shown that materialism could be an adaptive reaction to a mortality salience condition, it should be very interesting to differentiate the nature and the length of mortality salience. Hence it would be useful to distinguish “death warning” as opposed to “death sentence” or “pending” and “terminal” death. Those differences could help to explain other contradictory results linking death anxiety to more pro-social behaviors demonstrated by financial support for charities (Jones et al. 2002). 2) Finally, a more qualitative approach underlain by Consumer Culture Theory could be used with more representative samples and multiple cultures. On this last point we have seen that some Eastern cultures could be less anxious facing death. In that way, it would be interesting to study the concept of “Death Acceptance” (Wong et al. 1994) and its relationship to Materialism and Quality of life.

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