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Effects of Family Structure on Materialism and Compulsive Consumption: A Life Course Study in Brazil

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ABSTRACT:

Previous studies assume that stress created by changes in family structure plays a role in the development of materialism and compulsive consumption tendencies of youths. The present study provides additional and alternative explanations as possible causal mechanisms; it suggests that social processes account for these consumption orientations among young Brazilians. The parent-child communication styles that are fostered in disrupted families due to depletion of tangible and intangible resources promote the importance of material possessions, while peer influences during adolescent years are positively associated with the impulse-control dimension of compulsive buying in early adulthood. Peers appear to influence the two consumption orientations regardless of the family structure and processes in which the young person is embedded, while television viewing during adolescent years is associated with compulsive consumption tendencies in early adulthood.

Although compulsive consumption and materialism have become topics of interest to researchers globally and across disciplines (e.g., Burroughs & Rindfleisch 2002; Faber et al. 1995; Kwak, Zinkhan, & Dominick 2002; Manolis, Roberts, & Kashyap 2008; McElroy et al. 1994; Sirgy et al. 1998; Roberts, Manolis, & Tanner 2003), these consumption orientations have not been adequately studied in different cultural settings. In addition, because previous studies have suffered from inadequate conceptualization of materialism and compulsive buying and a lack of consensus with regard to theory and measurement, relatively little is known about the reasons for the observed differences in such orientations among consumers.

Researchers have examined materialistic values and compulsive consumption tendencies in the context of either socialization or psychological paradigms, devoting little attention to cultural influences. Studies employing the socialization perspective have focused on the effects of socialization agents (television in particular) as sources of development of materialistic values and compulsive consumption, and they have produced mixed results in different cultural settings (e.g., Cheung & Chan 1998; Kwak et al. 2002; Sirgy et al. 1998). Considerably less attention has been devoted to the influences of other socialization agents, such as family and peers (e.g., Flouri 1999; Moschis et al. 2011; Vu Nguyen et al. 2009).

In contrast, studies relying on the psychological perspective have attributed the development of these orientations to various circumstances in the consumer's life that create emotional states (e.g., stress, self-esteem) and either deter or promote their development (e.g., Faber et al.1995; Rindfleisch et al. 1997). However, such studies outside the U.S. are sparse (e.g., Flouri 1999; Moschis et al. 2011; Vu Nguyen et al. 2009). Furthermore, it is not clear whether and how specific sociological and psychological factors affect people in different cultural settings. The need to study materialism and compulsive consumption in different cultures has been suggested by previous researchers (e.g., Burroughs & Rindfleisch 2002). To our knowledge, no study has examined these orientations among Brazilian consumers.

The present study follows the research tradition in several disciplines which seeks explanations for such behaviors on theories that link childhood experiences to adult maladaptive behaviors by focusing on processes that link childhood adversities to such outcomes (e.g., Hill, Yeung, & Duncan 2001; McLeod & Almazan 2003, Simon et al. 1998), using the life course paradigm as an overarching theoretical framework. First, we present previous efforts to conceptualize compulsive buying and materialism. Second, we present the life course framework that serves as a blue print for organizing and integrating previous research and developing hypotheses relevant to materialism and compulsive consumption. Third, data collected from young adults in Brazil are used to test our hypotheses. Finally, we discuss implications of our findings for theory development and suggest directions for further research.

Background

Previous studies have suffered from inadequate conceptualization of compulsive buying and materialism and a lack of consensus with regard to the measurement of these concepts. For example, some researchers have viewed compulsive buying as a single-dimensional concept, using a screener or a multi-item scale for its measurement (Valence, d'Astous, & Fortier 1988; Faber & O' Guinn 1992), while Ridgway and colleagues (2008) have recently distinguished between the impulse-control and obsessive-compulsive dimensions of compulsive buying. In addition, little theory has been developed in the field of consumer behavior to help understand how or why materialistic values and compulsive buying tendencies develop, although several possible explanations of their origins have been offered (e.g., Faber 1992; Faber et al. 1995; Litt, Pirouz, & Shiv 2011; Rindfleisch et al. 1997). Most researchers, however, view materialistic and compulsive buying orientations as "excessive." In this context, they are considered deviant, anti-social, or maladaptive that have their roots in biological or genetic factors (e.g., neurological, chemical) psychological traits (e.g., low self-control), and sociological factors (e.g., early-life socialization experiences) (e.g., Burnett et al. 2011; Faber 1992; Faber et al. 1995; Litt et al. 2011; McLeod & Almazan 2003; Simon et al. 1998).

Researchers in several disciplines have presented compelling evidence for childhood-adulthood links and have begun to elucidate the mechanisms behind these linkages (McLeod & Almazan 2003). Despite undisputable evidence of the relevance of childhood experiences for later life, relatively little is known about strength and nature of the relationships of childhood adversities to adult maladaptation, the specific mechanisms that account for them, and the conditions under which they hold (McLeod & Almazan 2003). Similarly, although it is recognized that materialism and compulsive behaviors are rooted (at least partly) in early-life experiences (e.g., Rindfleisch et al.1997), little is known about the processes that link early-life experiences to these types of consumer behavior (Rindfleisch et al. 1997).

Given the broad landscape with respect to conceptualization, measurement, and theory, the present study follows the emerging research approaches in several disciplines that seek explanations for such behaviors on theories that link childhood experiences to adult maladaptive behaviors by focusing on processes that link childhood adversities to such outcomes (e.g., Hill et al. 2001; McLeod & Almazan 2003, Simon et al. 1998). These approaches seek to integrate several theoretical perspectives into multitheoretical models that can more fully explain behavior. The present research contends that the life course paradigm (e.g., Elder 1998; Elder et al. 2003) offers a viable framework for studying childhood-adulthood links because it suggests that behavior is embedded in circumstances one has experienced at earlier stages in life; it focuses on the mechanisms that link childhood adversities to materialism and compulsive buying tendencies observed in later life. This paradigm has been used to study similar phenomena of maladaptive behavior, such as the impulse-control disorders of binge-eating and binge-drinking (e.g., Simons et al.1998, 2002), and seems appropriate for studying additional forms of maladaptive behavior—i.e., materialistic orientations and the impulse-control dimension of compulsive buying. While we recognize the importance of obsessive-compulsive dimensions of compulsive buying, this dimension may lend itself to pathological and biological explanations, because recent neuroscience research suggests that such addictions entail genetic or developmental processes that are beyond explanations based on social and psychological consequences of early-life experiences and may require different research approaches (e.g., Burnett et al. 2011; Litt et al. 2011).

The Life Course Paradigm

The life course paradigm, which is considered "one of the most important achievements of social science in the second half of the 20th century" (Colby 1998, p. *x*) and is widely used internationally and across disciplines (Elder, Johnson, & Crosnoe 2003), has flourished in recent decades as a framework that extends across substantive and theoretical boundaries of the social and behavioral sciences (e.g., Elder et al. 2003). It suggests that behavior cannot be studied in isolation from one's experiences or expectations; rather it is embedded within circumstances one has experienced and anticipates at different stages in life. This framework views behavior at any stage in life or given point in time as product of responses to earlier life conditions, including cultural settings, and the way the individual or other units have adapted to these circumstances (e.g., Mayer & Tuma 1990).

The elements of the life course paradigm can be classified into three broad categories: events and circumstances that are experienced at a specific point in time in the person's life course, processes triggered by these events, and outcomes that occur at later points in time which are the consequence or outcome of these processes and earlier in-time-occurred events. The life course paradigm suggests that changing life conditions in the form of life events experienced create physical, social, and emotional demands and circumstances to which one must adapt. Patterns of thought and action at a given stage in life may be viewed as outcomes of a person's adaptation to various demands and circumstances experienced earlier in life, with adaptation entailing the processes of (a) stress and coping responses, (b) socialization, and (c) development or growth and decline. These processes, triggered by earlier-in-life events and moderated by contextual factors (e.g., culture), are the underlying change mechanisms of the three most widely-accepted life course perspectives: *stress*, *normative*, and *human capital*, respectively (Moschis 2007a).

Hypotheses

Stress: The life course model recognizes both negative and positive life events as creators of disequilibrium; they are treated as stressors that elicit response in order to re-establish

psychological equilibrium. Each individual constructs a unique set of strategies to cope with the aversive feelings produced by expected and unexpected events experienced at different stages of life. Though at first effortful, those strategies that help reduce stress are often reinforced and may eventually become conditioned responses that result in the development of patterns of thoughts and actions, such as compulsive consumption tendencies (e.g., Faber et al. 1995).

Evidence based on U.S. studies suggests that the acquisition of material objects and consumption in general are coping strategies (see Moschis 2007b for studies); and recent studies assume stress as a developmental explanation that links the social (family) structure to compulsive behaviors and materialism, both directly as well as indirectly via family resources and family stressors stemmed from family disruption events (e.g., Rindfleisch et al. 1997; Roberts et al. 2003). To the extent that Brazilians use purchasing goods and material possessions as coping strategies, we would expect perceived stress to mediate the relationship between disruptive family events experienced in adolescent years and materialistic and compulsive consumption tendencies exhibited in early adulthood.

H1*: The level of perceived stress associated with disruptive family events mediates the relationship between disruptive family events experienced in adolescence and (a) materialistic and (b) compulsive consumption tendencies in early adulthood.*

*Normative***:** The *normative perspective* assumes that when people experience life events such as marriage, divorce, and retirement that signify transition into important life roles (e.g., spouse, parent, retiree), they are socialized to socially desirable roles; they acquire behaviors, skills, and attitudes consistent with these roles. The socialization process is rather predictable; the socializee is expected to change in response to socialization agents such as the media or peers and to adapt to the requirements of the environment (Mortimer & Simmons 1978).

From a normative perspective, materialistic values are considered socially desirable orientations among U.S. consumers (Easterlim & Crimmins 1991). Theory and research suggest that symbolic consumption norms are most likely to be acquired from mass media (television in particular) and peers, at least in Western countries such as the U.S. (for studies, see Moschis

1987; O'Guinn & Shrum 1997). Cultivation theory suggests that a person's perceptions and behaviors are often shaped by the amount of television to which that person is exposed (O'Guinn & Srum 1997; Kwak et al. 2002). While some research supports the cultivation perspective in the U.S. (O'Guinn & Shrum 1997), cross-country studies of cultivation effects have produced mixed results even in similar cultures of the world (e.g., Cheung & Chan 1998; Kwak et al. 2002). Researchers posit that the inconsistency regarding the impact of television can be explained by the country's cultural context and the values held by the society (Kwak et al. 2002; O'Guinn & Srum 1997); and they have suggested that material possessions are important in cultures which hold collectivistic values, such those of Asia and Latin America (Wong et al. 2003). If materialism is a norm in the collectivistic society of Brazil, its socialization agents such as mass media and peers to which one is exposed should promote the importance of such possessions and their excessive ownership.

H_2: *Television viewing during adolescent years has a positive association with (a) materialistic values and (b) compulsive consumption tendencies of young adults.*

H3: *Peer communication about consumption during adolescent years has a positive association with (a) materialistic values and (b) compulsive consumption tendencies reported as a young adult.*

Human capital: Human capital refers to the resources, qualifications, skills, and knowledge that people acquire and "influence future income and consumption" (Frytak, Harley, & Finch 2003, p. 627). Its development is based on environmental factors that are considered nested, hierarchical, and interrelated structures varying from distal (macro-level) settings (e.g., class, culture) to those located proximally (e.g., family, work). The macro-system defines the character, structure, and environments with which the person is in contact and can interact directly (e.g., family, school, leisure settings) and constitute "the vehicles of behavior change and individual development" (Bolger et al. 1988, p. 2). In contrast with the normative perspective, which considers the outcomes of socialization as predictable and stable, theories of

human capital development allow for change in outcomes, which may include maladaptive and deviant responses (e.g., excessive, compulsive) (Mortimer & Simmons 1978).

Developmental researchers consider the family as a source of human capital (Frytak et al. 2003). The disruption of family due to events in parents' life course (e.g., divorce, parents' discord, increased time dedicated to outside careers discord) are believed to have social and psychological consequences on the young person's development and well-being the rest of his or her life (Elder, George, & Shanahan 1996; Hill et al. 2001), although the specific mechanisms that link the experience of family disruptions to certain outcomes in later life are not very clear (McLeod & Almazan 2003). There is substantial evidence to suggest that family disruptions weaken adult supervision and monitoring of children's behavior (see Hill et al. 2001 for studies) and result in less effective socialization (Amato & Sololewski 2001), making them more susceptible to other socialization agents (mass media and peers in particular) that promote the importance of material possessions (Moschis 1987). Peers are sources of influence on the initiation of several undesirable consumption activities (e.g., cigarette smoking, alcohol consumption, gambling, and shoplifting) (for studies, see Moschis 1987). The self-agency developed and fostered in peer groups may be directed toward constructive or destructive ends (Gecas 2003) and thus may be influenced by interactions with peers who exhibit compulsive buying tendencies. Theories of antisocial or deviant behavior link interaction with deviant peers in early life to problem behavior in later life (e.g., Simons et al. 1998, 2002), including compulsive buying tendencies (d' Astous, Maltais, & Roberge 1990). Research in neuroscience shows that peer influences lead to increased impulsive behavior in teens (Burnett et al. 2011; Steinberg 2008) and the triadic circuit controlling impulsive behavior is actively maturing during adolescence (Litt et al. 2011; Ernst & Fudge 2009) (thus vulnerable to disruption during late development), suggesting possible effects of peer on the development of excessive and obsessive-compulsive buying tendencies. Thus, peer interactions and TV viewing (socialization processes) are expected to mediate the relationship between disruptive life events and materialistic attitudes and compulsive consumer behaviors found in previous studies (Rindfleisch et al. 1997; Roberts et al. 2003).

H4*: The relationship between disruptive family events and materialism is mediated by the (a) frequency of peer communication about consumption and (b) the amount of television viewing during adolescence.*

H5*: The relationship between disruptive family events and compulsive consumption is mediated by the (a) frequency of peer communication about consumption and (b) during adolescence.*

While the negative effects of family disruptions on resources available to the child are well established (Hill et al. 2001; Uhlenber & Mueller 2003), relatively less is known about the effects of resource depletion on the child's development of consumption-related thoughts and habits. Depletion of family resources due to family disruptions affects socialization practices. Specifically, decreased control over the child's activities due to family disruption events places greater emphasis on coercive strategies single parents use to monitor their child's behavior (Conger et al. 1994) and discipline them more harshly (Amato & Sobolewski 2001). This need for tighter supervision is likely to affect the parent's communication style with the child and promote the socio-oriented style, which emphasizes conformity to authority rather than self-expression; it does not promote independence and self-direction, which are characteristic of the concept-oriented family communication style and promote early cognitive development (Moschis 1987).

H6: *A socio-oriented family communication structure is negatively associated with the level of (a) material support and (a) intangible support young adults received from their parents during their adolescent years.*

Research shows that socio-oriented family communication, that is, communication which stresses conformity to social norms and the importance of judging others based on their consumption habits, is likely to promote the importance of symbolic consumption (Moschis 1987). This emphasis on symbolic consumption may contribute to the development of materialistic orientations in youths, since materialism is viewed as an orientation that "emphasizes possessions and money for personal happiness and progress" (Moschis &

Churchill 1978, p. 607). Available evidence, based on a few studies in the U.S. and United Kingdom (Flouri 199; Moschis 1987), show a significant positive relationship between a socio-oriented family communication structure and materialism among adolescents.

Finally, delayed development in cognitive skills is associated with susceptibility to impulsive choices that are precursors to compulsive behaviors (e.g., Pechman, Loughlin, & Leslie 2005; Uhlenber & Mueller 2003). Recent research by Gwin, Roberts, and Martinez (2005) found compulsive buying to be associated with socio-orientation family communication among high school and young adult students surveyed in Mexico. The preceding discussion suggests that:

H_7: *The young adult person's exposure to a socio-oriented family communication structure during adolescent years is positively associated with the strength of his or her (a) materialistic values and (b) compulsive consumption tendencies held in early adulthood.*

The Study

Sample

Researchers in several disciplines of science have presented substantial evidence to support the view that childhood experiences are of paramount influence in shaping thoughts and actions in later life (McLeod & Almazan 2003). We choose our sample based on Wooten's (2006) suggestion that people in late adolescence and early adult developmental stages are young enough to recall their adolescent experiences and old enough to be aware of their compulsive buying tendencies without inhibition. A convenience sample of 177 undergraduate students attending a Brazilian university was used. The average age was 24 (SD = 3 years), which makes the age of sample fairly similar to the ages of samples used in previous studies in other parts of the globe that used retrospective measures of young adults' adolescent experiences (e.g., Benmoyal & Moschis 2009; Moschis et al. 2011; Rindfleisch et al. 1997). Genders were about equally represented (46.3% females and 53.7% males). The survey was self-

administered in class; and the participants remained anonymous by asking them not to write their names on the questionnaire and return it to a secure location to guarantee anonymity.

Measures

We used measures similar to those of previous studies that appeared in leading marketing journals (e.g., Rindfleisch et al. 1997; Roberts et al. 2003; Wong et al. 2003). Because most of these were developed in the U.S, translation into Portuguese was necessary. The questionnaire translation was conducted by one of the authors who is bilingual, followed by a second translation back to the original language by a bilingual Ph.D. student. Furthermore, a bilingual English teacher checked the original questionnaire and its translated version, and confirmed that the translation was done well.

Our *materialism* scale was based on research findings by Wong and her associates (2003), who surveyed consumers in Asian cultures and found that the validity and reliability of the scale developed in the U.S. were improved when items that are posed as statements are replaced with items framed as questions. This change was thought to improve validity and reliability in Latin American countries as well, because consumers in collectivistic countries tend to exhibit high levels of acquiescence (Wong et al. 2003). Six of the 15 items proposed by Wong and colleagues (2003) were not included in our materialism scale, since they were not particularly relevant to younger people (e.g., those that referred to their professional accomplishments) (Appendix). The instructions and the response format the items used to construct this scale were identical to those used by Wong et al. (2003). The alpha reliability of this scale was 0.79.

Because the present study subscribes to views on the development of materialism and compulsive buying popular in other disciplines that are based on psychosocial perspectives, it conceptualizes and measures compulsive buying as an impulse-control disorder; it uses psychological and sociological explanations for impulse-control disorders to explain its development. Specifically, given our focus on the impulse-control disorder, we employed the measure of *compulsive behavior* that was initially developed by Valence and associates (1988) and subsequently used in several studies. It was preferred over other scales because it is

considered a measure of the impulse-control dimension of compulsive buying (Ridgeway et al. 2008) and, in comparison to other available measures of this dimension (e.g., Rindfleisch and colleagues 1997), it was found more reliable in U.S. and non-U.S. cultures, including Asian, French-Canadian, and Mexican youths (e.g., Vu Nguyen & Moschis 2009; Roberts, Gwin, and Martinez, 2004; Roberts et al. 2003). One of the ten items in the scale was not used to improve reliability. The alpha reliability coefficient of this scale was 0.85.

We used the same measure of *peer communication about consumption* that had been used in previous studies (Moschis 1987) (alpha = 0.84). Our *television viewing* measure (Appendix), a summated index of number of hours spent watching television weekly, follows previous studies of television effects (O'Guinn & Shrum 1997).

The *socio-oriented family communication* scale consisted of five items (after purification of the six items originally developed--Appendix). Its alpha was 0.65, which is consistent with the relatively low alphas for this measure in previous studies (Moschis 1987). We obtained the same measures of 10 *disruptive family events* as those used in previous studies (e.g., Rindfleisch et al. 1997; Roberts et al. 2003). However, unlike previous studies, we chose only five events that suggested a direct impact of family on the young person's emotional well-being (Appendix), excluding the remaining events that appear to be the consequence of family disruptions (Amato & Sobolewski 2001), and developed a 0-to-5 point index. From a psychometric standpoint, "the various events are *not* expected to be estimates of a single underlying construct or characteristic and, therefore, should have nothing in common" (Herbert & Cohen 1996, p. 304).

In determining *perceived stress,* we employed the same wording and response format that were used in previous studies (e.g., Rindfleisch et al. 1997; Roberts et al. 2003) and measured this variable retrospectively, summing the stress responses associated with each of the measured disruptive events respondents had indicated they had experienced. Because each event may occur independently from other events, we did not expect this composite

measure of stressful events experienced to have psychological properties and display interval validity or consistency (e.g., Herbert & Cohen 1996).

We used exactly the same items and response format for the *material support* and *emotional support* scales as those of previous studies (e.g., Rindfleisch et al. 1997; Roberts et al. 2003). The alpha reliability coefficient of the eight-item global family support scale was 0.85; for emotional family support and material family support dimensions the reliabilities were 0.86 and 0.77, respectively.

Results

Descriptive statistics and correlations among the variables used in this study are shown in Table 1. Hypotheses 1(a) and 1(b) concern the mediating effects of stress produced by disruptive family events; they were tested using the method suggested by Baron and Kenny (1986). Perceived stress was not found to be a mediator of the relationship between disruptive family events and materialism (H1a), since the effect of disruptive family events on materialism was not significant (B = 0.045, p = 0.901). Similarly, disruptive family events were not associated with compulsive consumption (B = 0.563, p = .182). Also, stress was not associated with compulsive behavior (B = .144, p =.603). These findings do not support H1(b) and suggests that other mechanism mediate the relationship between family disruptions and compulsive consumption.

Hypotheses 2(a) and 2(b) were tested by examining correlation results (Table 1). Hypothesis 2(a), which concerns the relationship between television viewing and materialism, was not supported (r = -0.043, p = 0.572). However, H2(b) that concerns the relationship between television viewership and compulsive consumption was supported (r = 0.231, p <0.01). Correlations were also used to test H3(a) and H3(b), which concern the impact of peer communication about consumption on materialism and compulsive consumption. Both of these hypotheses were supported. The correlation between peer communication and materialism was significant (r = 0.386, p < 0.001) and so was the correlation between peer communication and compulsive consumption (r = 0.388, p < 0.001).

Hypotheses 4(a) and 4(b) posit that the relationship between disruptive family events and materialism is mediated by peer communication and television viewing. These hypotheses were tested using the method suggested by Baron and Kenny (1986). Mediation effects of both peer communication and mass media use were not supported, since the effect of disruptive family events on materialism was not significant (R-Squared = 0.009, F = 0.016, p = 0.901). Hypotheses 5(a) and 5(b) posit peer communication and television viewing as mediators of the relationship between disruptive family events and compulsive consumption. Both hypotheses were tested using the same method used for testing H4(a) and H4(b). The regression coefficient regarding the effect of disruptive family events on compulsive consumption was not significant (R-Squared = 0.101, F = 1.797, p =0.182), suggesting that the effect of disruptive family events on compulsive consumption is not mediated by peer communication. The effect of disruptive family events on television viewing also was not significant, suggesting that television-viewing frequency does not mediate the relationship between family disruptive events and compulsive consumption.

Hypothesis 6(a) and 6(b) posit a negative relationship between socio-oriented family communication and levels of material and intangible family support, respectively. Both hypotheses were supported, as the correlations were -.278 (p<.001) and -.301 (p <.001), respectively, suggesting that depletion of family resources promotes the development of socio-oriented family communication. Hypothesis 7(a) posits a positive association between the socio-oriented structure of family communication and materialistic values. The correlation between the two variables was significant (r= 0.171, p < 0.05) (Table 1), providing support for H7(a). The correlation between socio-oriented family communication and compulsive buying was not significant (r = .112, p =.137), though, providing no support for H7(b).

Additional exploratory analyses uncovered several interesting relationships among the study variables. Disruptive family events not only create stress in young people, as expected, but also deplete tangible and intangible resources (Table 1). Perceived stress from such disruptive events has a positive association with socio-oriented family communication, and it is negatively associated with intangible (but not with tangible) resources. Amount of television

viewing is negatively associated with both disruptive family events and received stressfulness from such events. Finally, perceived stress has a positive association with materialism (Table 1).

Table 1: Descriptive statistics and correlations

	Mean	SD	1	2	3	4	5	6	7	8
1	25.429	5.625	1.000							
2	1.864	2.307	0.052	1.000						
3	15.418	1.987	0.064	0.361**	1.000					
4	27.825	19.268	0.064	0.058	-0.098	1.000				
5	19.633	4.203	0.095	-0.344**	-0.330**	0.035	1.000			
6	11.808	2.126	0.078	-0.153*	-0.099	0.076	0.452**	1.000		
7	27.684	6.167	0.386**	0.009	0.149*	-0.043	-0.063	-0.021	1.000	
8	12.203	3.620	0.133	0.130	0.288**	0.072	-0.301**	-0.278**	0.171*	1.000
9	21.684	7.303	0.388**	0.101	0.039	0.231**	0.010	-0.056	0.304**	0.112

* Correlation is significant at 0.05 level.
* * Correlation is significant at 0.01 level.

Legend

1 – Peer Communication
2 – Disruptive Family Events
3 – Perceived Stress
4 – Hours of Television Viewing
5 – Emotional Family Resources
6 – Material Family Resources
7 – Materialism
8 – Socio-Oriented Communication
9 – Compulsive Consumption

Discussion

As any other cross-sectional study, our study is not without limitations. First, although retrospective measures are commonly used in life course studies, their accuracy may suffer when respondents are asked to recall their experiences into the distant past (Henry et al. 1994). Although we attempted to reduce possible error by surveying young adults who may be able to recall their adolescent experiences, we have no way of assessing the accuracy of their responses. Second, the reliability coefficient of the socio-oriented family communication measure was below acceptable level. Third, our sample was relatively small and may be idiosyncratic (e.g., college students may be coming from more upscale Brazilian families). Finally, the emerged relationships do not suggest causality; they merely serve in falsifying our hypotheses (Popper 1959). Therefore, the reader should exercise caution with respect to the discussion of the findings that should be viewed in the context of the study's limitations. These limitations notwithstanding, the study has produced some interesting relationships that have implications for theory and further research.

Our data show that the experience of disruptive family events during adolescent years creates stress and depletes emotional support provided to adolescents by their parents. Our data do not suggest that the development of impulsive-compulsive buying is the result of stress experienced due to family disruptions. With regard to materialism, although there was no association between experience of disruptive family events in formative years and materialistic values in early adulthood, perceived stress from disruptive family events had a positive association with materialism. These findings suggest that the mere experience of family adversities in early life may be necessary but not sufficient condition for the development of materialistic values. Rather, it is the experience of subjective stress that promotes materialism, suggesting that Brazilians may use consumption to cope with stress, a strategy believed to be common among U.S. consumers (Moschis 2007b).

While our hypotheses regarding the impact of peer communication on materialism and compulsive consumption were supported, our data showed that peers do not mediate disruptive

family events. Thus, it appears that peers influence the two consumption orientations regardless of the family structure in which the child is embedded. The findings of this study are consistent with research in neuroscience that shows that peer influences lead to increased impulsive behavior in teens (Burnett et al. 2011; Steinberg 2008), suggesting that such influences may be contingent upon the youth's developmental stage (e.g., Litt et al. 2011). For example, recent research in neuroscience shows that peer influences lead to increased impulsive behavior in teens (Burnett et al. 2010; Steinberg 2008) because the mechanism controlling impulsive behavior is still developing during adolescence (Litt et al. 2011; Ernst and Fudge 2009). Specifically, the triadic circuit controlling impulsive behavior is actively maturing during adolescence (Litt et al. 2011; Ernst and Fudge 2009), thus potentially making adolescents particularly vulnerable to life disruptions and peer influence. Although neuroscience research shows that susceptibility to peer influences due to biological deficits leads to increased impulsive behavior by teens (Burnett et al. 2010; Ernst and Fudge 2009; Litt et al. 2011; Steinberg 2008), there is evidence to suggest variability in neurological deficit development according to the psychological and social factors that moderate biological development (Elder 1998), a notion that is compatible with the life course paradigm. Thus, research is needed to assess direct biological changes (viewed as events in the life course paradigm), their possible direct and moderating effects on the relationship between the adolescent's experiences of family disruptions and influence of peers on his or her development of obsessive-compulsive buying tendencies.

Results also suggest that Brazilian youths may not acquire symbolic consumption norms from television, a finding that is not consistent with cultivation theory (e.g., O'Guinn and Srum 1997). Kwak and colleagues (2002) and O'Guinn and Srum (1997) suggested that the inconsistency of the effects of television on materialistic values across various studies could be explained by the differences in the general cultural context across countries, specifically the values held by a society. It is thus surprising that television viewing did not have the same effect on materialism as it did on compulsive consumption. This finding could be unique to our sample or may be indicative of a cultural factor; in either case, it points to the need for further research on the effect of television cultivation in other countries. Further, while television viewing during

adolescent years is associated with compulsive consumption in early adulthood, a finding consistent with previous studies (Kwak et a. 2002), this socialization agent does not mediate the emerged relationship between disruptive family events and compulsive behaviors. In fact, exploratory analyses showed those youths who experienced disruptive family events and stress from such adversities spent fewer hours watching television, suggesting that television effects on compulsive buying are not promoted by family adversities. These findings suggest that susceptibility to influence of socialization agents that leads to increased impulsive behavior by teens due to biological deficits is not confined to peer but also applies to television.

With respect to the effects of family communications, our results are consistent with previous findings that a socio-oriented family communication style leads to the development of materialistic orientations (Moschis 1987); they suggest that the socio-oriented family communication environment that stresses conformity to social norms and the importance of judging others as persons based on their consumption habits promotes the importance of symbolic consumption and leads to the development of materialistic values. This type of family communication style was not significantly associated with compulsive consumption in young adults, albeit the emerged relationship was in the expected direction, as it was found in previous research in the U.S. (Gwin et al. 2005). An interesting novel finding is the negative link of socio-oriented family communication style to both tangible and intangible parental support. This may offer a new insight into the mechanism that explains the link between family disruptions and developments and changes in consumption patterns; it underscores the importance of social processes, rather than stress found in previous research (e.g., Rindfleisch et al. 1997), as mechanisms for the development and change in the two consumption orientations.

The normative perspective suggests that most effects of family disruption events are indirect, operating via other factors such as poor quality of social relationships or ineffective parenting (Amato and Sobolewski 2001). Specifically, social control theory suggests that family disruptions weaken adult supervision and monitoring of children's behavior as important means by which children acquire social norms and are discouraged from socially undesirable behaviors (Hill et al. 2001). Prolonged experience of disruptive family events, such as having parents who

are absent due to divorce or long work hours, interferes with socialization and weakens parent-child bonds (Amato and Sobolewski 2001; Uhlenberg and Mueller 2003). Parents in such disruptive families tend to display less warmth toward their children and discipline them more harshly; and they are more likely to argue over the use of limited resources (Amato and Sobolewski 2001; Conger et al. 1994; Hill et al. 2001). This view is supported by our results that show weakening of parent-child bonds as a reduction in intangible resources as well as reduction in material resources available to the child due to family disruptions. It is also supported by the negative relationship between stress induced from family disruptions and intangible resources available to the child. Further, reduction in intangible resources in the forms of lessened parental warmth, understanding, and communicative and caring response by parents is likely to promote the development of a socio-oriented family communication style. This communication style includes coercive strategies through which a parent attempts to maintain control over the child's activities, compared with parents in nondisrupted families who more likely to have a higher level of commitment and involvement in their child's life (Uhlenberg and Mueller 2003). Our findings are also in line with this view, showing a negative relationship between emotional family resources and socio-oriented family communication, which in turn predicts materialism.

The present study helps put previous research on materialism and compulsive buying in a broader context and provides additional and alternative explanations. Researchers have suggested the possibility that social processes may help explain the emerged relationships between family disruptions and materialism and compulsive buying, but they fell short from specifying possible causal mechanisms (e.g., Rindfleisch et al. 1997). The results of the present study suggest that family disruptions deplete parental support, which fosters communication styles that puts children at risk of developing materialistic orientations. However, family adversities and their resultant consequences in the form of depleted parental support and family communication styles do not appear to promote the development of compulsive consumption tendencies. Rather, such orientations appear to stem from interaction with peers and, to a lesser extent from television. The reported frequency of peer communications during the

person's adolescent years was a very strong predictor of both materialistic attitudes and compulsive consumption tendencies reported in early adulthood.

While our study focused on compulsive buying as a consumption orientation that emphasizes lack of impulse control, we recognize that pathological compulsive buying (which includes its adverse consequences to self and others) is an important consumer welfare concept that must be better understood and addressed in future studies. Perhaps human capital and family socialization processes shape general, non-pathological, compulsive buying orientations, while biological and other psychological perspectives better account for the development of pathological compulsive buying that may be viewed as an addiction. Thus, research is needed to assess such direct biological changes (viewed as events in the life course paradigm) on peer influences and their possible effects on the development of obsessive-compulsive buying tendencies. In addition, the role of psychological variables, such as self-esteem and anxiety, should be examined as mediators of family adversities (e.g., socioeconomic hardship, reduction in intangible resources) on compulsive buying, as well as the moderating effects of such psychological variables on the influence of other socialization agents, especially peers, on compulsive buying and materialistic consumption tendencies (e.g., Chaplin & John 2007; Moschis 2007b). Such efforts would require the employment of longitudinal designs.

By viewing previous studies within the broader life course framework, this study has offered additional and alternative explanations for the development of materialistic values and compulsive buying tendencies. While the study tested the hypothesized relationships in one cultural setting, its results underscore the need for research in various cultural settings, as well as the use of additional variables and more rigorous methods of data collection, measurement, and analysis. For example, depletion of resources may not only lead to ineffective socialization practices but it might also impair self-esteem that has been linked to the two consumer variables (e.g., Chaplin & John 2007; Moschis 2007a, 2007b). The study of such effects would require longitudinal designs because the reliability of psychological constructs tends to suffer when they are measured retrospectively into the distant past (Henry et al. 1994). Although our study could

not assess such psychological consequences of family disruptions at the time or shortly after they occurred during our respondents' adolescent years, it is hoped that it has provided a blue print for further research.

References

Amato, Paul R. and Juliana M. Sobolewski (2001), "The Effects of Divorce and Marital Discord on Children's Psychological Well-Being," *American Sociological Review,* 66, 900-21.

Baron, Reuben M. and David A. Kenny. (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology*, 51 (December), 265-280.

Benmoyal-Dauphie, Sarah and George P. Moschis **(**2010), "Effects of Family Structure and Socialization on Materialism: A Life Course Study in France," *Journal of Marketing Theory and Practice,* 18 (Winter), 53–69.

Bolger, Niall, Avshalom Caspi, Geraldine Downey, and Martha Moorehouse (1988), *Persons in Context: Developmental Processes*. Cambridge, UK: Cambridge University.

Burnett, Stephanie, Catherine Sebastian, Kathrin Kadosh, and Sarah-Jayne Blakemore (2011), "The Social Brain in Adolescence: Evidence from Functional Magnetic Resonance Imaging and Behavioural Studies," *Neuroscience Biobehavioral Reviews*, 35 (8), 1654-1664.

Burroughs, James E. and Aric Rindfleisch (2002), "Materialism and Well-Being: A Conflicting Values Perspective," *Journal of Consumer Research*, 29 (December), 348-370.

Chaplin, Lan Nguyen and Deborah Roedder John (2007), "Growing Up in a Material World: Age Differences in Materialism in Children and Adolescents," *Journal of Consumer Research,* 34, 480–493.

Cheung, Chau-Kiu and Chi-Fai Chan (1998), "Television Viewing and Mean World Value in Hong Kong's Adolescents," *Social Behavior and Personality*, 24(4), 351-364.

Colby, Ann (1998), "Foreword: Crafting Life Course Studies," in J.A. Giele and Glen H. Elder, eds. *Methods of Life Course Research: Qualitative and Quantitative Approaches.* Thousand Oaks, CA: Sage.

Conger, Rand D., Xiaojia Ge, Glen H. Elder, Frederick O. Lorenz, and Ronald L. Simons (1994), "Economic Stress, Coercive Family Process, and Developmental Problems of Adolescents," *Child Development* 65, 541-561.

d'Astous, Alain, Julie Maltais, and Caroline Roberge (1990), "Compulsive Buying Tendencies of Adolescent Consumers," in M. E. Goldberg, G. Gorn, and R. W. Pollay, eds. *Advances in Consumer Research Volume 17*, Provo, UT: Association for Consumer Research, pp. 306-312.

Easterlin, Richard A. and Eileen M. Crimmins (1991), "Causes of Recent Changes in the Values of American Youth," *Public Opinion Quarterly*, 55(4), 499-533.

Elder, Glen H., Jr. (1998), "The Life Course as Developmental Theory," *Child Development,* 69 (February), 1-12.

Elder, Glen Jr., M. Kirkpatrick Johnson, and R. Crosnoe (2003), "The Emergence and Development of Life Course Theory," in JeylanT. Mortimer and Michael J. Shanahan, eds. *Handbook of the Life Course*, New York: Plenum Publishing, pp. 3-19.

Elder, Glen H. Jr., Linda K. George, and Michael J. Shanahan (1996), "Psychosocial Stress over the Life Course," in Howard B. Kaplan, ed. *Psychosocial Stress: Perspectives on Structure, Theory, Life Course, and Methods,* Orlando, FL: Academic Press, pp. 247-292.

Ernst, Monique and Julie L. Fudge (2009), "A Developmental Neurobiological Model of Motivated Behavior: Anatomy, Connectivity and Ontogeny of the Triadic Nodes," *Neuroscience and Biobehavioral Reviews,* 33 (3), 367–382.

Faber, Ronald J. (1992), "Money Changes Everything: Compulsive Buying From A Biopsychosocial Perspective," *American Behavioral Scientist*, 35(July), 809-819.

Faber, Ronald J., Gary A. Christenston, Martina De Zwann, and James Mitchell (1995), "Two Forms of Compulsive Consumption: Comorbidity of Compulsive Buying and Binge Eating," *Journal of Consumer Research,* 22 (December), 296-304.

Flouri, Eirini (1999), "An Integrated Model of Materialism: Can Economic Socialization and Maternal Values Predict Materialistic Attitudes in Adolescents?" *Journal of Socio-Economics,* 28(6), 707-724.

Frytak, Jennifer, Carolyn R. Harley, and Michael D. Finch (2003), "Socioeconomic Status and Health over the Life Course," in Jeylan T. Mortimer and Michael J. Shanahan, eds. *Handbook of the Life Course,* New York, Plenum Publishing, pp. 623-643.

Gecas, Victor (2003), "Self Agency and the Life Course," in Jeylan T. Mortimer and Michael J. Shanahan, eds. *Handbook of the Life Course,* New York: Plenum Publishers, pp. 369-388.

Gwin, Carol F., James A. Roberts, and Carlos Rudy Martinez (2005), "Nature vs. Nurture: The Role of Family in Compulsive Buying," *Marketing Management Journal*, 15 (1), 95-107.

Henry, Bill, Terrie E. Moffitt, Avshalom Caspi, John Langley, and Phil A. Silva (1994), "On the 'Remembrance of Things Past': A Longitudinal Evaluation of the Retrospective Method," *Personality Assessment,* 6(2), 92-101.

Herbert, T. B., and S. Cohen (1996), "Measurement Issues in Research on Psychosocial Stress," in H. B. Kaplan, ed. *Psychosocial Stress: Perspectives of Structure, Theory, Life Course, and Methods,* San Diego, Academic Press, pp. 295-332.

Hill, Martha S., Wei-Jun J. Yeung, and Greg J. Duncan (2001), "Childhood Family Structure and Young Adult Behaviors," *Journal of Population Economics,* 14, 271-299.

Kwak, Hyokjin, George M. Zinkham, and Joseph R. Dominick (2002), "The Moderating Role of Gender and Compulsive Buying Tendencies in the Cultivation Effects of Television Shows and TV Advertising: A cross Cultural Study between United States and South Korea," *Media Psychology*, 4, 77-111.

Litt, A., D. M. Pirouz, and Baba Shiv (2011), "Neuroscience and Addictive Consumption," in D. Mick, S. Pettigrew, C. Pechman, and J. Ozanne, eds. *Transformative Consumer Research for Collective and Personal Well Being,* New York: Taylor & Francis, pp. 523-542.

Manolis, Chris, James A. Roberts, and Vishal Kashyap (2008), "A Critique and Comparison of Two Scales From Fifteen Years of Studying Compulsive Buying," *Psychological Reports*, 102, 153-165.

Mayer, Karl Ulrich and Nancy B. Tuma (1990), "Life Course Research and Event History Analysis: An Overview," In Karl Ulrich Mayer and Nancy B. Tuma, eds. *Event History Analysis in Life Course Research*, Madison, WI: University of Wisconsin Press, pp. 3-20.

McElroy, S. L., P. E. Kleck, Jr., H. G. Pope, Jr., J. M. Smith, and S. M. Strakowski (1994), Compulsive Buying: A report of 20 cases. *Journal of Clinical Psychiatry*, 55 (6 June), 242-248.

McLeod, Jane D., and Elbert P. Almazan (2003), "Connections Between Childhood and Adulthood," in Jeylan T. Mortimer and Michael J. Shanahan, eds. *Handbook of the Life Course,* New York, Plenum Publishing, pp. 391-412.

Mortimer, Jeylan T. and Roberta G. Simmons (1978), "Adult Socialization," *Annual Review of Sociology*, 4, 421-454.

Moschis, George P. (1987), *Consumer Socialization: A Life-Cycle Perspective,* Boston: Lexington.

Moschis, George P. (2007a), "Life Course Perspectives on Consumer Behavior," *Journal of the Academy of Marketing Science,* 35(2), 295-307.

Moschis, George P. (2007b), "Stress and Consumer Behavior," *Journal of the Academy of Marketing Science*, 35 (3), 430-344.

Moschis, George P. and Gilbert A Churchill. (1978), "Consumer Socialization: A Theoretical and Empirical Analysis," *Journal of Marketing Research*, 15(4), 599-609.

Moshcis, George P., Fon Sim Ong, Anil Mathur, Takako Yamashita, and Sarah Benmoyal-Dauphie (2011), "Socialization Influences on Materialism: A Cross-Cultural Life-Course Approach," *Journal of Asian Business Studies,* 5 (2), 124-144.

O'Guinn, Thomas C. and L. J. Shrum (1997), "The Role of Television in the Construction of Consumer Reality," *Journal of Consumer Research*, 23 (March), 278-294.

Pechman, Cornelia, Linda Levine, Sandra Loughlin, and Frances Leslie (2005), "Impulsive and Self-Conscious: Adolescents' Vulnerability to Advertising and Promotion," *Journal of Public Policy and Marketing,* 24 (2), 202-221.

Popper, Karl (1959), *The Logic of Scientific Discovery*. New York: Basic Books.

Ridgway, Nancy M., Monika Kukar-Kinney, and Kent B. Monroe (2008), "An Expanded Conceptualization and a New Measure of Compulsive Buying," *Journal of Consumer Research*, 35 (4), 622-39.

Rindfleisch, Aric, James E. Burroughs, and Frank Denton (1997), "Family Structure, Materialism and Compulsive Consumption," *Journal of Consumer Research,* 23(4), 312-325.

Roberts, James A., Chris Manolis, and John F. Tanner, Jr. (2003), "Family Structure, Materialism, and Compulsive Buying," *Journal of the Academy of Marketing Science.* 31(3), 300-311.

Roberts, James A., Carol F. Gwin, and Carlos Rudy Martinez (2004), "The Influence of Family Structure on Consumer Behavior: A Re-Inquiry and Extension of Rindfleisch et al. (1997) In Mexico," *Journal of Marketing Theory and Practice*, 12 (1), 61-79.

Simons, Ronald L., Christine Johnson, Rand D. Conger, and Glen H. Elder, Jr. (1998), "A Test of Latent Trait Versus Life-Course Perspectives on the Stability of Adolescent Antisocial Behavior," *Criminology*, 36, 863-891.

Simons, Ronald L., Eric Stewart, Leslie C. Gordon, Rand D. Conger, and Glen H. Elder, Jr. (2002), "A Test of Life-Course Explanations for Stability and Change in Antisocial Behavior From Adolescence to Young Adulthood," *Criminology*, 40 (2), 401-434.

Sirgy, M. Joseph, Dong-Jin Lee, Rustan Kosenko, H. Lee Meadow, Don Rahtz, Muric Cicic, Guang Xi Jin, Duygun Yarsuwat, David L. Blenkhom, and Newell Wright, (1998), "Does Television Viewership Play a Role in the Perception of Quality of Life?" *Journal of Advertising,* 27(1), 125-142.

Steinberg, Laurence (2008), "A Social Neuroscience Perspective on Adolescent Risk-Taking," *Developmental Review,* 28 (1), 78–106.

Valence, Gilles, Alain d'Astous, and Louis Fortier (1988), "Compulsive Buying: Concept and Measurement," *Journal of Consumer Policy*, 11 (September), 419-433.

Vu Nguyen, H., George P. Moschis, R. Shannon, and K. Gotthelf (2009), "Effects of Family Structure and Socialization on Compulsive Consumption: A Life Course Study in Thailand," *Journal of Global Academy of Marketing Science,* 33, 483-495.

Uhlenberg, P. and M. Mueller (2003), "Family Context and Individual Well-Being," in Jeylan T. Mortimer and Michael J. Shanahan eds. *Hand-Book of the Life Course,* New York: Plenum Publishing, pp. 123-148.

Wong, Nancy, Aric Rindfleisch, and James E. Burroughs (2003), "Do Reverse-Worded Items Confound Measures in Cross Cultural Consumer Research? The Case of Material Value Scale," *Journal of Consumer Research*, 30, 72-91.

Wooten, David B. (2006), "From Labelling Possessions to Possessing Labels: Ridicule and Socialization Among Adolescents," *Journal of Consumer Research*, 33 (September), 188-98.

Appendix

Measures of selected variables

Materialism

1. Do you feel that you have all the things you really need to enjoy life?
2. How do you feel about having a lot of luxury in your life?
3. How do you feel about acquiring material possessions as an achievement in life?
4. Would your life be any better if you owned certain things that you don't have?
5. How do you feel about people who own expensive homes, cars, and clothes?
6. How much pleasure do you get from buying things?
7. How do you feel about things you own?
8. How do you feel about owning things that impress people?
9. How do you approach your life in terms of your life possessions (i.e., buying and owning things)?

Socio-Oriented Family Communication

1. Say that their ideas were correct and you shouldn't question them.
2. Say that you should give in on arguments rather than making people angry.
3. Answer your arguments by saying something like "You'll know better when you grow up."
4. Say that you shouldn't argue with adults.
5. Say that the best way to stay out of trouble is to keep away from it.

Television Viewing

Approximate number of hours spend weekly viewing the following on television: News, soap operas, action and adventure shows, sport events, drama shows, movies, comedy shows, other (write in number of hours)

Disruptive Family Events

The respondent's experience of the following events before their 18th birthday:

1. Frequent time periods in which one or both parents were absent
2. Loss(other than death) or separation from a family member or loved one
3. Arguments between parents or other family members
4. Move(s) to a new place of residence
5. Physical abuse by parents or close family members.