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Source: *Journal of Consumer Research*, (-Not available-)
Published by: The University of Chicago Press
Stable URL: http://www.jstor.org/stable/10.1086/680087
Accessed: 08/01/2015 14:15

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Material Parenting: How the Use of Goods in Parenting Fosters Materialism in the Next Generation

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Abstract

This research introduces the concept of material parenting, in which parents use material goods to express their love or to shape children's behavior. Despite the common use of material goods for these purposes, possible long term effects of material parenting practices have not been studied. This article addresses this oversight by examining the potential effects of material parenting on the material values of children once they're grown. This research proposes and tests a material parenting pathway, in which warm and supportive parents provide children with material rewards that in the long run foster materialism in adulthood. An insecurity pathway to materialism, previously proposed in the literature, is also examined. Results from three survey studies provide support for both pathways. Results also suggest that material parenting may influence children's material values by (possibly unintentionally) encouraging them to use possessions to shape and transform the self.

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Parents use material goods every day in their interactions with children. Besides providing children with such basics as food, shelter, and a warm winter coat, parents give them a large number of discretionary goods, among them toys, electronic devices, and trendy clothes. Often these discretionary items have a practical purpose. At other times, purchases are made simply because the parent loves the child and wants to buy something that brings the child joy. In fact, the crowded closets and overflowing toy bins in most middle class homes may be considered a testament of how much parents love their children.

Parents also use material things to shape their children's behaviors. For example, parents may take things away as a discipline for disobedience or a consequence for neglect of responsibilities, or they may buy a desired toy to reward a child's accomplishments or good behavior such as successful toilet training, doing chores, or achieving a target GPA.

In this article, we introduce the concept of material parenting, in which parents use material goods to express their love or to shape children's behavior. Despite the common use of material goods for these purposes, the long term effects of material parenting practices are unknown. Although personal values are acquired in childhood, with the family playing a key role (Parke and Buriel 2006), we know surprisingly little about the long term effects of parental practices and, in particular, the use of material goods in parenting, on later (adult) consumer values such as materialism. Understanding how parenting may affect the development of materialism is important because materialism in adults is associated with several characteristics that most parents hope to protect their children from. For example, materialistic people are more likely to be compulsive purchasers (Ridgway, Kukar-Kinney, and Monroe 2008) or gamble (Mowen, Fang, and Scott 2009). They also tend to have more debt (Watson 2003), more frequent financial problems (Dowling, Corney, and Hoiles 2009), and lower marital satisfaction (Dean, Carroll, and Yang 2007).

This research examines how the use of material things by parents may affect their children's material values in a way that persists into adulthood. In doing so, we propose a material parenting pathway to materialism in which parental warmth is associated with the provision of material rewards, which in turn can foster later (adult) materialism. At first glance, this proposed pathway may seem at odds with findings that parental warmth is negatively associated with children's materialism (Kasser et al. 1995). Our research resolves this apparent contradiction by examining the potential effects of parental warmth on different facets of materialism. Our research also addresses the question of *how* material parenting influences materialism. Thus, our research has three objectives: first, to describe and test the material parenting pathway; second, to examine whether the material parenting pathway complements or conflicts with earlier findings concerning parental warmth and materialism; and third, to examine one of the mechanisms by which material parenting may affect materialism.

In addressing these objectives, this research contributes both to discussions about the development of materialism and an expansion of values socialization theory. Prior research on values socialization has focused on actively shaping children's behavior and values so that children eventually adopt values their parents want them to have (Grusec 2011). We extend this research by showing how parents' actions may lead their children to develop an adulthood value that researchers have linked to undesirable characteristics. Moreover, this research paves the way for a shift in attention to include reward practices in the study of parenting. Socialization research has focused heavily on the process of identification and the effective use of disciplinary actions in values acquisition (Eisenberg and Valiente 2002; Grusec 2002); it has given little attention to how rewards may influence the values that children acquire. The research reported

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here suggests that reward practices can have a significant impact on the formation of values.

CONCEPTUAL OVERVIEW

In the consumer behavior literature, materialism is commonly defined as the importance consumers place on material goods as a means for reaching important life goals. Materialism is typically viewed as having three facets: a tendency to judge one's own success and that of others in terms of material possessions, a belief that acquisition leads to happiness, and the centrality of acquisition in a consumer's life (Richins and Dawson 1992). We adopt this view of materialism in our research on parenting's long term effects on adult consumers' materialistic values.

In discussing parenting effects on children, it is helpful to distinguish between parenting style and parenting practices. *Parenting style* is "a constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parent's behaviors are expressed" (Darling and Steinberg 1993, 488). In contrast, *parenting practices* are specific behaviors carried out by parents with specific socialization goals within a specific context. Being a warm and supportive parent, for example, is an expression of parenting style and is independent of context. Specific parental behaviors, such as providing rewards or punishments, are parenting practices that occur within specific socialization domains (e.g., academic achievement, family chores). Parenting style and parenting practices are discussed separately below.

Parenting Style and Materialism

Although characterizations of parenting style are varied, there is universal agreement in the literature that a parenting style reflecting nurturance, acceptance, or responsiveness to a child is of central importance to the child's well-being (Baumrind 1991; Maccoby and Martin 1983). To simplify exposition, we refer to this dimension as parental warmth. Parental rejection has been identified as another element of parenting style that also has an important impact on some child outcomes (Rohner 2004). Although parental rejection has not been examined in the context of materialism, studies have observed a negative relationship between parental warmth and children's materialism (Chaplin and John 2010; Flouri 2004; Kasser et al. 1995), suggesting that parental warmth may curb materialism.

Parenting Practices and Materialism

Although studies have examined the relationship between parenting style and materialism, essentially no research has examined how parenting practices concerning rewards and punishments may relate to materialism. This is a notable lack, given the extensive literature on the importance of parenting practices in the formation of children's values (Eisenberg and Valiente 2002).

However, there is a large body of literature on parenting practices and values socialization more generally. This literature has focused primarily on socialization of moral and pro-social values, such as honesty, respect for others, and cooperation. The primary focus of this literature has been on parents' disciplinary practices and children's internalization of the positive values espoused by their parents. Authors have also stressed the disciplinary message that accompanies a disciplinary action and the role of these messages in value internalization (Buck,

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Vittrup, and Holden 2007; Grusec 2012; Grusec and Goodnow 1994).

While there have been many studies on discipline or punishments, the research on how *rewards* affect values socialization is much more limited. These studies show that tangible rewards are effective for inducing desirable behavior in the short term, but such rewards can be poor agents of socialization because they undermine intrinsic motivation (Deci, Koestner, and Ryan 1999; Grusec 2002). As a result, rewards are seen as unlikely to produce internalization of a desired value. While agreeing with the major findings in this area of research, we view the absence of studies that examine the role of rewards in the socialization literature to be a significant oversight, given the frequency with which parents use tangible rewards in so many elements of parenting, from M&M treats for successful toilet training episodes to the "gift" of an electronic device for reaching a target GPA.

The socialization literature is also limited by its focus on purposive socialization. Although most parents consciously try to shape their children's pro-social behavior through tangible rewards and punishments, they are less likely to devote the same attention and care to prevent materialistic values beyond abstract reminders that "many children have a lot less than you do" and aphorisms along the lines of "money doesn't buy happiness."

Despite these limitations, there are two key conclusions we can take from the values socialization literature. First, parents send children both implicit and explicit messages with their disciplinary and reward practices. Second, children interpret these messages, and over time come to internalize them (Goodnow 1992; Grusec and Goodnow 1994). The role of these messages in values socialization suggests how material parenting practices might influence the development of material values in children that persist into adulthood. This process, which we refer to as the material parenting pathway, is described in more detail below.

The Material Parenting Pathway

Material parenting is the use of material rewards and punishments by parents in their interactions with children. In the material parenting pathway, we propose that parental warmth encourages parents to engage in material parenting, and this material parenting in turn can foster the formation of material values in children that persist into adulthood. The material parenting pathway is shown in the top panel of figure 1.

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Insert figure 1 about here

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There is some evidence for the first step of this pathway. As noted by Clarke et al. (2014) and readily observed in everyday life, parents who have warm, supportive relationships with their children enjoy providing for them and giving them things that make them happy. Consistent with this notion, some scholars include the provision of material resources in the definition of parental warmth (Grolnick 2003), and have suggested that money can become a symbol of love and care when money is used to pay for material things that make children happy (Haugen 2005). Accordingly, we propose that

H1: Parental warmth is positively associated with the provision of material rewards to children.

In step two of the pathway, we propose that material parenting can lead to materialism. In our conceptualization, material parenting has three components, each of which may influence the

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values a child acquires.

Conditional material rewards are a kind of compensation for good behavior. Buying things for children as a reward for accomplishments or good behavior is an example of conditional material rewards. There is usually an explicit message associated with such rewards. For example, when giving a child a new phone as a reward for making the soccer team, a parent may comment about how proud she is of the child's accomplishment or of the child's hard work and persistence in achieving this goal. However, the reward also sends an implicit message of a different nature. The implicit message may be that satisfaction is not a sufficient reward for accomplishment, but that a material reward is needed as well. In addition to undermining intrinsic motivation, this implicit message when repeated often enough can set the stage for future habits of material self reward and materialistic behavior in response to accomplishments.

Conditional material rewards may influence materialism in other ways as well because they are so closely tied to the success facet of materialism. Children whose accomplishments are rewarded with desirable material goods will come to associate acquisition and ownership of desirable goods with accomplishment and success. This association between possessions and success is one of the hallmarks of materialism (Fournier and Richins 1991; Richins and Dawson 1992). In addition, the pleasure experienced by the child basking in a parents' approval may transfer via classical conditioning to the acquisition of the material reward, further enhancing materialistic tendencies in the child. Hence,

H2: Materialism in adults is positively associated with the frequency of receiving conditional material rewards from parents during childhood.

Unconditional material rewards involve giving the child desired items without requiring any specific performance. These rewards are often given out of love for a child, and parents experience delight in seeing the child's pleasure when receiving a desired object. In other cases, material gifts assuage a parent's guilt for not spending more time with a child or to end a child's repeated (and exasperating) requests for a product. Regardless of parents' motivations for providing these rewards, frequently receiving material goods may be habit forming, in the sense that getting things can be fun and expected, and children who frequently receive things may come to see that as normal. Consequently, when these children grow up, they may tend to place importance on acquisition as a central part of their lives, another hallmark of materialism.

H3: Materialism in adults is positively associated with the frequency of receiving unconditional material rewards from parents during childhood.

Material punishments involve taking a valued possession from the child, either temporarily or permanently, as a consequence for a misdeed or failure. Taking a favorite toy from a child who bullies a sibling or removing a game box as a consequence for poor grades are examples of material punishment. One possible outcome of this discipline strategy is that the loss of a possession may make its importance increase in the child's eyes (Brehm 1981; Hammock and Brehm 1966). Repeated instances of this sort of discipline may lead to an escalation of the importance the child places on possessions, in general, a defining characteristic of materialism.

H4: Materialism in adults is positively associated with the frequency of receiving material punishments (as a consequence for misbehavior) from parents during childhood.

Together, hypotheses 1 through 4 describe the material parenting pathway to materialism. Parental warmth leads parents to utilize material parenting in socializing their children, which in turn unintentionally fosters materialism in these children that persists into adulthood.

However, a possible qualifying factor relates to the conditions under which material

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parenting occurs. A common observation is that some parents tend to give their children material things as a substitute for spending time with them, perhaps to assuage their guilt for being too busy to be emotionally supportive of their children or involved in their lives (Bredehoft et al. 1998; Kasser 2002). It is possible that when material rewards are given in the absence of parental warmth, and without the protective benefits conferred by parental warmth and support, the effects of these rewards on materialism will be stronger than if these rewards are provided as an expression of parents' warm feelings. In other words, parental warmth and material rewards may interact in the formation of materialism. Although we do not provide a hypothesis for the interaction between parental warmth and material rewards, we do explore this possible relationship in our study analyses.

An Insecurity Pathway to Materialism

Although we propose in the material parenting pathway that warmth can foster materialism, this is somewhat at odds with previous findings of a negative relationship between parental warmth and materialism. To address this apparent inconsistency, this research also examines a pathway to materialism suggested by Kasser (2002). He postulated that a parenting style characterized by a lack of nurturance or warmth creates insecurity in children and, further, that this sense of insecurity fosters materialism.

As noted above, studies have verified the proposed negative relationship between parental warmth and materialism. These studies, however, have examined only the endpoints of the process postulated by Kasser (i.e., parental warmth and materialism) and have not addressed the role of insecurity. The one exception (Chaplin and John 2010) found evidence for both steps in the insecurity pathway among children, but did not study long term (adult) materialism.

Because the research concerning the insecurity pathway is limited, and because it is at apparent odds with the proposed material parenting pathway, we examine this pathway in our research by testing the following hypotheses.

H5: Parental warmth is negatively associated with insecurity experienced in childhood.

H6: Insecurity experienced in childhood is positively associated with materialism in adulthood.

In our tests of these hypotheses, we elaborate on the insecurity pathway proposed by Kasser in two ways. First, we expand the conceptualization of parenting style as it relates to insecurity. While Kasser focuses on the warmth aspect of parenting style, scholars have also noted the important influence of rejection or neglect on a child's behaviors and feelings of insecurity (Akse et al 2004; Brown and Whiteside 2008). Parental acceptance-rejection theory (Rohner 2004; Rohner and Khaleque 2005) places a high importance on the impact rejection has on a child and argues that rejection should be assessed separately from warmth. Therefore, in addition to testing the relationship between parental warmth and insecurity, we also test the relationship between parental rejection and insecurity, which has received less attention.

Second, we elaborate on the construct of insecurity. Although Kasser speaks of "feelings of insecurity" in somewhat general terms, we elaborate this by measuring two forms of insecurity—personal insecurity and social insecurity. Personal insecurity involves a lack of confidence in one's self or one's abilities, while social insecurity involves a lack of confidence in one's social relationships (Chang and Arkin 2002; Rindfleisch, Burroughs, and Wong 2009). The insecurity pathway proposed by Kasser, with our elaborations, is shown in the bottom panel of figure 1.

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Integrating the Pathways

The material parenting and insecurity pathways make different predictions. As shown in figure 2, which integrates the two pathways, warmth encourages parents to engage in material parenting, which ultimately leads to materialism. But warmth also reduces childhood insecurity, which leads to lower materialism. The second objective of this research is to examine whether the material parenting pathway complements or conflicts with the insecurity pathway described in the literature, and examination of this integrated pathway addresses that objective. As we will show in our presentation of studies and results, the answer to this apparent conflict lies in the finding that material parenting and insecurity affect different facets of materialism.

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The Role of Material Rewards in Shaping and Transforming the Self

The third objective of our research is to examine *how* material parenting might affect materialism. A possible mechanism for this effect relates to the nature of material rewards and their relationship to the development and transformation of the self, which are discussed below.

Although the values socialization literature has been largely silent about the use of rewards in values acquisition, we give rewards priority in the formulation of material parenting because of the powerful role of rewards in facilitating learning (Gazzaniga, Heatherton, and Halpern 2012; Zimmerman 1990) and the frequency with which they are used by parents to shape children's behavior. One possible explanation for how material rewards may influence material values is the usefulness of these rewards in developmental tasks.

Childhood and adolescence are times of immense learning and involve the mastery of many skills. Havighurst (1948/1972) called the acquisition of these skills "developmental tasks" (Kirchler, Palmonari, and Pombeni 1993). Some developmental tasks involve acquiring concrete skills like self-care, mastering academic subjects like reading and mathematics, and learning to drive. But many developmental tasks involve social and psychological skills, such as gaining autonomy from parents, navigating relationships with peers, and—one of the most fraught tasks of adolescence—gaining an acceptance and understanding of one's personal identity.

Children have many resources to draw upon when carrying out developmental tasks—their parents, institutions such as school and church, and their own developing personal resources that include acquired skills, personality characteristics, intelligence, and wit. In developing personal identity, for example, children come to know who they are by the feedback they receive from parents, teachers, and peers; by applying the skills they possess, such as the ability to score a soccer goal, play a clarinet, or tell a good joke; and by how people respond to expressions of these abilities. Material goods also can serve as a resource in carrying out the developmental task of identity creation (Belk 1988). The clothes a child wears and possessions like electronic devices can become central to the creation of identity, and some children may be more prone to use possessions in this way than others.

The developmental task of creating the self is difficult, and children rely on resources that are readily available to them for the task. Thus, one way that material parenting may lead to materialism is that children who own a lot of possessions (received through material parenting)

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have many opportunities to use these possessions in their task of developing and expressing identity; over time, the use of possessions for this purpose may become a habit that persists into adulthood and becomes ingrained as materialism. Indeed, some scholars have characterized materialism as the use of material goods to construct and maintain the self (Shrum et al. 2013).

Another possible outcome of material parenting is that reliance on material rewards to encourage the acquisition of skills may cause young people to reduce emphasis on the skill itself as part of their self-definition and instead focus on the material reward as an affirmation of the self. As a result, children may learn that the material reward is equally or more important than the acquired skill in shaping self identity. In this sense, the frequent receipt of material rewards may teach children that goods are important to defining themselves. Hence, as stated in the hypothesis below, children who receive a lot of material rewards while growing up may come to expect acquisitions to shape and transform their self identity in positive ways.

H7: Adults who frequently received material rewards from their parents while growing up are more likely than others to view acquisitions as effective for shaping and transforming the self.

The expectation that the self will be changed by acquisition is associated with materialism (Richins 2011, 2013). Thus, evidence for this hypothesis would support the idea that material rewards received in childhood may ultimately influence adult material values because of the importance these material objects play in self-definition (Ahuvia 2005; Chaplin and John 2005).

The Study of Childhood Circumstances and Materialism

The relationship between childhood circumstances and materialism has been studied using two different approaches. One approach examines relationships between co-occurring variables in child populations. For example, in studies of adolescents, Chaplin and John (2010) found that those with more supportive peers were less materialistic, and Churchill and Moschis (1979) found that materialism was associated with television viewing. While these studies provide valuable insights, they can tell us only about the relationship between childhood circumstances and childhood materialism. The extent to which materialism expressed in childhood is predictive of materialism during adulthood is unknown.

The second approach is to examine a person's life course or life history. Typically, research using this approach assesses materialism in a sample of adults and examines the relationship between childhood circumstances and adult materialism. For example, Ahuvia and Wong (2002) asked college students about their family's economic situation when they were growing up and correlated childhood economic insecurity with the students' current level of materialism. While such studies cannot definitively establish whether past events or circumstances influence materialism, they can at least indicate whether past circumstances are associated with current levels of materialism and in some cases can rule out the possibility of reverse causal direction.

True causation, of course, could only be established in long-running experiments with manipulations that are impossible to implement. In the absence of these, longitudinal studies that examine a child's experiences and values over many years could provide insight into the causes of materialism. However, longitudinal studies of this nature are rare in consumer behavior because they are difficult, expensive, and time consuming.

Longitudinal studies of people in any branch of science are expensive and difficult.

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Before undertaking them, the researcher wants to be confident that the proposed factors under investigation are potentially useful explanatory variables, to avoid diverting resources from research in more fruitful directions. Prior to carrying out longitudinal studies in medicine, for example, researchers conduct correlational and retrospective studies to assess whether environmental or nutritional factors are potential causes of cancer, arthritis, or other diseases. Accordingly, medical researchers have used retrospective methods to study the relationship between childhood family circumstances and adult depression (Taylor et al. 2006), psychological distress (Mallers et al. 2010), neuroendocrine function (Taylor et al. 2011), coronary heart disease (Loucks et al. 2011) and other conditions (Felitti et al. 1998). Consumer researchers have also begun to use elements of the retrospective approach in their studies (Connell, Brucks, and Nielsen 2014). The research reported here follows this model by conducting a retrospective study of childhood circumstances to assess their possible links with materialism in adulthood.

Retrospective Research Methods

Although retrospective data are sometimes used with caution due to concerns about the accuracy of people's reports of their past, scholars have found that the accuracy of retrospective data depends in part on what is being measured. Henry et al. (1994), for example, looked at the reliability of several types of retrospective data provided by 18-year-olds about their childhoods. The authors concluded that retrospective reports should not be relied on to identify specific dates or absolute frequencies of events in childhood, but that retrospective data possess acceptable reliability for testing hypotheses that concern an individual's relative standing in some distribution during childhood, such as how close a child was to his/her parents.

The salience of the variable in question is also relevant to the accuracy of retrospective reports. After reviewing the literature, Scott and Alwin (1998) concluded that on issues of importance or salience to the respondent, retrospective data tends to be quite reliable, while retrospective measurement of unimportant factors is less accurate. The frequency with which an event or behavior occurred during childhood will also influence accuracy of recall. While the memory for irregular or infrequent behaviors may be poor, retrospective reporting of frequent past behaviors or events is relatively accurate (Potts and Seger 2013 for a review).

The research reported here asks about respondents' memories of important and salient matters (their relationship with their parents) and relatively frequent events (rewards and punishments provided by parents). The evidence cited above indicates that respondents' memories are likely to be sufficiently accurate for the types of hypotheses tested in this research.

Because retrospective data can be useful in the study of many topics, some scholars have systematically endeavored to improve the quality of retrospective measurements. One approach has been to incorporate the use of contextual cues in the measurement instrument to facilitate memory for one's past behavior and for autobiographical information (Conway and Pleydell-Pearce 2000; Dijkstra and Kaup 2005; Menon and Yorkston 2000). For example, when asking adults to remember something that occurred during the seventh grade, memory accuracy is improved by first asking respondents to think about where they were living at that time, what school they were going to, and their teacher's name.

Another approach to improving recall has focused on sequential retrieval of information in chronological order. The Event History Questionnaire uses this approach and was developed to improve respondents' accuracy in the recall of specific events (Belli 1998). Studies have found significantly increased accuracy of retrospective measures when this questionnaire or

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similar formats are used (Belli, Shay, and Stafford 2001; Caspi et al. 1996; Freedman et al. 1988).

Taking insights from the research reviewed above, our survey instruments used contextual cues and chronological retrieval to help respondents access memories and report them as accurately as possible. While this measurement approach enhances the accuracy of respondent recall, we make no claims that the data accurately capture the "objective" reality of participants' childhoods. Instead, this research assesses respondents' subjective experiences and their interpretations of those experiences. It is widely recognized that subjective reality has a more significant influence than "objective" reality on those who experience it. When retrospective measures meet the qualifications for accuracy, as described above, we believe that they can provide a reasonably reliable representation of earlier subjective experiences. This belief is also justified by the many successful research endeavors that have shown a relationship between retrospective childhood data and adult health (Felitti et al. 1998; Loucks et al. 2011; Taylor et al. 2006) or adult behaviors (Boduszek, Hyland, and Bourke 2012; Easow et al. 2008).

OVERVIEW OF STUDIES

The research method used in these studies was informed by the best available research on retrospective measurement so that reliable information about respondents' childhoods could be obtained. However, all memories, whether of events yesterday or of family circumstances during childhood, are subject to perceptual biases or fragmentary loss due to the passage of time. Therefore, Study 1 was conducted to examine whether bias is a concern for retrospective data on this topic. Following this, study 2 examines the material parenting pathway (H1-H4) as well as the insecurity pathway (H5 and H6) described by Kasser (2002). Study 3 replicates study 2 on a different type of sample and also examines the relationship between exposure to childhood material rewards and later (adult) beliefs about the usefulness of acquisitions to shape personal identity (H7). In all three studies parenting and childhood circumstances were measured at three different developmental stages—third, seventh, and tenth grades—following the precedents of earlier research on childhood and consumer behavior (e.g. Chaplin and John 2005).

STUDY 1

The aim of Study 1 was to assess whether recall bias is a significant concern for research on this topic. Secondarily, the study assesses measure reliability by comparing the recollections of parents and their adult children about events and family circumstances when the child was young.

Methods

Overview. Students at a major public university participated in an online survey for course credit. Surveys were completed in a computer lab under the supervision of a research assistant. After completing a survey about their childhood experiences at three different grades (third, seventh, and tenth), participants addressed an envelope to one of their parents. These envelopes were used to send parents a survey that asked about their child's experiences in either the third, seventh, or tenth grade (randomly assigned). Anonymity was maintained by having students choose a code number that they wrote on the envelope and also entered on their survey.

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Participants. Surveys were completed by 254 college students who received course credit. After excluding students who had spent part of their childhood outside the U.S., students with little contact with either parent when growing up, and 79 respondents whose parents elected not to return the survey, a sample of 160 student-parent pairs remained for analysis. The student sample was 54% female and most were in their junior (67%) or senior (15%) year of college. The majority of parent respondents were mothers (83%), had a college or advanced degree (67%), and had annual household incomes of $100,000 or more (64%). Of the 160 student-parent pairs, 55 parents reported on third grade, 60 on seventh grade, and 45 on tenth grade.

Measures. The survey instrument combined contextual cues (Dijkstra and Kaup 2005) and elements of the Life History Calendar method (Freedman et al. 1988) to obtain information about respondents' life events and family relationships during the three grades. Student participants reported on all three grades; parents reported on one grade only to reduce respondent burden and increase parent participation.

The student survey measured the parenting and family circumstance variables used in the main study (see appendix), including parental warmth and rejection, material rewards, and material punishments. The sources and rationale for these measures are described more fully in study 2. The parent version of the survey measured the same variables as the student survey, with minor changes to wording as needed. These measures were used in tests of recall bias.

The student and parent surveys also measured several factual items, such as where the child lived at each grade, who lived in the child's household at each grade, and child's sports participation, among other variables. These were included to provide baseline agreement levels between students' and parents' recollections. Both student and parent surveys contained additional measures not relevant to this study.

Results

Tests for Biased Recall. Recollections are subject to two types of recall error. Random error is usually due to forgetting. This form of error is randomly distributed across respondents. Its effect on hypothesis tests would be to attenuate statistical relationships, effectively reducing the chance of finding statistical support for hypotheses. Systematic error, on the other hand, is not randomly distributed and may affect measurements from all members of the sample or measurements from just a biased subset of the sample. An example of the former is the general tendency of people to remember the past as being more pleasant than it actually was (Walker, Skowronski, and Thompson 2003). This sort of systematic bias causes errors in means, but does not affect the strength of relationships. Because none of our hypotheses involve interpretations of means, this class of systematic bias is not a concern for the present research.

The second class of systematic bias, however, can be more harmful to statistical tests. For example, the insecurity pathway hypothesizes a negative relationship between parental warmth and materialism. If the recollections of high materialism respondents were biased to recall their parents as being less warm than they actually were (while low materialism respondents' memories were more accurate), the statistical relationship between warmth and materialism would be biased in a negative direction, possibly resulting in a statistically significant relationship between these two variables when none actually exists. On the other hand, an opposite bias could occur, such that high materialism respondents mistakenly recall their parents as being warmer than they actually were. In this case, the bias would attenuate the relationship

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between the two variables, possibly leading to unwarranted failure to statistically support the hypothesized relationship.

Because systematic error in a biased sample subgroup has the potential to give false results in hypothesis tests, this sort of systematic error was examined by assessing whether parent-child agreement levels correlated with the child's materialism level. Significant correlations between materialism and recollection agreement would be evidence of systematic error. Correlation analyses were performed for all variables used in hypothesis tests.

Recollection agreement was measured as the difference between the college student's response and the parent's response. A positive value on the agreement measure indicates the college student provided a higher rating on the measure than the parent did. Conversely, a negative value indicates the student respondent's rating on the variable was lower than the parent's. (Recollection agreement was not related to whether the mother or father completed the parent questionnaire.) None of the correlations between student respondent materialism and recollection agreement was significant (all $p > .10$; see table 1, first column). These results indicate that recollection similarity with parents was equal for low and high materialism respondents, suggesting that biased subgroup systematic error is not present in the data.

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Insert table 1 about here

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Tests of Measure Reliability. While reliability assessment was not the main purpose of study 1, the nature of the data allowed us to assess this by comparing the responses of the parent and adult child. Most of the parenting variables were measured with five-point rating scales, and for these variables rating scale agreement between the adult child and parent was assessed two ways. First, weighted kappa (Cohen 1968) was calculated and found to be significant for all variables. However, because this statistic has some limitations that make it difficult to interpret, the average discrepancy between adult child and parent responses was also calculated and is reported in Table 1. Although this discrepancy represents possible differences in scale use as well as differences in recollection, there was remarkable consistency in most of the recollections. In every case except one, parent's and adult child's average discrepancy was considerably less than one scale point. The exception to that was the variable measuring child's social insecurity, where the discrepancy averaged about one scale point. This higher discrepancy for social insecurity is not entirely surprising, as this is an element of a child's life that parents may not have had a great deal of access to. For the two parenting variables measured as categorical variables (conditional material rewards and material punishments) reliability was assessed with percent agreement.

For the factual variables, percent agreement was also used as the measure of reliability. As shown in table 1, there was high agreement between the parent and adult child on these variables. Their recollections were identical or nearly identical for almost every item for all three grades (e.g., where the family lived, who was living in the child's household, and the child's sports participation).

Discussion

The purpose of study 1 was to determine whether recall bias is a significant concern for the variables measured in our studies, and results are reassuring. There was no evidence of recall

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bias for any of the study variables, eliminating this form of systematic bias as a possible explanation for results of our hypothesis tests.

In terms of reliability assessment, as expected there was not perfect agreement between students and their parents about their childhood circumstances, but correspondence for most variables was very good. For factual data, such as place of residence and who lived in the household, agreement approached 100%. For subjective variables measured with rating scales, agreement was slightly lower. Incomplete agreement on these variables could be due to memory errors on the part of the adult child or the parent, perceptual differences between child and parent, or differences in scale use. But the high levels of agreement observed in this study, and the lack of evidence for biased subgroup systematic error, provide confidence in the reliability of the data and the appropriateness of using these variables to address substantive research questions and test hypotheses.

STUDY 2

Study 2 was carried out to test hypotheses about the two pathways by which parenting style and practices may influence a child's materialism in adulthood.

Participants

Study participants were 295 consumers between the ages of 20 and 40 who had grown up in North America. Respondents were recruited through an online consumer panel company. After deleting those who had no parent contact for one or more of the grades studied, those who reported they had poor memory of their childhood experiences, and respondents who completed the questionnaire too quickly to have carefully read the items, 261 cases remained for analysis. The sample was 52.5% female, 65.9% were married or living in a partnership sharing financial responsibilities, and 53.7% were college graduates. 55.2% were employed fulltime; 9.7% were employed part time. Median annual household income was in the $55,000 to $69,999 category.

Measures for Hypothesis Tests

As in study 1, the survey instrument combined contextual cues and elements of the Life History Calendar method to obtain information about respondents' family circumstances and relationships with parents at three periods of childhood (third, seventh, and tenth grades). For each grade, respondents first recalled specific contextual events and circumstances (e.g., where they lived, who was living in their household, and similar measures). They then answered questions about their family circumstances and parent relationships during that time, along with other grade-specific questions. After all questions relating to a grade period were completed, respondents continued on to questions concerning the next grade period (see the appendix for measures).

Parenting Style. The parenting style dimensions of warmth and rejection were measured with four and three items, respectively. Items that assessed parental warmth were similar to items used in other studies measuring this variable (Darling and Toyokawa 1997; Greenberger and Chen 1996; Rohner 2004). The measure of parental rejection was based on Rohner and Kahleque's (2005) conceptualization of parental rejection. Measures of both dimensions were

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taken separately for mother and father at all three grades. Coefficient alpha for the warmth measure was between .93 and .95; alpha for the rejection measure was .76 to .81. The average of mother's and father's scores at each grade were used in analysis. For respondents who had no contact with one of their parents for a specific grade, the other parent's scores were used in analysis.

Conditional Material Rewards. Respondents were presented with a list of commonly used rewards for each of two situations: having a positive accomplishment and receiving good grades in school. For each situation, respondents checked which rewards parents were likely to provide. Parental purchase of a desirable item represented conditional material rewards. For each grade, the score for this variable could range from 0 (material rewards given for neither situation) to 2 (material rewards given for both situations).

Unconditional Material Rewards. This variable was measured separately for mothers and fathers at each grade. Respondents reported how often the parent purchased items for the child just because the child wanted them, using a five-point response scale. The average of mother's and father's scores at each grade were used in analysis. For respondents who had no contact with one of their parents for a specific grade, the other parent's score was used in analysis.

Material Punishments. Respondents were presented with a list of commonly used disciplinary practices for each of two situations: serious misbehavior and receiving bad grades in school. For each situation, respondents checked which punishments parents were likely to use. Having a toy or other possession taken away temporarily or permanently represented a material punishment. For each grade, the score for this variable could range from 0 (no material punishment in either situation) to 2 (material punishment for both situations).

Feelings of Insecurity. Both personal insecurity and social insecurity were measured. A self-doubt measure is typically used to measure personal insecurity in adults (Oleson et al. 2000); however, this measure is not suitable for retrospectively measuring personal insecurity during childhood. Pretesting identified two items that adults felt they could recall with reasonable accuracy that reflect childhood feelings of personal insecurity: the extent to which the respondent felt generally self-confident and generally happy at each of the grades studied (five-point response scales). Items were reverse scored so that a high score indicates higher insecurity. Correlation between the two personal insecurity items ranged from .43 to .46 across the three grades.

Typical measures of social insecurity used in cross-sectional research with adults, such as social anxiety and public self-consciousness, are also not suitable for retrospective measurement. Based on pretests, childhood social insecurity was measured in this study by three items that assessed the extent to which the respondent felt self-conscious about his/her appearance, was concerned about fitting in with others, and looked to peers to know how to act (five-point response scales). Cronbach's alpha for this measure was .71 to .85 for the three grades.

Respondents' Materialism. After completing the grade-specific items in the survey, respondents completed a section concerning their current circumstances. The nine-item version of the Material Values Scale (MVS; Richins 2004) was included in this section and was used to assess respondents' materialism (α = .88).

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Control Variables

Parents' Materialism. Because values tend to be transmitted from parents to children, with the result that materialistic parents tend to have materialistic children (Ahuvia and Wong 2002; Goldberg et al. 2003), the survey included measures of the respondent's perception of both the mother's and the father's level of materialism. The measure included three items (one measuring each of the three facets of materialism) that formed an overall (rather than grade-specific) assessment and was placed near the end of the survey. Alpha was .80 for perception of mother's materialism and .87 for perception of father's materialism. The average of mother's and father's scores were used in analysis. For respondents who had little or no contact with one of their parents while growing up, the other parent's score was used.

Family Economic Status. A measure similar to that used by Griskevicius et al. (2011) and others (Ahuvia and Wong 2002) was used to assess perceived economic status at each of the three grades. It contained two items: one concerning how limited the family's income was and the other a measure of income relative to peers. The correlation between these items ranged from .65 to .78.

Family Disruption. This variable was measured by parental absence from the household at each of the grades studied.

Family Conflict. This variable was assessed by a formative index composed of five items concerning fights or arguments between parents, fights or arguments among siblings, perceived family tension, how well family members got along, and perceived happiness of the family (reverse scored).

The survey also included a measure of socially desirable response (SDR) bias (Paulhus 1992), demographic items, and some other items that are not relevant to this study.

Results: Preliminary Analyses

Most prior studies of childhood circumstances and materialism have analyzed materialism as a unidimensional construct, using the entire summed scale as the dependent variable. In this research, we treat materialism as a multidimensional construct. We had originally intended to use each of the three MVS subscale scores as a dependent variable. However, while factor analysis of the MVS items showed coherent factors for the success and happiness subscales, a factor for centrality did not emerge. While the centrality items correlated with both the success and happiness subscales, they did not form a factor of their own. Accordingly, results are reported only for the success and happiness subscales.

The average of mother's and father's materialism was used as a control variable in all analyses in which the respondent's level of materialism in adulthood was the dependent variable. This allowed the effects of the hypothesized parenting variables to be isolated from other socialization effects. The correlation between respondents' materialism and parents' average materialism was .29 ($p < .001$) for both the success and the happiness subscales of the MVS.

Correlations with SDR were calculated for study variables. In only one case was the correlation with SDR above the .20 cutoff that warrants further examination (Steenkamp, De

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Jong, and Baumgartner 2010). The correlation between SDR and both materialism subscales was -.28. As noted by Richins (2013), this correlation is most likely due to the association of both materialism and moral behavior with a third variable—religiosity. Because highly religious people are less likely to hold materialistic values (LaBarbera and Gürhan 1997) and less likely to engage in the undesirable behaviors assessed in SDR scales (e.g., less likely to lie, steal, or break the law), in situations where data collection is anonymous, the SDR correlation with materialism most likely represents shared variance in these two constructs rather than bias, and statistical adjustment due to SDR is unwarranted (Steenkamp et al. 2010).

Material Parenting Pathway Results: H1 through H4

The material parenting pathway proposes that warm parents are likely to engage in material parenting, and that children exposed to material parenting are more likely to be materialistic when they are grown than are children whose parents used material parenting practices less frequently. The hypotheses in this pathway were first tested with regression analysis, to provide a nuanced view of possible differences in effects by grade. Following hypothesis tests for this pathway and the insecurity pathway, mediation analysis of the two pathways is reported.

Hypothesis 1 proposes that parents who have warm parenting styles are more likely to provide their children with material rewards. Hypothesis tests were conducted separately for conditional and unconditional material rewards and for each grade level. Partial correlations (controlling for family economic status and parents materialism) between parental warmth and material parenting are shown in the top half of table 2.

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Insert table 2 about here

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Across all three grades, parental warmth is associated with the provision of conditional and unconditional material rewards, supporting hypothesis 1. The association between parental warmth and rewards was especially strong for unconditional material rewards and remained strong across all three grade levels.

The second step of the material parenting pathway hypothesizes that exposure to material parenting practices during childhood is associated with materialism in adulthood (H2, H3, and H4). This was tested with regression models in which materialism was the dependent variable, parents' materialism was a control variable, and material parenting practices at each of the three grades were the independent variables. Analyses were performed separately for the two facets of materialism and for the three components of material parenting.

Results are shown in table 3. Because there is considerable multicollinearity across grades for each independent variable, the entries in this table are partial correlations (controlling for parents' materialism) rather than regression coefficients, which become unstable under conditions of multicollinearity.

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Insert table 3 about here

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As shown in this table, both conditional material rewards ($R = .24$, $p < .01$) and unconditional material rewards ($R = .27$, $p < .01$) received during childhood are associated with the success facet of materialism in adulthood. Specifically, when children who received these

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kinds of rewards in grades 3 and 7 grow up, they are more likely than others to admire people with expensive possessions and judge success by the kinds of things people own. Material punishments received in childhood, however, were not related to adult materialism in this study.

A summarizing multiple regression analysis was also performed, with the three material parenting variables measured at the three grades as the independent variables and parents' materialism as a control variable. The resulting R of .32 ($p < .01$) indicates the strength of the overall relationship between material parenting and the success facet of materialism.

Results for the happiness facet of materialism were quite different, and none of the material parenting practices showed a significant relationship with this variable. Children who received material rewards and material punishments during childhood were no more likely than others to believe, as adults, that they would be happier if they owned more or better things.

Summarizing, in the analyses reported above, the test of hypothesis 1 found support for the first step of the material parenting pathway: warm and nurturing parents are more likely than other parents to provide their children with material rewards. Other hypothesis tests provided support for the second step of the material parenting pathway, but showed that the effects of this pathway are limited to the success facet of materialism. Children whose parents provided them with conditional and unconditional material rewards when they were young tend to value goods as an indicator of success when they are adults.

Finally, we tested the possibility that the effects of material parenting may depend on whether material rewards are given by warm and supportive parents or by more distant parents, possibly to make up for their lack of warmth or to reduce the child's demands on their time and attention. This possibility is represented by an interaction between parental warmth and material rewards. Regression analysis in which materialism was the dependent variable revealed no significant interaction between parental warmth and any of the material parenting variables, for either materialism facet. This finding indicates that the relationship between material parenting and child's later materialism is independent of parental warmth.

Insecurity Pathway Results

The insecurity pathway proposes that a lack of parental warmth creates insecurity in children (H5), and that this sense of insecurity fosters materialism in a child that persists into adulthood (H6). The first step of this pathway was tested separately for two forms of insecurity: personal insecurity and social insecurity. The analysis for each type of insecurity was done with three regression models—one for each grade level. For example, in the third grade model, insecurity experienced during the third grade was the dependent variable, family circumstances during third grade (family economic status, family conflict, and disruption) were control variables, and parental warmth and rejection (averaged across parents) were the independent variables. Because warmth and rejection are related variables with moderately high correlations (average r across grades = –.65), factor scores for these variables were used in the regression analysis. Analogous models were used in the analysis of seventh and tenth grade data.

Results support hypothesis 5 (see table 4). Parental warmth and rejection were associated with feelings of insecurity at all three grades. These two parenting variables made independent and significant contributions to feelings of personal insecurity. For social insecurity, only parental rejection was a significant predictor.

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Insert table 4 about here

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The second step of the insecurity pathway proposes that childhood insecurity is associated with materialism in adulthood (H6). The evidence for this link was examined separately for the success and happiness facets of materialism. In regression analysis, adult materialism was the dependent variable, parents' materialism was a control variable, and insecurity at grades 3, 7, and 10 were the independent variables. Results are shown in table 5. Due to multicollinearity across grades within a variable, the entries in table 5 are partial correlations (controlling for parents' materialism). The multiple regression coefficients (after controlling for parents' materialism) were .19 and .23 (both $p < .05$) for the success and happiness facets of materialism, respectively, providing evidence for hypothesis 6 and the second link in the insecurity pathway.

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Insert table 5 about here

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Test of the Mediational Pathways

The hypothesis tests reported above show disaggregated effects by grade level, which is helpful in identifying possible critical periods in which material parenting may be most likely to affect values. In this section, we turn to examination of aggregated effects using mediation analysis. We also use this mediation analysis to illustrate how components of the two pathways relate to one another.

Bootstrapping procedures (Preacher and Hayes 2008) were used to test the meditational pathways shown in Figure 2, which integrates the material parenting and insecurity pathways. For this analysis, factor scores were created for the variables assessed at the three grade levels (parental warmth, parental rejection, material rewards, material punishments, personal insecurity, and social insecurity). These factor scores aggregated the variables across the grades and eliminated the multicollinearity inherent in these repeated measures. Although the use of these factor scores eliminates the grade-related effects shown in tables 2 through 5, they are suitable for testing the overall validity of the proposed pathways.

The meditational pathways were tested using Hayes' (2013) Mediate software. Results for the success facet are shown in the top panel of figure 3; results for the happiness facet are in the bottom panel. For the success facet materialism, the indirect effect of parental warmth through material rewards to materialism was significant (99% confidence interval = .0204, .1702), providing support for the material parenting pathway (parental warmth → material rewards → success materialism). In addition, the indirect effect of parental rejection through social insecurity to success materialism was significant (99% confidence interval = .0003, .0966), supporting the insecurity pathway.

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Insert figure 3 about here

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For the happiness facet of materialism, the indirect effects of parental warmth and rejection through personal insecurity to materialism were both significant (99% confidence interval = –.1462, –.0137 for warmth; 99% confidence interval = .0096, .1032 for rejection), supporting the insecurity pathway. For both facets of materialism, there were no direct effects

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between parental warmth or rejection and materialism in either the material parenting pathway or the insecurity pathway.

Although not hypothesized, we wondered if there was a relationship between material parenting and insecurity. The relationship was not significant for either personal or social insecurity, indicating that the two pathways, in general, act independently.

Discussion

This study examined how parenting styles and practices may influence the development of materialism by testing the material parenting pathway. In this route to materialism, warm parents engage in material parenting practices, which are then associated with materialism when a child is grown. Data provided evidence for this pathway for the success facet of materialism, but not the happiness facet. In addition, data showed that reward elements of material parenting are associated with adult materialism, but the hypothesized relationship did not hold for material punishments. This suggests that material punishments may not impact materialism in the same way that rewards seem to. However, it is also possible that measurement problems with the material punishments variable may be responsible for this non-significant finding. Material punishments was measured by having respondents check whether they tended to receive certain types of punishments, but this check-off format did not allow respondents to indicate how often material punishments occurred, resulting in measurement imprecision. In study 3, this deficiency was removed with an improved measure of material punishments.

Study 2 also examined and found support for an insecurity pathway to materialism, postulated by Kasser (2002). Data showed that lack of parental warmth and rejection of a child were both associated with childhood feelings of insecurity, which in turn were associated with higher materialism in adulthood.

STUDY 3

Study 3 was conducted to test hypothesis 7, which proposes that material rewards may affect material values by facilitating the use of possessions in the creation or transformation of self identity. Study 3 was also an opportunity to examine the generalizability of study 2 findings by using a different type of sample. Study 2 respondents were members of a commercial survey panel; study 3 respondents were workers who had signed up with Amazon Mechanical Turk.

Participants

Survey respondents were 325 registered Mechanical Turk workers between the ages of 20 and 40 who had grown up in North America and who agreed to complete an online survey about their childhood experiences. Participants were paid $3.50 for completing the survey. After deleting respondents who had no parent contact for one or more of the grades studied, those who reported they had poor memory of their childhood experiences, and respondents who completed the questionnaire too quickly to have carefully read the items, 280 cases remained for analysis. The sample was 54.3% female, 48.2% married or living in a partnership sharing financial responsibilities, and 47.9% were college graduates. 55.7% were employed full time; 16.4% worked part time. Median annual household income was in the $40,000 to $54,999 category.

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Measures

The survey contained the same measures as study 2, with two minor changes to improve measurement of some variables. First, the response categories for the conditional material rewards and material punishments items were changed from a binary check-off to a four-point likelihood scale (very unlikely, somewhat unlikely, somewhat likely, very likely). Second, a 12-item version of the MVS was used instead of the 9-item version.

To test hypothesis 7, the survey also included the self-transformation subscale of the Transformation Expectations Scale (Richins 2011, 2013), which assesses beliefs about the effectiveness of acquisitions to transform the self (alpha = .91). Respondents were asked to identify a product they hoped to acquire in the near future but had not yet been able to purchase, and then completed the transformation expectation items with respect to that desired purchase. The scale measured the extent to which respondents expected the acquisition to make them feel more self-confident, become more respected, and be more attractive to others, among other similar items. A six-point likelihood response scale was used ("very unlikely" to "very likely").

Results: Preliminary Analyses

As in Study 2, the success and happiness subscales emerged from the factor analysis of the MVS items (but the centrality subscale did not). Accordingly, results are reported only for these two subscales. As in study 2, respondent's materialism was correlated with parents' materialism. The average of mother's and father's materialism was used as a control variable in all analyses in which the respondent's level of materialism in adulthood was a dependent variable.

The Material Parenting and Insecurity Pathways

Analyses for the material parenting pathway were conducted the same way as in study 2; results are shown in tables 2 and 3. In most respects, results replicated study 2 findings. The differences that do emerge (in the form of stronger relationships) can be attributed to the improved measurement of the conditional material reward and material punishment measures. Most importantly, we find that in this study material punishments experienced during childhood were associated with the success facet of materialism in adulthood, supporting hypothesis 4. As in study 2, we also tested the (non-hypothesized) possibility that the effects of material rewards on materialism depend on parental warmth. We again found no significant interaction between parental warmth and material parenting.

Analyses for the insecurity pathway were conducted the same way as in study 2; results are shown in tables 4 and 5. Findings again provide support for the insecurity pathway to materialism and are consistent with the results from study 2, with one exception. In study 3, there was a small *positive* correlation between parental warmth and social insecurity instead of the hypothesized negative relationship (this relationship was not significant in study 2). A possible explanation for this finding is that when a child is socially insecure, the parent may make an extra effort to be supportive of the child, resulting in the observed positive correlation. Because of this possible reverse causation, the link between parental warmth and social insecurity was dropped from the mediation test of the integrated pathways.

Aside from this one difference, the pathway mediation test was carried out as in study 2.

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Results are shown in figure 4. For the happiness facet of materialism, results were substantively identical with the results from study 2. Results for the success facet were also identical with the exception that in this study, unlike study 2, the hypothesized relationship between material punishments and materialism is supported (as noted above). These analyses again provide support for both the material parenting and insecurity pathways. As in study 2, there were no direct effects between parental warmth or rejection and materialism in either model. Also, as in study 2, separate regression analysis again showed no relationship between material parenting and insecurity.

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Insert figure 4 about here
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Material Rewards and Self Transformation

Hypothesis 7 addresses a possible mechanism by which material parenting may influence children's materialism in a way that persists into adulthood. Specifically, this hypothesis proposes that the frequent receipt of material rewards during childhood encourages people to view material acquisitions as an effective way to shape or transform one's self identity.

This hypothesis was tested with multiple regression analysis in which the self transformation expectations measure was the dependent variable and the independent variables were conditional and unconditional material rewards received in grades 3, 7, and 10. Due to multicollinearity across grades within independent variables, correlations are reported in table 6 instead of regression coefficients.

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Insert table 6 about here
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Results supported hypothesis 7. Adults who had frequently received conditional and unconditional material rewards as children were more likely to expect that the acquisition of a desired product would improve their self-concept and make them more attractive to others. When the sample was analyzed as a whole, R was .29 ($p < .001$). The relationship was even stronger when the analysis was limited to respondents who reported on a desired product that they described as very important to them ($n = 147$). For those respondents, R was .45 ($p < .001$).

Discussion

This study replicated study 2 findings on a sample that differed in some respects from the earlier study. This sample was, on average, lower in socioeconomic status as indicated by a lower median income and a smaller percentage of college graduates. The samples in the two studies were also recruited differently. Study 3 again found support for both the material parenting and insecurity pathways to materialism. In addition, study 3, with an improved measure of material punishments, showed the potential effects of material parenting on materialism are not restricted to material rewards, but also occur for material punishments.

Study 3 also tested and found support for hypothesis 7. Results showed that adults who received material rewards as children (both conditional and unconditional) come to believe, more than others, that products are important to the construction and expression of the self. This suggests an underlying mechanism that may explain the relationship between material parenting

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and adult materialism. Material rewards received in childhood appear to lead people to place emphasis on possessions as a means to develop and transform self identity, possibly encouraging them to place more importance on goods in general and become more materialistic than their peers who did not receive as many material rewards.

GENERAL DISCUSSION

This research makes several contributions. First, we introduce the material parenting pathway that describes how parents' use of material rewards and punishments can predict the level of materialism in their children when they are grown. Loving parents tend to provide their children with material rewards. In turn, children who receive these rewards, and children who receive material punishments, are more likely than others to be materialistic as adults. One explanation for the link between material rewards and later materialism is that children who receive these rewards are more likely than others to use possessions to define and enhance the self, an essential element of materialism (Shrum et al. 2013).

Second, this research provides direct empirical evidence for the insecurity pathway to materialism proposed by Kasser (2002). It also expands the conceptualization of this pathway by showing that two types of childhood insecurity feelings (personal insecurity and social insecurity) are relevant to materialism. This research also identifies parental rejection as an important and independent contributor, beyond a lack of warmth, to the childhood insecurities that are linked with materialism.

The two pathways studied in this research affect different facets of materialism and explain how parental warmth can both protect against *and* foster materialism. In the insecurity pathway, warmth creates personal security that *protects against* happiness materialism, while the material parenting pathway shows that warmth is associated with the provision of material rewards, which *fosters* success materialism. Thus, different processes are relevant to the formation of different facets of materialism. Some prior research has tended to view the materialism facets as acting, and being acted upon, in concert (Ahuvia and Wong 2002; Flouri 1999). However, this research shows that different childhood experiences are relevant to the formation of the individual facets. The material parenting pathway seems to be relevant only to the success facet. The insecurity pathway seems to affect both facets, but in different ways. Experiencing personal insecurity in childhood is predictive primarily of the happiness facet of materialism; experiencing social insecurity is predictive primarily of the success facet.

In 2009, Giddens, Schermer, and Vernon examined the extent to which materialism is determined by genetic versus environmental factors. In a study of adult twins, they found the success facet of materialism to be determined wholly by environmental factors. The happiness facet, after controlling for emotional intelligence, was also determined almost exclusively by environment. In their conclusion, these authors recommended further investigation into the environmental antecedents of material values. The present research is a response to that call and shows that parenting style and material parenting practices are two important elements of the family environment associated with the development of materialism.

This research also makes a contribution to values socialization theory. Prior research on this topic has focused on parents actively shaping children's behavior and values so that children adopt values their parents want them to have (Grusec 2011). We extend this research by showing how parenting actions may lead children to acquire a value that is not necessarily socially desirable and that parents may not want their child to adopt. Our work also adds to the values

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socialization literature by shifting attention to reward practices. Socialization research has focused heavily on the process of identification, modeling, and the effective use of disciplinary actions in values acquisition (Eisenberg and Valiente 2002; Grusec 2002); it has given little attention to how rewards may influence the values that children acquire. The research reported here suggests that reward practices can have a significant impact on the formation of values.

Finally, this research highlights the value of examining childhood circumstances and parenting practices to understand the consumer behavior of adults. Although some studies have examined the effects of childhood circumstances on children's consumer behavior (e.g., Chaplin, Hill, and John 2014; Ward and Wackman 1971), the research presented here demonstrates that retrospective data has a valuable role in understanding the consumer behavior of *adults*. Just as medical research has shown that retrospective data about childhood and parenting can be effective in understanding adulthood disease, retrospective data can help us understand why adult consumers behave the way they do.

Limitations and Future Research

This research provides a good starting point for a more comprehensive understanding of how childhood circumstances and material parenting may influence adult materialism. However, as with any research, ours is not without limitations. Perhaps the most obvious limitation is that it used a retrospective rather than longitudinal (prospective) design. Although retrospective data have successfully been used in the study of health (Loucks et al. 2011; Taylor et al. 2011), criminal behavior (Blanchard et al. 2002; Boduszek et al. 2012), educational achievement (Boden, Horwood, and Fergusson 2007), and other areas (Easow et al. 2008), it should be used with awareness of its primary limitation—the possibility of random or systematic error in respondents' recall. In this research, we tried to minimize these errors by using the best available methods to reduce recall error. In the retrospective portion of our data collection, we measured only salient variables and parenting practices that would have occurred repeatedly during the respondent's childhood. We also used a sequential approach to collecting data, along with contextual cues to facilitate recall and thoughtful processing (Belli 1998). Furthermore, study 1 tested for the presence of the most serious form of recall error in retrospective data—the systematic over- or under-reporting of a variable in a biased subgroup of the sample—and found no evidence that such biased recall errors occurred. Although we were unable to test for the presence of other recall errors (randomly distributed forgetting or randomly distributed over- and under-reporting of variables), such errors would serve to weaken statistical relationships rather than to artificially inflate them. In this sense, the actual relationships between variables examined in this study may in fact be stronger than what we observed. Nevertheless, moving forward, longitudinal studies would address potential recall errors that are inherent in retrospective studies.

An unexpected finding of our research concerns the conceptualization and measurement of materialism. Using both a 9-item (study 2) and a 12-item version (study 3) of the most widely accepted materialism measure, factor analysis revealed only two distinct facets for materialism. The centrality items were distributed across both the happiness facet factor and the success facet factor, rather than forming a separate centrality factor. In addition, although the two facets of materialism were correlated ($r_{\text{study2}} = .55$, $r_{\text{study3}} = .52$, $p < .01$), we also observed some differences in their relationships with independent variables. If such findings consistently emerge in other studies measuring materialism, it may be appropriate to revise the conceptualization of materialism to some extent. Instead of viewing materialism as composed of three separate facets

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with equal standing, it may be more appropriate to consider the happiness and success facets as two separate (but related) forms of materialism that lead to centrality as an outcome. That is, the belief that acquisition is important for happiness is likely to cause a person to give acquisition a central place is one's life, as would the tendency to judge success by one's acquisitions. Whether happiness and success are two facets of materialism or two types of materialism is an interesting question that is beyond the scope of this research, but warrants further investigation.

Another topic worthy of further research is the possibility that material rewards could be associated with positive outcomes for children. The central finding in this research program is that material parenting is associated with materialism when a child is grown. Contrary to earlier theory proposing that economic insecurity creates materialism (Abramson and Inglehart 1995; Inglehart 1981; Kasser 2002), our study shows the opposite: an affluence of things during childhood is instead predictive of materialism in adulthood. Because materialism is associated with a number of negative outcomes, this finding suggests that providing children with fewer things will be beneficial to them in the long term. However, this raises another question: might material parenting have some other, more beneficial outcomes for children when they are grown? For example, because conditional material rewards can be effective in gaining compliance, might they also help children develop life skills and habits that foster success in adulthood?

Although this research was not designed to address this question, we do have data that shed some light on this possibility. Studies 2 and 3 measured several demographic variables indicative of adult success, including education, income, employment status, and marital status. Respondents also reported how happy they are in their daily lives. We found no relationship between material parenting and any of these variables, except for a small, inconsistent relationship with marital status. (In study 3, adults who had received more conditional rewards during childhood were less likely than others to be married or living in a committed partnership (point biserial $r = -.17$, $p < .01$, controlling for age); this relationship did not occur in study 2.) Although not definitive, these results suggest that the use of material rewards does not help children grow up to be happier, more responsible adults. These findings provide a good starting point for researchers to investigate other possible outcomes of material parenting besides adulthood materialism.

Another area for further inquiry concerns the mechanism by which material parenting may affect material values. Our research suggests that self transformation expectations may be one such mechanism, but other plausible mechanisms should also be examined. For example, material parenting may lead to childhood narcissism, a trait characterized by an exaggerated sense of self-importance, an unreasonable sense of entitlement, and a craving for admiration (Raskin and Terry 1988). The need for admiration and esteem from others and the behaviors associated with fulfilling such needs may lead to an addiction-like pattern (Baumeister and Vohs 2001) where individuals constantly seek opportunities (e.g., new material possessions) to accrue social rewards (Campbell, Rudich, and Sedikides 2002).

Another opportunity for future research involves extending the topics studied here to research involving children. These studies found that parental warmth and material parenting experienced during childhood may influence adult materialism. An important next step would be to determine how material parenting relates to *children's* materialism. Research that examines the effects of material parenting on children would allow researchers to determine whether the relationship between material parenting and materialism emerges sometime during childhood and persists well into adulthood, or whether materialism instead emerges in adulthood as a cumulative response to material parenting over the years.

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Data from a preliminary study conducted at the beginning of our research program sheds some light on this issue. We surveyed 40 children from grades 3, 7, and 10 and asked them about the kind of rewards they received from their parents (IRB restrictions precluded asking about punishments). The survey also assessed parental warmth and the child's level of materialism. We found that the frequency of conditional and unconditional material rewards was positively associated with materialism in these children ($r = .47$ and $r = .56$, respectively; $p < .001$). We also tested the material parenting pathway using a bootstrapping procedure and found that the indirect path from parental warmth to material rewards to materialism was significant for both conditional and unconditional rewards ($p < .05$). These results suggest that effects of material parenting on materialism are evident in childhood, perhaps as early as age eight. Parents express their love to children by buying them things they need and want, but the result of this seems to be an emphasis on material things that begins in childhood and persists into adulthood.

Although our research examines the longer term effects that parents can have on grown children's materialism, it does not address interventions that may inoculate against the potentially damaging effects of material rewards. Our research suggests that adults who grew up with material rewards will be more materialistic than their counterparts. Theoretically, materialism should diminish if one were to decrease material parenting, yet it is difficult to imagine a tractable strategy aimed at changing ingrained parenting practices. Parents will continue to reward their children with material possessions because it makes both parents and children happy and is often effective in inducing compliance. However, there may be an approach for inoculating against materialism based on the idea that increasing positive emotions can diminish strivings for material possessions (Chaplin and John 2007, 2010). One viable strategy might be to encourage gratitude in children—reward children, but also teach and encourage them to be thankful for the people and things in their lives. Gratitude has been found to increase the value placed on connections to people, mindful growth, and social capital, whereas materialism promotes valuing possessions, instant comfort, and social status (Froh et al. 2010). For this reason, encouraging gratitude in children may reduce materialistic strivings (Lambert et al. 2009; Polak and McCullough 2006).

Finally, this research examined material parenting with tangible objects. However, intangible experiences can also make people feel happy (Nicolao, Irwin, and Goodman 2009; Van Boven 2005). At first glance, rewarding children with enjoyable experiences may seem to be a good alternative to using material objects to reward, but researchers have recently cautioned that the acquisition of experiences can be as materialistic as the acquisition of goods (Shrum et al 2013). Future research could examine whether experiential rewards are as effective as material rewards in shaping children's behavior, but less likely to contribute to materialism. If this proves to be the case, research can also identify the types of experiences that are most rewarding to children while contributing the least to materialism.

Conclusion

This research has implications for both child socialization and the larger social issues of overconsumption and environmental degradation. In their efforts to make their children happy and shape their behavior through the use of material parenting, parents may unintentionally pave the way for their children to become materialistic adults. Studies have shown that materialistic people consume more than others (Garðarsdóttir and Dittmar 2012; Watson 2003), and the research presented here suggests that adults who received many material rewards during

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childhood will be likely to continue rewarding themselves with material goods when they are grown. This is a cause for concern at both the personal and the environmental levels. At the personal level, materialism in adulthood has been linked to reduced well-being (Burroughs and Rindfleisch 2002), marital problems (Dean et al. 2007), and financial difficulties (Watson 2003). At the environmental level, materialism is associated with a lower concern for the environment (Banerjee and McKeage 1994; Kilbourne and Pickett 2008). The higher consumption levels of materialistic consumers contribute to greenhouse gas production and climate change, depletion of natural resources, and environmental pollution. The United States already out-consumes nearly every other economy (World Bank 2014). Our findings suggest that material parenting may be setting the stage for long term over-consumption and consequent environmental harm.

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Data Collection Paragraph

The first author conducted all data collections and performed all data analyses for studies 1, 2 and 3. Data for study 1 were collected at the University of Missouri in fall semester 2010. Data for study 2 were collected online in the spring of 2011. Data for study 3 were collected online in fall 2013. The second author performed data collection and data analysis for a preliminary study (described in the General Discussion) conducted with children from a northeastern USA metropolitan area in summer 2011.

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Appendix

Parental Warmth

These questions concern your relationship with your [mother/father] when you were in [third/seventh/tenth] grade.

1. My [mother/father] was a source of encouragement to me.
2. When I needed it, my [mother/father] was a source of comfort to me.
3. When I did well, my [mother/father] praised my accomplishments or behavior.
4. My [mother/father] and I did fun things together.

Five-point response scale: Almost never, rarely, sometimes, often, very often; these items were intermixed with the parental rejection items (below) and other parenting items

Parental Rejection

These questions concern your relationship with your [mother/father] when you were in [third/seventh/tenth] grade.

1. My [mother/father] seemed to be disappointed in me.
2. My [mother/father] was too busy to spend time with me.
3. I tried to avoid my [mother/father].

Five-point response scale: Almost never, rarely, sometimes, often, very often

Conditional Material Rewards

1. When you were in [third/seventh/tenth] grade, if you had a positive accomplishment or did something difficult that your parents really wanted you to do, what would happen?
   My parents would praise me.
   My parents would take me out for a food treat, like an ice cream or restaurant meal.
   My parents would buy something nice for me.
   My parents would give me money as a reward.
   I would get some special privileges.
   Nothing much would happen.
2. If you got good grades in [third/seventh/tenth] grade, what would happen at home?
   My parents would praise me.
   My parents would take me out for a food treat, like an ice cream or restaurant meal.
   I got paid money for getting good grades.
   My parents would buy me something I'd been wanting.
   I would get extra privileges.
   Nothing much would happen.

The measure of conditional material rewards was the item in each question that asked whether the parent bought something for the child as a reward. In study 2, respondents checked all that applied; scale range was 0-2. In study 3, respondents reported how likely it was that each would happen using a four-point rating scale (very unlikely, somewhat unlikely, somewhat likely, very likely); scale range was 2-8.

Unconditional Material Rewards

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These questions concern your relationship with your [mother/father] when you were in [third/seventh/tenth] grade.

My [mother/father] often bought things for me just because I wanted them.

This item was embedded in a series of other questions concerning the child's interactions with parents; five-point response scale: Almost never, rarely, sometimes, often, very often

Material Punishments

1. At this age [third/seventh/tenth grade], when you misbehaved or got into trouble at home in a pretty serious way, what was likely to happen?
   I would get sent to my room. [third and seventh grades only]
   I would be grounded or restricted from activities I enjoyed.
   Some of my [toys/stuff/things] would be taken away temporarily or permanently.
   One or both of my parents would raise their voice or speak angrily to me.
   I would lose money from my allowance.
   I would be spanked. [third and seventh grades only]
   I would lose driving privileges. [tenth grade only]
   One or both of my parents would have a serious discussion with me about what I did wrong.
   One or both of my parents would make suggestions about how I could improve.
   I would get a lot of criticism.
   My parents would say they were disappointed in me.
   Nothing much would happen.
2. If you got bad grades in [third/seventh/tenth] grade, what would happen at home?
   I would be grounded or restricted from activities I enjoyed.
   Some of my [toys/stuff/things] would be taken away temporarily or permanently.
   One or both of my parents would raise their voice or speak angrily to me.
   My parents would reduce my allowance.
   I would be spanked. [third and seventh grades only]
   I would lose driving privileges. [tenth grade only]
   My parents would help me work out a plan to improve my grades.
   My parents would criticize me.
   Nothing much would happen.

The measure of material punishments was the item in each question that asked whether the parent took away the child's possessions as a punishment. In study 2, respondents checked all that applied; scale range was 0-2. In study 3, respondents reported how likely it was that each would happen using a four-point rating scale (very unlikely, somewhat unlikely, somewhat likely, very likely); scale range was 2-8.

Personal Insecurity

[When in third/seventh/tenth grade]

1. I was generally self-confident. [reverse scored]
2. I was generally happy. [reverse scored]

Five-point response scale (rarely, occasionally, about half the time, a lot of the time, most of the

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time); these items were intermixed with the social insecurity items (below) and other self-perception items.

Social Insecurity

[When in third/seventh/tenth grade]

1. I was self-conscious about the way I looked.
2. I was concerned about fitting in with others.
3. I looked to my friends to know how to act.

Five-point response scale: Rarely, occasionally, about half the time, a lot of the time, most of the time

Parents' Materialism

When I was growing up....

1. My [mother/father] liked to buy things that other people noticed or admired.
2. Buying things seemed to bring my [mother/father] a lot of pleasure.
3. Having money and a lot of things were important to my [mother/father].

Five-point Likert response scale.

Economic Status

1. What was your family's financial situation when you were in [third/seventh/tenth] grade? [Respondents chose the one option from below that best described their family's situation.]
   It seemed like we could afford pretty much anything we wanted.
   Things were pretty comfortable, but we couldn't get everything we wanted.
   We usually had enough money, but sometimes things were tight.
   Our family had some financial difficulties at this time.
   Our family had very limited income at this time.
2. Compared to other kids you knew in [third/seventh/tenth] grade, did your family seem to have:
   A lot less income than average __ __ __ __ __ A lot more income than average

Family Disruption

Family disruption was assessed as absence of one or both parents from the home. It was measured at each grade by responses to the following question: At this time, who was living in your home with you? Seven options were provided: mother, father, stepmother, stepfather, older brothers or sisters, younger brothers or sisters, other. Parental absence at each grade ranged from 0 (both parents living with the child) to 2 (neither parent living with the child).

Family Conflict

How would you describe things in your home when you were in the [third/seventh/tenth] grade? Check all that apply.

Family members tended to get along most of the time. (reverse scored)

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My parents got into a lot of fights or arguments with each other.
My siblings and I got into a lot of fights or arguments with each other.
Overall, things were reasonably happy. (reverse scored)
Overall, things were pretty tense or unpleasant.
Things were just average. (filler item; not included in score)

Items were scored 0 or 1 and summed; the family conflict score ranged from 0-5.

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Table 1

Recall Bias Test and Measure Reliability
for Recollections of Childhood Circumstances

Childhood circumstance	Bias correlation[a]	Reliability assessment: Third grade *n* = 55	Seventh grade *n* = 60	Tenth grade *n* = 45
Parenting and Other Subjective Measures (Rating Scales)				
		Average Difference (Rating Scales)[b]		
Parental warmth	-.08	.40	.50	.59
Parental rejection	.03	.49	.68	.65
Unconditional material rewards	.01	.84	.76	.71
Child's personal insecurity	-.01	.63	.68	.78
Child's social insecurity	.09	1.07	1.04	1.15
Family economic status	.11	.58	.54	.73
		Percent Agreement (Categorical Measures)[c]		
Parenting Measures (Categorical)				
Conditional material rewards	.02	61.8	70.0	62.2
Material punishments	-.03	61.8	58.3	62.2
Factual Measures (Categorical)				
Residence location		98.1	100.0	100.0
Type of school		98.2	100.0	100.0
Household composition[d]		98.1	97.8	91.5
Family disruption		100.0	96.7	88.9
Father's employment status		98.2	100.0	97.8
Mother's employment status		83.6	88.3	95.6
Sports participation		89.1	90.0	91.1

[a]Correlation between recollection agreement and respondent's materialism
[b]Average difference in rating between adult child and parent
[c]Percent agreement between adult child and parent
[d]Presence or absence of mother, father, step-mother, step-father, older siblings, and younger siblings

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Table 2

The Relationship between Parental Warmth and Material Parenting

	Partial correlation[a]		
Parental warmth	Conditional material rewards	Unconditional material rewards	Material punishments
Study 2			
Third grade	.24***	.51***	.06
Seventh grade	.18**	.50***	-.11
Tenth grade	.21***	.57***	-.05
Study 3			
Third grade	.36***	.52***	-.05
Seventh grade	.41***	.56***	.03
Tenth grade	.44***	.60***	-.02

[a]Partial correlation between parental warmth and material parenting (controlling for family economic status and parents' materialism).

**$p < .01$
***$p < .001$

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Table 3
The Relationship between Material Parenting Received in Childhood and Materialism in Adult Offspring

	Study 2				Study 3			
	Materialism				Materialism			
	Success facet		Happiness facet		Success facet		Happiness facet	
Independent variable	Partial *r*	*R*	Partial *r*	*R*	Partial *r*	*R*	Partial *r*	*R*
Conditional material rewards								
Third grade	.21***		.08		.21***		.04	
Seventh grade	.21***		.08		.19***		-.06	
Tenth grade	.20**		.07		.12		-.12	
		.24**		.09		.22**		.13
Unconditional material rewards								
Third grade	.19**		.05		.13*		-.03	
Seventh grade	.24***		.09		.22***		-.02	
Tenth grade	.10		-.03		.13*		-.11	
		.27**		.09		.24***		.12
Material punishments								
Third grade	.09		.01		.19***		.12	
Seventh grade	.06		.04		.17**		.08	
Tenth grade	.07		-.01		.11		-.07	
		.11		.04		.20**		.12
Combined effects[a]		.32**		.12		.32***		.14

Note: Partial correlations control for parents' materialism.
[a]Combined effects are for the three material parenting variables
*$p < .05$
**$p < .01$
***$p < .001$

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Table 4

The Relationship between Parental Warmth/Rejection and Childhood Insecurity

	Study 2						Study 3					
	Insecurity in:						Insecurity in:					
	Third grade		Seventh grade		Tenth grade		Third grade		Seventh grade		Tenth grade	
	β	*R*	β	*R*	β	*R*	β	*R*	β	*R*	β	*R*
Personal insecurity												
Parental warmth	-.25***		-.22***		-.22***		-.16**		-.25***		-.34***	
Parental rejection	.29***		.16**		.06		.29***		.23***		.16**	
		.38***		.27***		.23***		.33***		.35***		.38***
Social insecurity												
Parental warmth	.08		.05		-.01		.06		.14*		.18**	
Parental rejection	.29***		.27***		.11		.28***		.23***		.20**	
		.30***		.27***		.11		.28***		.27***		.28***

Note: Family economic status, family conflict, and family disruption have been controlled for in all analyses.

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

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Table 5

The Relationship between Childhood Insecurity and Adult Materialism

	Study 2				Study 3			
	Materialism				Materialism			
	Success facet		Happiness facet		Success facet		Happiness facet	
Independent variable	Partial *r*	*R*	Partial *r*	*R*	Partial *r*	*R*	Partial *r*	*R*
Personal insecurity								
Third grade	-.02		.13*		-.02		.13*	
Seventh grade	-.12		.14*		-.12		.11	
Tenth grade	-.03		.19**		-.03		.22***	
Social insecurity								
Third grade	.17**		.14*		.14*		.07	
Seventh grade	.06		.09		.08		.01	
Tenth grade	.16**		.15*		.22***		.08	
		.19*		.23*		.24**		.22**

Note: Partial correlations control for parents' materialism.
*$p < .05$
**$p < .01$
***$p < .001$

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Table 6

Material Parenting and Self Transformation

	Self transformation expectation	
Material parenting	*r*	*R*
Conditional material rewards		
Third grade	.25***	
Seventh grade	.26***	
Tenth grade	.18**	
Unconditional material rewards		
Third grade	.16**	
Seventh grade	.13*	
Tenth grade	.16**	
		.29***

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

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FIGURE 1
TWO PATHWAYS TO MATERIALISM

A. The Material Parenting Pathway to Materialism: (Parental Warmth → Material Parenting → Adult Materialism)

B. The Insecurity Pathway to Materialism: (Lack Of Parental Warmth → Insecurity → Adult Materialism

FIGURE 2
MATERIAL PARENTING AND INSECURITY PATHWAYS TO MATERIALISM, INTEGRATED

FIGURE 3
INTEGRATED PATHWAY TESTS, STUDY 2: SIGNIFICANT PATHS

A. Success Facet of Materialism

B. Happiness Facet of Materialism

**$p < .01$
***$p < .001$

FIGURE 4
INTEGRATED PATHWAY TESTS, STUDY 3: SIGNIFICANT PATHS

A. Success Facet of Materialism

B. Happiness Facet of Materialism

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

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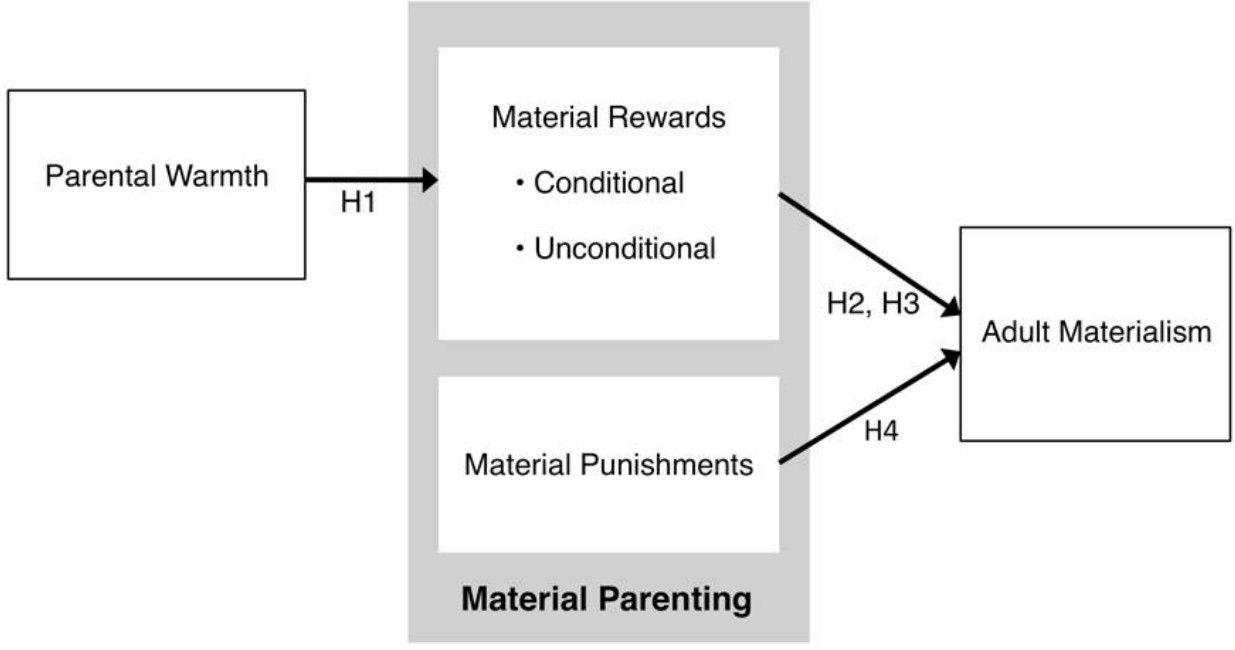
FIGURE 1
TWO PATHWAYS TO MATERIALISM

A. The Material Parenting Pathway to Materialism: (Parental Warmth→Material Parenting→Adult Materialism)



B. The Insecurity Pathway to Materialism: (Lack of Parental Warmth→Insecurity→Adult Materialism)

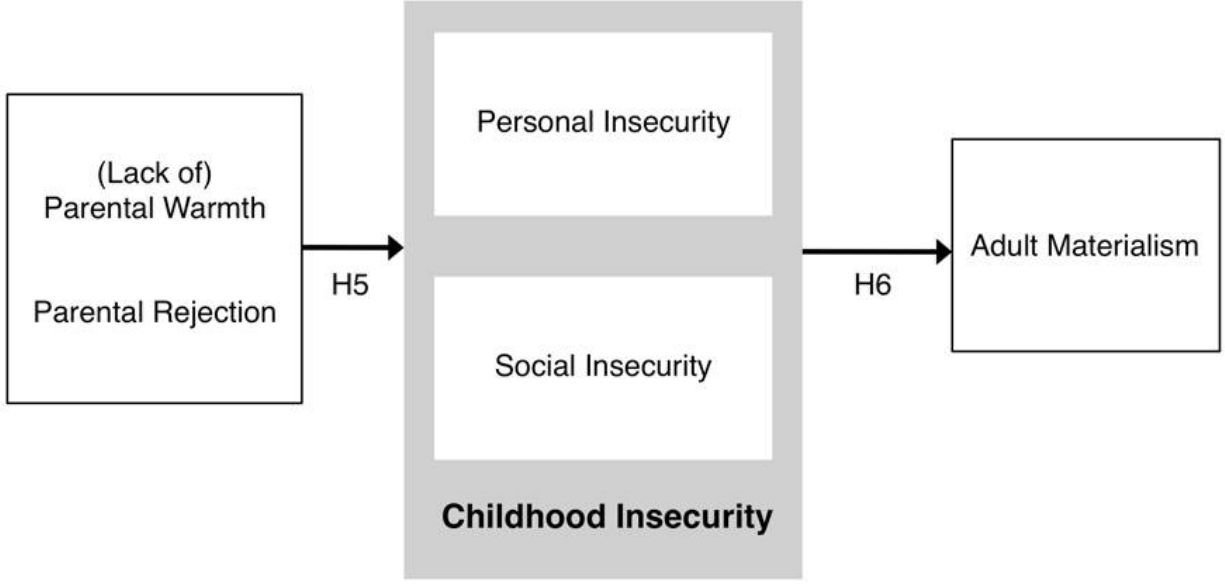


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FIGURE 2

MATERIAL PARENTING AND INSECURITY PATHWAYS TO MATERIALISM, INTEGRATED

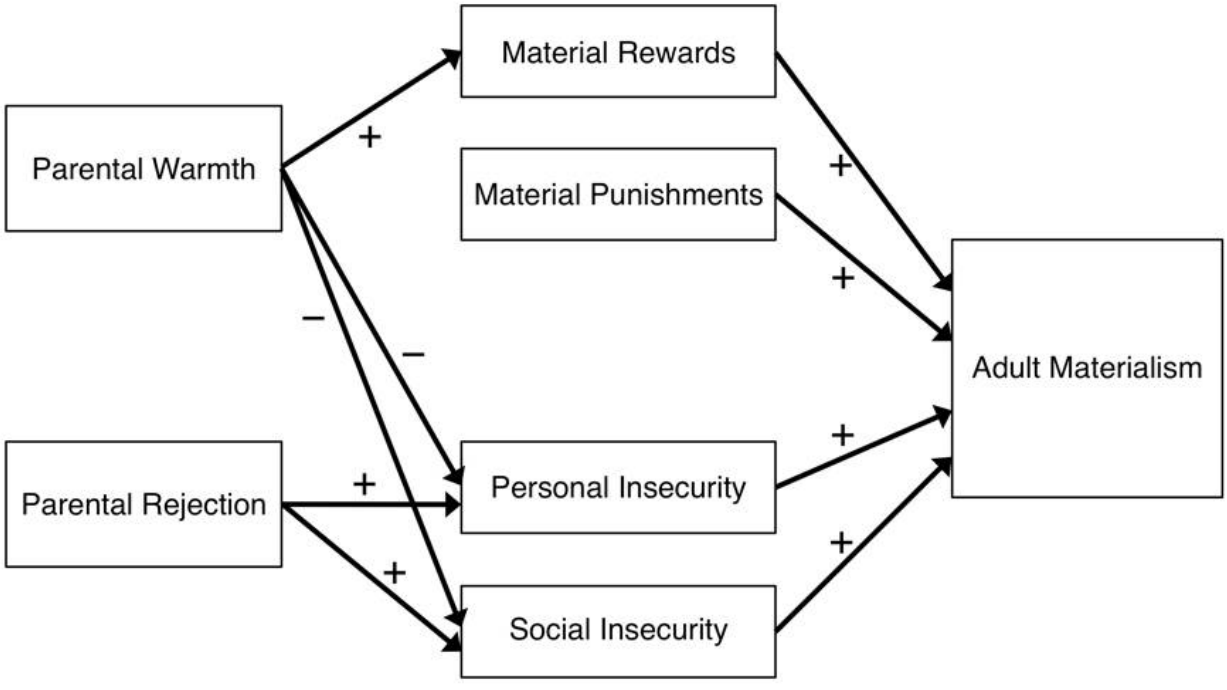

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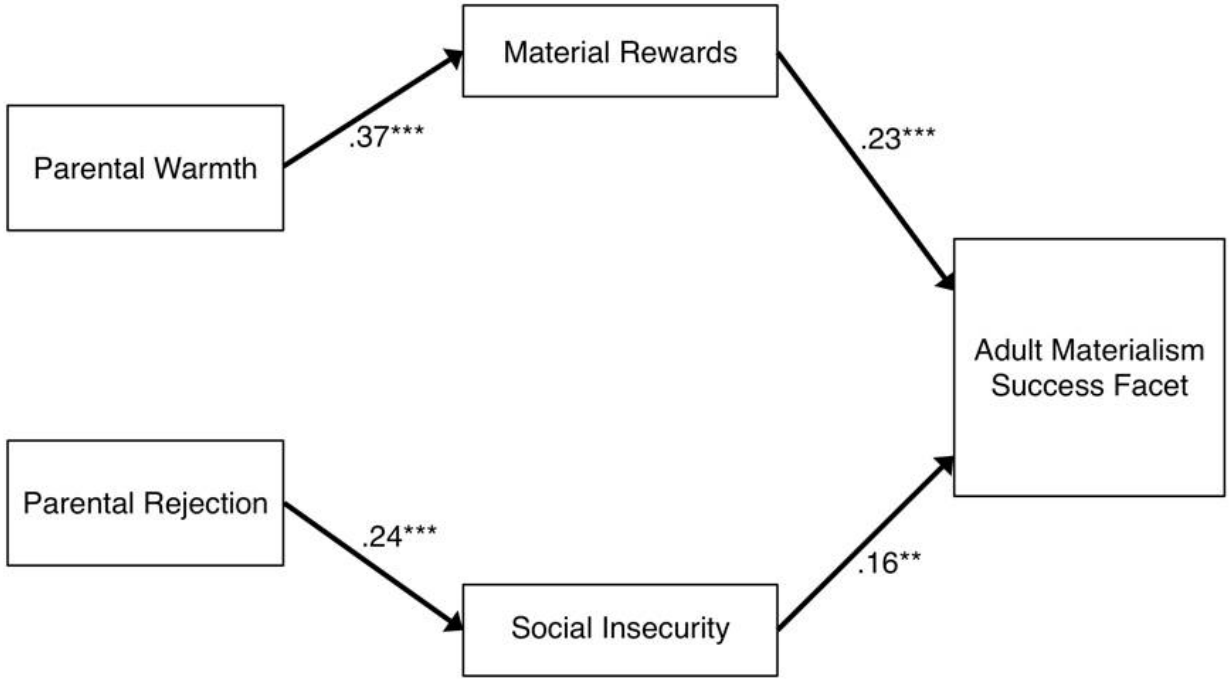
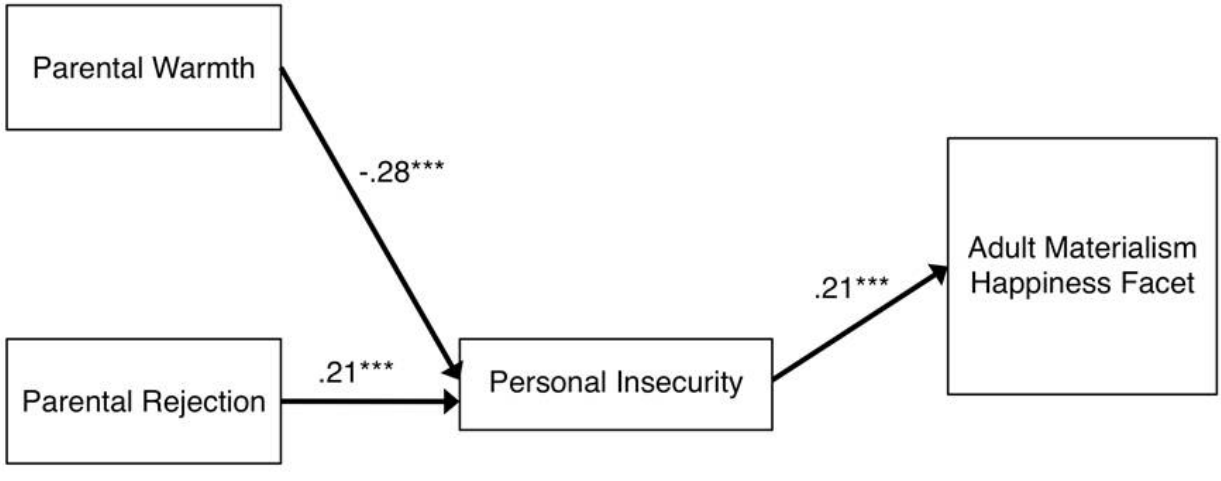
FIGURE 3
INTEGRATED PATHWAY TESTS, STUDY 2: SIGNIFICANT PATHS

A. Success Facet of Materialism



B. Happiness Facet of Materialism



**$p < .01$
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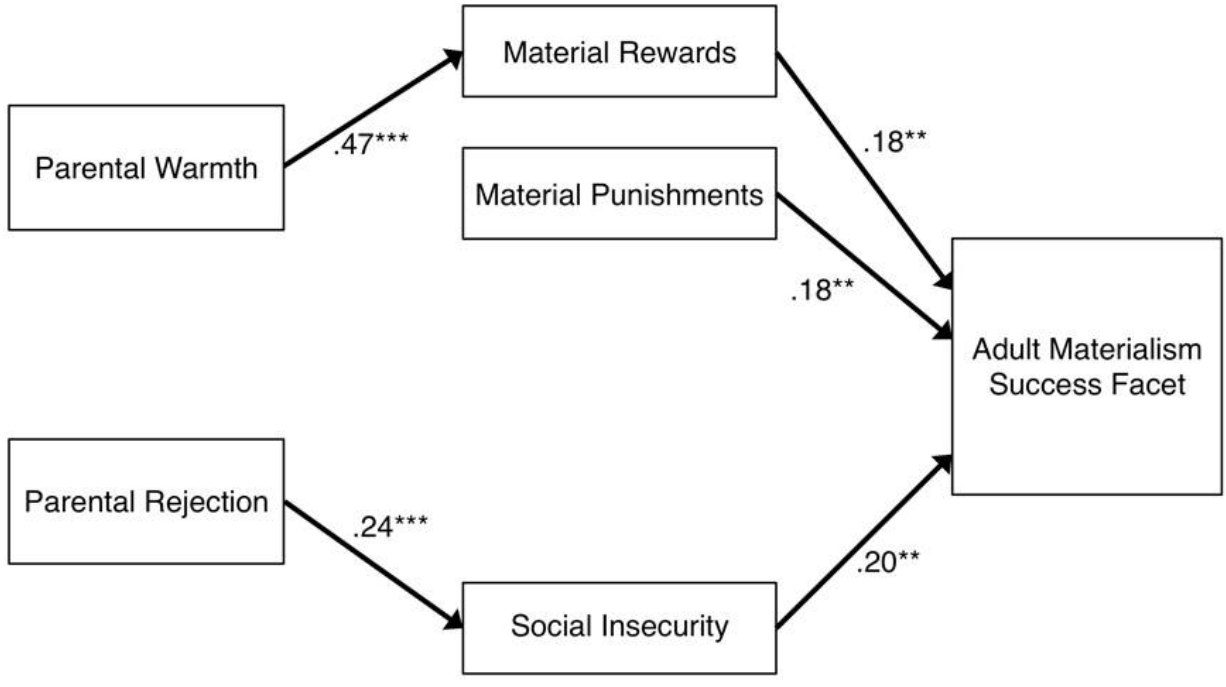
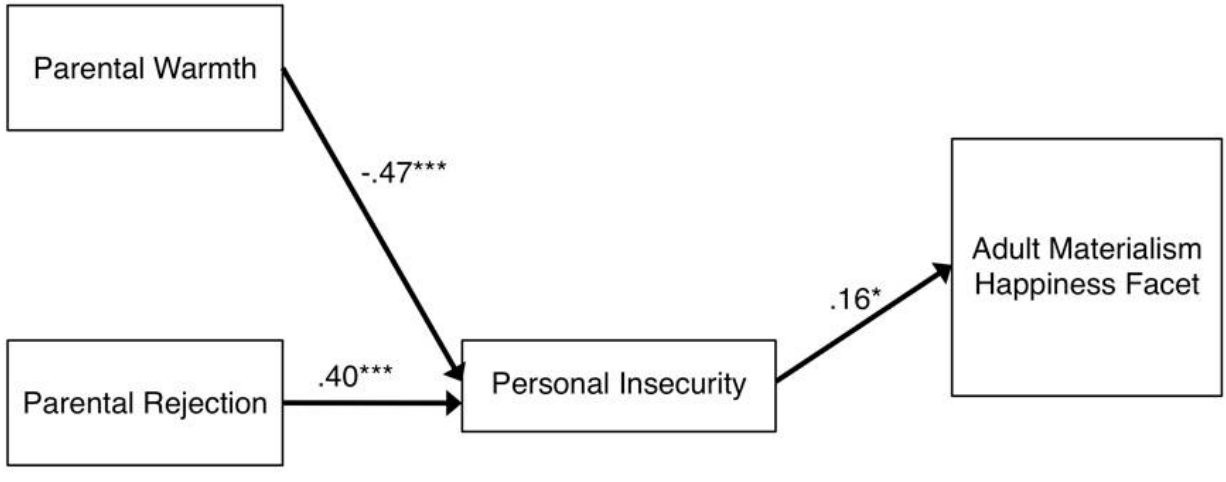
FIGURE 4
INTEGRATED PATHWAY TESTS, STUDY 3: SIGNIFICANT PATHS

A. Success Facet of Materialism



B. Happiness Facet of Materialism



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

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1) CONCEPTUAL OVERVIEW
2) Parenting Style and Materialism
2) Parenting Practices and Materialism
2) The Material Parenting Pathway
2) An Insecurity Pathway to Materialism
2) Integrating the Pathways
2) The Role of Material Rewards in Shaping and Transforming the Self
2) The Study of Childhood Circumstances and Materialism
2) Retrospective Research Methods
1) OVERVIEW OF STUDIES
1) STUDY 1
2) Methods
3) Overview
3) Participants
3) Measures
2) Results
3) Tests for Biased Recall
3) Tests of Measure Reliability
2) Discussion
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2) Discussion
1) GENERAL DISCUSSION

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2) Limitations and Future Research
2) Conclusion

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