

Truly, Madly, Deeply: Consumers in the Throes of Material Possession Love

JOHN L. LASTOVICKA
NANCY J. SIRIANNI

Our treatment of material possession love expands an understanding of the role that discrete emotional attachment forms play in identifying commercial value for marketers and in enhancing consumer well-being. Employing a mixed-methods research design—relying on both qualitative and quantitative data—we develop and empirically test a three-factor, but seven-faceted, conceptualization of material possession love in four separate consumption contexts (automobiles, computers, bicycles, and firearms). We find love-smitten consumers nurturing their beloved possessions, in part, by buying complementary products and services. We also find that material possession love is empirically tied to loneliness and social affiliation deficits, which suggests a compensatory basis of consumer well-being. We distinguish possession love from the construct of attitude and empirically demonstrate the distinct functionality of each. Our concluding discussion considers our mixed-methods findings and their implications for consumer research.

Hark close and still what I now whisper to you,
I love you, . . .
That furious storm through me careering,
I passionately trembling;
The oath of inseparableness of two together, . . .
O you and I—what is it to us what the rest do or think?
(Walt Whitman, from “Pent-Up Aching Rivers”)

Kleine and Baker’s (2004) review of the material possession attachment literature observes that consumer research has yet to explore how any single emotion, such as love, shapes the deeply charged emotional bonds that can exist between consumers and their possessions. While consumer research primarily considers attachment as the degree

of emotional bond between consumers and their psychologically appropriated consumption objects (Ball and Tasaki 1992; Thomson, MacInnis, and Park 2005), the nature of the emotion behind such attachments to consumption objects is largely ignored. Prominent among the emotions ignored is the powerful emotion of love. When Schultz, Kleine, and Kernan (1989) asked consumers their feelings about emotionally attached possessions, love was the second most common of the 83 emotions elicited. Therefore, we shed light on a form of possession attachment we call material possession love.

Our perspective of material possession love has implications for understanding how possession attachment provides commercial value and for how attachment influences consumer welfare. Whereas prior consumer attachment research primarily shows the effects of bonding with possessions in consumer well-being (Belk 1992), a clear identification of the commercial value of consumer attachment is absent. In contrast, we find that love-smitten consumers nurture their beloved possessions, in part, by buying complementary products and services. In addition, while prior research largely delimits the benefits of possession attachment to self-definition (Ahuvia 2005) and social affiliation (Kleine, Kleine, and Allen 1995), our findings suggest that material possession love provides another locus of well-being rooted in social affiliation deficits.

We report our work in four steps. First, we review our conceptual foundations and articulate the meaning of material possession love. We embrace a conceptual foundation

John L. Lastovicka (john.lastovicka@asu.edu) is professor of marketing at Arizona State University, W. P. Carey School of Business, 350 E. Lemon, P.O. Box 874106, Tempe, AZ 85287, and, during his North American summers, is visiting professor of marketing at the University of Auckland, New Zealand. Nancy J. Sirianni (n.sirianni@tcu.edu) is assistant professor of marketing at Texas Christian University, Neeley School of Business, Box 298530, Fort Worth, TX 76129. The first author acknowledges the support of a sabbatical leave from Arizona State University and the helpful input from participants in seminars at the University of Auckland, Auckland University of Technology, University of Melbourne, University of Queensland, and University of Wollongong.

John Deighton served as editor and Russell Belk served as associate editor for this article.

Electronically published January 25, 2011

that considers love as a form of attachment (Hazan and Shaver 1987; Shaver and Mikulincer 2006). Second, based on the literature and our initial qualitative research with automobile enthusiasts, we develop a three-component, but seven-faceted, measure of material possession love rooted in a Sternbergian perspective on the diverse forms of love (Sternberg 1986, 2006). In an automotive context, our measures examine the role of material possession love in explaining consumer nurturing behaviors. Third, in other contexts (i.e., computers, bicycles, and firearms), we reexamine love's influence on nurturing and also examine interpersonal deficits as antecedent to material possession love. We conceptually distinguish possession love from the construct of attitude and empirically demonstrate the distinct functionality of each. Finally, we discuss our mixed-methods findings and their meaning for consumer research.

THEORETICAL FOUNDATIONS

Attachment and Love

The Attachment Perspective. Bowlby's (1969) landmark work explained how infants are emotionally attached to their adult caregivers. Bowlby viewed attachment as a selective emotional bond of one for another that supports a sense of closeness and well-being. Subsequently, Hazan and Shaver's (1987) classic article—as well as Shaver and Mikulincer's (2006) more recent work—conceptualizes adult heterosexual love as an attachment process, which consequently views love as a form of attachment. This perspective views all loving relationships—including the first ones between children and parents, and later ones, such as those between adult lovers—as stemming from a few innate behavioral systems. Bowlby (1969) viewed attachment, caregiving, and proximity-seeking (and a few others) as deep-seated and innate motivating behavioral systems. Given that early infant-caregiver attachments vary in their nature, an attachment perspective on love recognizes that love can take several forms (Hazan and Shaver 1987).

The Varieties of Love. Love is not a homogeneous monolith with one form. Rather, per Bernstein's (1988) taxonomy, love is a genus of diverse phenomena whose only commonalities are that they (1) take place in a relationship and (2) have a positive emotional quality. Hence, different taxonomies of love exist, such as Lewis's (1960), which follows the classical Greek approach and includes agape (altruism), philias (friendship), and eros (romantic adult love). When consumer research examines love, most efforts assume a sole monolith (Carroll and Ahuvia 2006). However, a few exceptions consider particular forms, namely, agape (Belk and Coon 1993) and philias (Fournier 1998). In contrast, when most think of love, they do not think of altruism or friendship; rather, romantic love and passion come to mind (Rook 2003). Therefore, we rely on Sternberg's (1986, 2006) taxonomy of love forms, which includes romantic love.

Material Possession Love Defined. We view material possession love as a property of a consumer's relationship

with a specific psychologically appropriated possession, reflecting the nature and degree of a consumer's positive emotional attachment to an object. Such attachment is: (1) multidimensional with three components (passion, intimacy, and commitment), and (2) multifaceted, meaning the components define seven forms of love.

We rely on Sternberg (1986, 2006) to define terms nested within our definition. Passion is the uncompromising motivational component of love; it is the relentless drive energizing one to be with the other. Passion is full of hot emotion, revealing itself in behaviors such as gazing at, or obsessing about, the other. Intimacy means achieving closeness and connectedness with a beloved. Intimacy with possessions can be gained by knowing the beloved both physically and intellectually. Commitment is the consumer's decision to be in an enduring relationship with his or her possession and a devotion to keep the possession. The three components give rise to seven different types of love, based on the combination of levels of the three components involved. The first three forms rely on single components, such that: (1) a high level of passion alone creates infatuation, (2) high intimacy alone generates friendship, while (3) high commitment alone yields an empty love, like a new arranged marriage. These single-component-based forms of love are the nascent early forms of love that often blossom into more complex forms of love (Sternberg 1986). More complex forms are defined via two components, namely: (4) high intimacy and high passion creates romantic love, (5) high intimacy combined with high commitment yields companionate love, and (6) high passion with high commitment creates fatuous love. Finally, (7) high levels on three components create enduring romantic love. Each form of love is a limiting case; therefore, a particular consumer's love will tend toward a particular form, and each love form has its own effects. For the forms of love detected in our empirical work, we subsequently discuss the influence of each.

Consequences and Antecedents of Material Possession Love

The Consequence of Nurturing. Branden (2008, 56) reasons that: "The origin of our desire to love lies in our profound need to value, to find things in the world which *we can care for*" (emphasis added). This not only reflects an urge to form attachments but also recognizes the need to nurture the beloved via Bowlby's (1969) caregiving system. In romance, this means that love leads to behaviors that benefit partners (Steck et al. 1982). Likewise, with objects, love-smitten consumers may be found nurturing their beloved possessions to further enhance those objects. As this may involve buying complementary products and services, such nurturing can have substantial commercial value.

By consumer nurturing, we refer to consumers giving of their time, energy, and financial resources, or otherwise of themselves, to foster beloved possessions and their relationships with such objects. Because emotional satisfaction

likely comes from hands-on behaviors, nurturing includes do-it-yourself activities. However, limited expertise—and a desire to have only the best—likely also leads to buying professional services.

Interpersonal Deficit as an Antecedent. Shaver and Mikulincer (2006) portray innate motivational systems, like attachment and proximity-seeking, as adaptive within each individual's lifetime, with learned adjustments rooted in individual success when an innate motivation system is activated and either succeeds or fails to attain a desired goal. Adaptive changes in a motivation system's enactments can include, for example, disengagement after repeated failure to meet a goal, such as an adult heterosexual obtaining intimate proximity to an attractive adult of the opposite sex. Shaver and Mikulincer view such repeated failures as a major source of human frustration and pain that adaptively may lead to deactivation. Consequently, some of life's most rewarding experiences are forgone so as to avoid the pain of frustration and disappointment. However, with the deactivation of interpersonal proximity-seeking, a likely outcome is social isolation and loneliness. Recent research shows an increasing proportion of lonely individuals (McPherson, Smith-Lovin, and Brashears 2006).

Hence, in postmodern consumption cultures, a not uncommon adaptation may be to remedy loneliness by seeking safe relationships in the marketplace, where being jilted is less likely. Indeed, lonely consumers' long-distance para-relationships with beloved media personalities have long been recognized (Horton and Wohl 1956), and some of these individuals fill emotional voids with pet animals (Beck and Meyers 1996). More recently, Rosenbaum et al. (2007) show that those with social deficits are more likely to become attached to third places—like restaurants—to form commercial friendships (Price and Arnould 1999). While Belk (1992, 54) has viewed possession attachment as “malignant” when it substitutes for interpersonal relationships, Kleine and Baker (2004) call for research on how possession attachments may compensate for interpersonal deficits. Therefore, we investigate the link between loneliness and possession love; consequently, we consider a source of consumer well-being not yet addressed in the material possession literature.

Material Possession Love and Other Consumer Research Constructs

Brand Love. With few exceptions, such as Ahuvia's (2005) key work on loved objects and identity, most consumer research examining love focuses exclusively on brand love (Albert, Merunka, and Valette-Florence 2008; Carroll and Ahuvia 2006; Ji 2002; Kamat and Parulekar 2007; Keh, Pang, and Peng 2007; Shimp and Madden 1988; Whang et al. 2004). Given a managerial focus (Roberts 2004), examining brand love makes sense. However, we believe that ignoring love for specific possessions limits the explanatory power of consumer love, especially if interested in commercial value. Just as in interpersonal love, where the

beloved is a singular person, we argue that consumer research has largely overlooked the love lavished on specific objects—as opposed to brands representing sets of fungible objects. While individuality is clearly recognized in interpersonal love, beloved objects are also seen as relatively unique by smitten owners due to the well-known properties of decommodification (Wallendorf and Arnould 1988), singularity (Epp and Price 2010), and indexicality (Grayson and Martinec 2004).

We do not deny that brand love exists; rather, we focus on consumers' love for specific, concrete, and tangible possessions, as opposed to brand love representing a love for more freely replaceable objects and abstractions within a brand designation. Fisher (2004, 39) notes that human adult romantic love is reserved for “a particular individual” like one's own mate. Likewise, we focus on love for particular owned possessions.

Attitude and Love. Like Park and MacInnis (2006), we view attitude as embodying undifferentiated affect, representing an object evaluation. It is tempting to see attitude and love merely as different regions on the same continuum, with love beyond a positive attitude. However, attitude and love are functionally distinct and should be recognized as two separate constructs. With respect to attitudes, Cacioppo, Gardner, and Berntson (2002) review evidence for a processing system—which renders cognitively based attitudes and choices—that allows humans to learn to differentiate hostile from hospitable stimuli and behave accordingly. Therefore, attitudes are learned and bipolar (positive-negative) evaluations that guide bivalent actions (approach-withdraw). In contrast to attitudes' learned and bipolar opposites, Carter's (2002) perspective—on interpersonal love as a form of attachment—views love and attachment as positively charged to facilitate mating and nurturing infants into adults. In sum, love is distinct from attitude, with both functioning in disparate manners.

Divergent Effects of Love versus Attitudes. Schwarz and Clore's (2007) review of the older research on emotions suggests that the positive affect stemming from any process makes everything more desirable. In contrast, contemporary work in psychology (Tiedens and Linton 2001) and consumer research (Griskevicius, Shiota, and Nowlis 2010) is more nuanced and recognizes that discrete sources of the same valence have different influences on behavior. This more recent perspective views disparate affective experiences as activating distinct behavioral routines. Therefore, the positive emotion of love and positive attitudes are not always univocally driving identical outcomes. Each is distinct, and each exists to guide different behaviors. Infants and romantic partners are typically hospitable; therefore, love is innately positive so as to encourage nurturing. Subsequently, attitudes reflect learned bipolar evaluations guiding actions like the decision to purchase or not purchase.

Consequently, comparable valences from different sources may drive different behaviors. Given the distinct conceptual functions of attitude and love, we consider the roles of the

positive emotion of love versus attitudes on the separate behaviors of nurturing versus making word-of-mouth (WOM) recommendations to buy. Herr, Kardes, and Kim (1991) show a relationship between attitudes—reflecting for-or-against or pro-con affective object evaluations—and WOM. In contrast, we expect that most forms of love influence only nurturing. Hence, we examine the influences of both attitude and love on both WOM and nurturing behaviors among those who already own a beloved possession.

We believe most forms of love do not generate WOM recommendations to family and friends to buy an object comparable to what the potentially recommending consumer is obsessed about. As explained, love functions to drive nurturing and not evaluations like WOM. Moreover, it is likely that many enthusiasts owning a beloved possession for some time are selective with their WOM, as they already have learned that others no longer want to hear about the beloved, as such family and friends do not share the enthusiast's passion. In contrast, less emotive and more cognitively based attitudes reflect for-or-against evaluations and are expected to drive WOM recommendations to buy or not to buy. That is—except for infatuation—we see love as more relevant to nurturing, but not relevant to evaluation-related behaviors like WOM recommendations to buy. Infatuation, however, is a special case. Infatuation is the love-at-first-sight reaction by a nonowner—driven by passionate arousal in absence of any intimate knowledge or commitment to the other—that creates an intense excitement and longing to possess the other. Because infatuation is the nascent form of love often found in the earliest stage of a well-established romantic or enduring relationship (Sternberg 1986, 2006), as our qualitative results suggest, infatuation helps drive acquisition and likely also drives indiscriminant WOM. Our reasoning about the roles of attitudes and most forms of love contradicts Park and MacInnis (2006). They argue that attachment to an object (e.g., brand, person, place, or object)—and not attitude—drives WOM.

In addition, opposite valences from discrete sources may drive comparable behaviors. This means that increased expenditures to nurture a possession may be driven by both the positive emotion of love and a cognitively based dislike. The distinct systems responsible for the emotion of love and the reasoning behind cognitively based attitudes are separate (Cacioppo et al. 2002; Carter 2002), which then permits potential conflicts and chasms between emotively and cognitively driven behaviors.

MIXED-METHODS EMPIRICAL RESEARCH

A blend of both quantitative and qualitative data is recommended for work on attachment (Belk 1992; Kleine and Baker 2004). Accordingly, we relied upon a mixed-methods design, combining both qualitative and quantitative data. A pragmatic philosophy (Creswell and Clark 2007) drives mixed-methods research. While qualitative data are best able to explicate the meanings of loving attachments, quantitative

data are better suited to portray the structure of love and the relationship of love with other variables. We obtained complementary data on the same topics in different consumption contexts and then gained perspectives from our diverse data by allowing insights gleaned from each study to inform our thinking about subsequent data collection and analysis. We worked in both an inductive and iterative manner, which meant that our subsequent quantitative analyses often informed reexaminations of our initial qualitative data.

INITIAL EMPIRICAL RESEARCH WITH AUTOMOBILE OWNERS

Our initial empirics (1) explore the nature of consumers' relationships with their possessions, (2) develop and evaluate measures of possession love, and (3) examine the utility of those measures in explaining consumer nurturing and WOM. We initially study automobiles, as both consumers' loves and attitudes should be operant because automobiles have both instrumental and hedonic value (Dittmar 1992). Instrumentally, cars are evaluated on a myriad of attributes (e.g., handling, braking), therefore providing a cognitive basis (Lutz 1977) for Cacioppo et al.'s (2002) system to develop reasoned attitudes. Cars also elicit hedonic reactions, including aesthetic responses; such reactions are like the excitement activations found among the love-smitten (Fisher 2004).

Study 1: Qualitative Research in the Automotive Context

Data. We visited five public car shows in the Phoenix-Mesa-Scottsdale metropolitan area in Arizona and conducted depth interviews with 11 car enthusiasts (males and females, ages 19–68) as they exhibited their cars. Our unstructured interviews were 40–60 minutes long and started by simply asking about the car. We sought to learn the meaning of the car in consumers' lives and asked grand-tour questions (McCracken 1988). Preliminary analyses of these qualitative data were reported in a short film (Lastovicka, Sirianni, and Kunz 2009).

Possession versus Brand References. Consumers' own words revealed how they predominantly thought of their cars. Our informants were eight times more likely to use an appropriated reference like "my car" than to refer to a brand name like "Dodge" when talking about their vehicle. Among those with pet names (e.g., "Blue Jewel"), the reference was more commonly the pet name rather than the brand. Hence, in the owning stage of consumer behavior, car enthusiasts referenced their psychologically appropriated possessions as theirs and not how the car had been referred to when in the marketplace. This is consistent with the viewpoint that consumers' emotional attachment to their possessions (Kleine and Baker 2004) is associated with decommodification and singularization. While brand references occurred, informants primarily spoke about specific possessions. Consequently, our research focuses on specific objects.

Adaptations to Interpersonal Deficits. Some informants' relationships with their cars appeared to remedy social isolation, which is a source of pain and disappointment for many in today's world (McPherson et al. 2006). As the following shows, Norton, a single 19-year-old male in trade school, describes his car, which he calls "Maybellene," as a dating partner and admits to spending more time with Maybellene than with people. While other young men showing their cars were often accompanied by what appeared to be their girlfriends, Norton was at the car show with his parents.

Norton: Yes, Maybellene. I told my mother, I said, "I date a 50-year-old woman [*laughing*]." And she looked at me the other day like I had fallen off my rocker.

Researcher: Now how old is your mother?

Norton: My mother is 54. And my mother looked at me and I said, "Mom, it's the pink and gray machine outside." And she said, "I've never heard anyone describe their car as a dating relationship." I said, "What else would you call it? I spend more time with the car than with anybody else [*laughing*]." . . . My mother actually said, "You know you spend more time on that car than you do socializing, I'm concerned about you."

Even though Norton's mother may not appreciate the role of his car in his life, we believe he finds comfort in his car. By engaging a possession relationship as an adaptive coping mechanism, Norton seems to have avoided the pitfalls of loneliness faced by others. In this way, possession relationships contribute to consumer well-being, especially when considered relative to less desirable alternative responses to loneliness, which include alcohol abuse, delinquency, and the side effects of antidepressant medications (Lynch 1976; Nerviano and Gross 1976; Russell, Peplau, and Cutrona 1980). We further examine the link between loneliness and possession love in our subsequent studies.

Three Components of Love. Our understanding of consumers' relationships with their possessions was enabled with Sternberg's (1986, 2006) three components of love, namely, passion, intimacy, and commitment. We now illustrate how each component is manifest with car lovers and how component combinations yield different forms of love.

Passion. Passion is the emotionally hot and uncompromising motivational component of love; it is a relentless drive energizing one to be with another (Sternberg 1986, 2006). In interpersonal love, "be with" equates to emotional and sexual union, while—with consumers—passion manifests in consumers' desires to always be physically near or otherwise be psychologically focused on the object. Passion alone—without the other love components—defines one nascent form of love: infatuated love. This is a love at first sight resulting from arousal in the absence of intimacy and commitment. In interpersonal love, the "turns-me-on" stimulation from physical attraction is the single best predictor of a successful first date leading to a more enduring relationship (Walster et al. 1971). Infatuation includes high

levels of psychophysiological arousal, resulting in vivid memories (Sternberg 1986). Terrence, who is a single, 30-year-old male working as an assembly-line worker, recalled his love-at-first-sight story:

Researcher: How did you come to own your car?

Terrence: Once I found this, I just knew. I'd looked at maybe three or four cars before this, and they weren't as nice as you think they are in the picture. When we drove up and I saw this in the parking lot I thought [*pauses and smiles*]: "I'm gonna buy this car!"

Researcher: Right then, you knew?

Terrence: Yeah, pretty much. I mean I would have had to find something pretty bad about my car [upon examination] for me not to do it. I didn't think I could afford it . . . so, [I spent] every penny I had, plus I borrowed . . . from my dad to pay for it.

Researcher: Oh my gosh. Did you ever regret it?

Terrence: There right after I bought it when I had like 20 bucks in my pocket, but once I saved up some more money, yeah, it was, like I said: It was the one that I always wanted.

Terrence's willingness to sacrifice—all his cash and then more—reflects the power of infatuation on acquisition. While passion is often the first component to set in, to go beyond infatuation to more complex forms of love, then other components are needed.

Intimacy. Intimacy is the state of closeness and connectedness of one with another (Sternberg 1986). With consumers, this state is achieved through a process where consumers come to know their possessions both intellectually and physically. Much of the getting-to-know-you aspect of intimacy is intellectual. In interpersonal love, the focus is on learning the private world, background, and experiences of the other. In consumers' love for their possessions, the intellectual intimacy focuses on becoming fluent in the singular details of their possession, which included—in one case—a top-of-mind recall of the last four digits of a car's unique VIN (vehicle identification number). Likewise, Norton uses a set of indexical time-and-place referents to uniquely define his car's early biography:

Researcher: How did you come to own your car?

Norton: My car was manufactured on the 15th of February 1957 in the South Gate, California plant. And it was in Los Angeles County in 1957 from the day it came out of South Gate in 1957 'til January 13 of 1958. And then she came to Arizona and spent her whole life in Tucson and Yuma. So I bought my car from a man who bought her from the son of the original owner in Yuma.

Researcher: So, you know your car's lineage and history?

Norton: Yes. I learned everything there is to know about my Maybellene.

Physical intimacy is another route to becoming close to a beloved possession. This physical intimacy may focus on the exterior body and the car's paint. Another focus is on

the less publicly visible mechanical systems inside of or beneath a car. In what follows, notice how Jerry—a 55-year-old empty nester, family man who works as a journalist—has hands-on knowledge of an unusual mechanical detail of his “baby”:

Researcher: You said before that you only changed the oil on this one, but not on the other cars [that you own]? Why is that?

Jerry: Well, that’s because this one is my baby. And I just don’t want anyone else touching her. I just don’t want anything screwed up. She has a special aftermarket oil filtration system with a reusable filter. Most shops just don’t have the patience to work on a mid-engined car and they don’t know what to do with a reusable stainless-steel oil filter. But I know her and I know how to do it right.

Jerry’s close knowledge of his car allows him to care for his “baby” as he believes only he can. Such intimacy coupled with passion yields romantic love. In romance, one is not only drawn to the other, but intimacy has developed as well. With romance and commitment, there is another form of love, namely, enduring romantic love.

Commitment. Commitment refers to the decision to love another and the dedication to maintain that relationship over time (Sternberg 1986, 2006). Our informant Douglas demonstrates a lifetime commitment to his car. Douglas is a 49-year-old unmarried male who is a successful entrepreneur. While he has had a 10-year relationship with his girlfriend, Candi, his relationship with his car has been more long lived, as evidenced by his statement, “So, I bought my car when I was in high school, long before I met Candi here. . . . About 30 years, 33 years now. So, yeah, my heirs will sell it, but I’ll never sell it.”

Douglas’s relationship is best described as enduring romantic love. Alternatively, given passion and intimacy, but without a long-term commitment, a romantic love exists (Sternberg 1986). Romantic love is ludic and is therefore more flirtatious, playful, pluralistic, and—although passionate—is free of the commitment that Douglas shows.

Discussion. Study 1 begins our understanding of material possession love. First, we show consumers referring to their beloved more often at the possession level rather than the brand level. Second, we provide some initial evidence of how possession love is linked to interpersonal deficit. Finally, we demonstrate how passion, intimacy, and commitment are manifest with autos; this helped generate the items listed in table 1.

Study 2: Development of Three Scales and Their Roles as Independent Variables

Study 2 develops measures of the three components of possession love. Also examined is love’s role (relative to attitude) in explaining nurturing and WOM.

Sample. Study 2’s data are from a convenience sample of 127 automobile owners, with automobile enthusiasts ov-

errepresented. Enthusiast data ($n = 25$) were collected from consumers (ages 51–80, 4% female) showing their cars. Other car owners ($n = 102$) were undergraduates (ages 20–47, 47% female) receiving course credit for participation. Such a sample is appropriate, as subsequent statistical analyses focus on interactions. Love is multidimensional and multifaceted; consequently, when analyses examine love’s effects on behavior, the analyses examine interactions between the love components. In naturally occurring data, as found in surveys such as ours, the detection of interaction effects is limited (McClelland and Judd 1993). Accordingly, oversampling of extreme strata in surveys is recommended to obtain the power needed to detect interactions (Cohen et al. 2003).

Measures. Based on our qualitative work, we designed a 58-item battery to measure passion, intimacy, and commitment with a car. This battery used a 6-point Likert scale (1 = definitely disagree, 6 = definitely agree). We also measured attitude and behaviors. We measured possession attitude by asking: “How do you feel about your car?” with five semantic differential scales (good-bad, favorable-unfavorable, like-dislike, pleasant-unpleasant, interested-disinterested) as commonly used in consumer research (Lutz 1977). We measured WOM by asking: “How likely are you to recommend a car like yours to a friend or family member?” The behavioral items measured self-reported hours (and dollars) spent in the past 12 months for cosmetic work on the car’s body, namely, washing, waxing, polishing, and professional body work.

Initial Measurement Analyses. The 58 love items were subjected to a series of exploratory factor analyses that were both theory and data driven. Elimination of nonunivocal items with low communalities produced a set of 17 items. Subsequently, a series of restricted maximum-likelihood-estimated factor analyses further examined the factorial structure of the 17 items. The top section of table 1 reports the loadings from our final three-factor model. Each factor’s items are consistent with the meaning of the three components of love, namely, factor I’s items correspond to passion, II’s to intimacy, and III’s to commitment. We use multiple fit indices to evaluate our model with the comparative fit index (CFI; Bentler 1990) and the Tucker-Lewis rho (TLR; Tucker and Lewis 1973). Based on Marsh, Hau, and Wen’s (2004) caution against rejecting content-valid models, we use Browne and Cudek’s (1993) index criterion of at least .90 for a good fit. So, this model’s TLR of .90 and CFI of .92 suggest acceptable fit.

Tests of Divergence. The discriminant validity of the three factors in table 1 was examined with comparisons among hierarchically nested competing factor models via chi-square difference tests. The first comparison considered the correlations among the three love-component factors and empirically examined if the three factors are distinct. The model in table 1 assumes three separate factors of love. In comparison, an alternative and more restricted model with factor correlations set to unity implies that the three factors

TABLE 1

STUDY 2: FACTOR LOADINGS, CORRELATIONS, AND RELIABILITIES FOR PASSION, INTIMACY, AND COMMITMENT SCALES

	I. Passion	II. Intimacy	III. Commitment	Attitude
Factor-loading estimates				
Item:				
1. Just thinking about <i>my car</i> "turns me on."	.87	.00 ^a	.00	
2. I cannot imagine anything else I own making me as happy as <i>my car</i> does.	.75	.00	.00	
3. Sometimes just <i>seeing my car</i> can be very exciting for me.	.87	.00	.00	
4. I enjoy <i>running my hands over the exterior surface of my car</i> .	.74	.00	.00	
5. When I cannot be around <i>my car</i> , I find myself <i>longing to see it</i> .	.78	.00	.00	
6. The day I bought <i>my car</i> was a dream come true for me.	.69	.00	.00	
7. I know details about the intricacies of <i>my car</i> that are of little interest to most other people.	.00	.84	.00	
8. I especially like to get things for <i>my car</i> .	.00	.85	.00	
9. I work to make sure <i>my car is running great</i> .	.00	.79	.00	
10. I work to make sure <i>my car is always looking its best</i> .	.00	.84	.00	
11. I feel I really understand <i>my car</i> .	.00	.79	.00	
12. I enjoy spending time on <i>my car</i> .	.00	.92	.00	
13. I am happy to share myself and my resources with <i>my car</i> .	.00	.68	.00	
14. I am always interested in learning more for <i>my car</i> .	.00	.75	.00	
15. I would like to always keep <i>my car</i> .	.00	.00	.87	
16. I can't imagine selling <i>my car</i> .	.00	.00	.81	
17. <i>My car</i> is irreplaceable.	.00	.00	.81	
Scale correlations				
Scale:				
I. Passion	.90 ^b			
II. Intimacy	.78	.94		
III. Commitment	.74	.67	.86	
Attitude	.50	.53	.58	.96

^aAll loading values shown as zero were restricted to zero during factor-model estimation. Nonzero loadings were left free to unrestricted estimation. All nonzero loadings were statistically different from zero ($p < .05$).

^bCronbach's α reliability estimates are in italics and are in the main diagonal of the lower half of the correlation matrix.

are not empirically distinct and that love is unidimensional. The chi-square value of this more restrictive model was $\chi^2(119) = 405.08$, with a TLR value of .81 and a CFI of .83. The difference ($\Delta\chi^2(3) = 151.00, p < .05$) between this more restrictive model's fit and the correlated factor model's fit ($\chi^2(116) = 254.08$) supports three distinct factors.

Another set of factor-analytic comparisons examined the discrimination of the love factors from an attitude factor. These models used the 17 love items and the five attitude measures. The first model left all factor-correlation ϕ parameters free to estimation, while the second more restricted model (assuming no divergence) set the three correlations with attitude to unity. The fit of the first four-factor model is satisfactory (TLR = .92 and CFI = .93). In comparison, the second more restricted model (TLR = .63 and CFI = .67) fits less well. The difference between these two models, $\Delta\chi^2(3) = 649.25 (p < .05)$, shows attitude is distinct from the love factors. Comparing the fit of the first model to the fit of nested models with only one ϕ parameter set to unity also supports divergence (if $\phi_{A,P} = 1, \Delta\chi^2(1) = 278.80,$

$p < .05$; if $\phi_{A,I} = 1, \Delta\chi^2(1) = 596.52, p < .05$; if $\phi_{A,C} = 1, \Delta\chi^2(1) = 121.03, p < .05$).

Reliabilities and Correlations. The bottom of table 1 shows the scales' reliabilities and correlations. The reliabilities are acceptable, ranging from .94 to .86. Although the measures are correlated, the findings in the two prior paragraphs show that the three love factors are distinct. Moreover, the correlations between attitude and the love measures shown at the bottom of table 1 are comparable in size to that found in studies of liking and love in interpersonal relationships (Sternberg 1987). The size of the love-attitude correlations means that love shares only about 25% of its variance ($.5^2 = .25$) with attitude. This means that some 75% of the variance of the love measures is distinct from attitude. However, what is the function of these measures of love relative to attitudes?

Love Components versus Attitude as Antecedents of Nurturing. Here we report study 2's initial statistical examination of the role that the love components play (relative to attitude)

in understanding consumer nurturing behaviors. Hierarchical regression analyses examined these variables' effects by including attitude in the first stage of a regression model and then—in a second stage of the model—subsequently also including the material-possession-love scales. This is a conservative test of the effect of love, as love effects were only assessed after accounting for any attitudinal explanations.

We defined love as multidimensional and multifaceted. Accordingly, the independent variables in the second stages of our regression models include not only passion, intimacy, and commitment, but also interactions between the three, namely, two-way interactions (passion \times intimacy, passion \times commitment, intimacy \times commitment) and the three-way interaction (passion \times intimacy \times commitment). This way, for example, the effects of romantic love (high passion and high intimacy) and enduring romantic love (high passion, high intimacy, and high commitment) are assessed with interaction effects.

The two hierarchical regression analyses rely on different dependent variables: (1) the total number of hours and (2) the total dollar expenditures consumers reported spending on exterior car care over a set of categories (washing, waxing, polishing, body work). These variables are both multipart behavior measures (Lastovicka and Joachimsthaler 1988), which reduce type II errors in detecting explanations of behaviors.

The first hierarchical regression model examines explanations for the total hours spent working on cars for exterior care. The first stage of this regression model, where attitude was the sole independent variable, suggests attitude has a modest effect on hours spent ($R^2_{\text{adj}} = .03$, $R^2 = .04$; $F(1, 125) = 4.92$, $p < .05$). However, in the second stage of the regression modeling, when passion, intimacy, commitment and all interactions between the love components are also considered, the explanatory power of the model is enhanced tenfold ($R^2_{\text{adj}} = .29$, $R^2 = .33$; $F(8, 118) = 7.27$, $p < .05$). The difference in variance explained between stages ($\Delta R^2 = .29$; $F(7, 118) = 7.35$, $p < .05$) shows that possession love largely explains these behaviors—even after controlling for attitude.

The regression weights in the first hierarchical regression's second stage reveal two love effects. Consistent with the passion \times intimacy coefficient ($\beta = 36.84$, $t = 2.10$, $p < .05$), figure 1A shows those in romantic love (high passion and high intimacy) spent more time caring for their cars. Dichotomizing the passion and intimacy variables via median splits allows examining those at higher and lower levels of intimacy and passion. The mean hours of those in romantic love ($M_{P=hi, I=hi} = 99.66$) was six times greater than that ($M_{\text{all conditions other than } P=hi, I=hi} = 15.77$) reported by all others ($t = 5.02$ (125), $p < .05$). Consistent with the passion \times intimacy \times commitment coefficient ($\beta = 16.76$, $t = 2.11$, $p < .05$), figure 1B shows those in enduring romantic love (high passion, high intimacy, and high commitment) nurturing more. On average, those in enduring romantic love ($M_{P=hi, I=hi, C=hi} = 115.63$) spend six times more time than ($M_{\text{all conditions other than } P=hi, I=hi, C=hi} = 17.43$) all others ($t = 5.71$

(125), $p < .05$). Finally, attitude had no effect ($\beta = -1.54$, $t = -.98$, $p > .05$) in the regression's second stage.

Study 2's second hierarchical regression examined consumers' total dollar expenditures in the past 12 months spent on washing, waxing, polishing, and body work. The first stage of this regression model, where attitude was the sole independent variable, suggests attitude has no effect on dollar expenditures for cosmetic car care ($R^2_{\text{adj}} = .00$, $R^2 = .00$; $F(1, 125) = .84$, $p > .05$). However, in the second stage of this regression modeling, when passion, intimacy, commitment, and all interactions between the love components were entered, the explanatory power is substantially enhanced ($R^2_{\text{adj}} = .21$, $R^2 = .26$, $F(8, 118) = 5.06$, $p < .05$). The difference in explained variance ($\Delta R^2 = .26$, $F(7, 118) = 5.77$, $p < .05$) shows that love explains dollars spent nurturing exterior care—even after statistically controlling for the effects of attitude.

The second stage of the second regression reveals which love forms explain dollars spent. Consistent with the passion \times intimacy \times commitment effect ($\beta = 484.78$, $t = 3.00$, $p < .05$), figure 2A shows higher expenditures by those in enduring romantic love (high passion, high intimacy, and high commitment). That spent by those in enduring love ($M_{P=hi, I=hi, C=hi} = \$1,590.66$) was three times greater than that spent ($M_{\text{all conditions other than } P=hi, I=hi, C=hi} = \497.89) of all others ($t = 3.04$ (125), $p < .05$).

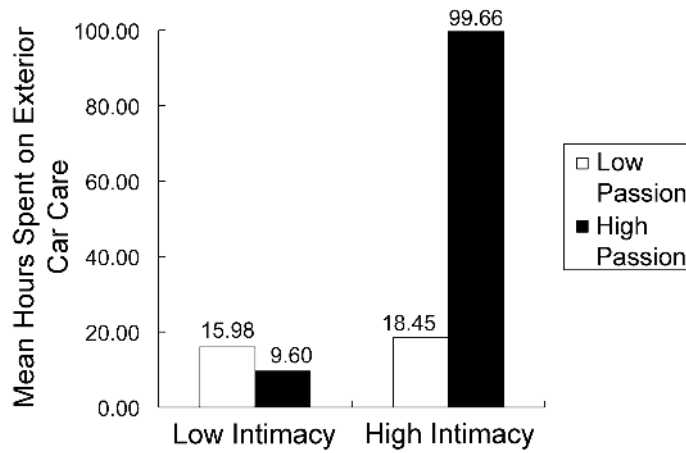
The only other effect detected in the second stage was an inverse relationship between attitude and dollars spent ($\beta = -84.13$, $t = -2.65$, $p < .05$). As figure 2B shows, with less favorable attitudes, higher expenditures were reported. Given the divergent functionalities of attitudes and love that we have previously discussed, having attitude and love working in opposite manners is not unexpected. As additional regression analyses revealed, these opposed effects occur among different kinds of consumers, therefore suggesting two distinct mechanisms. In the stratum of enthusiast consumers who own and display a show car, an emotionally based love may well lead to lavishing even more care on the car with an expensive professional repainting. In contrast, consumers in the nonenthusiast stratum likely have a more functional and utilitarian relationship with their cars. Such owners could feel more compelled to bear the burden of an expensive body-shop repair (due to an accident) so as to maintain the car's economic value. Therefore, among the more utilitarian, paying for such expensive body work could lead to less favorable attitudes.

Love versus Attitude as Antecedents of WOM. Regression analyses also examined the role that love plays—relative to attitude—in explaining WOM. A hierarchical regression included attitude as the sole independent variable in the first stage and then, in the second stage, the effects of attitude, the three love measures, and all the interactions among the three love measures were simultaneously considered.

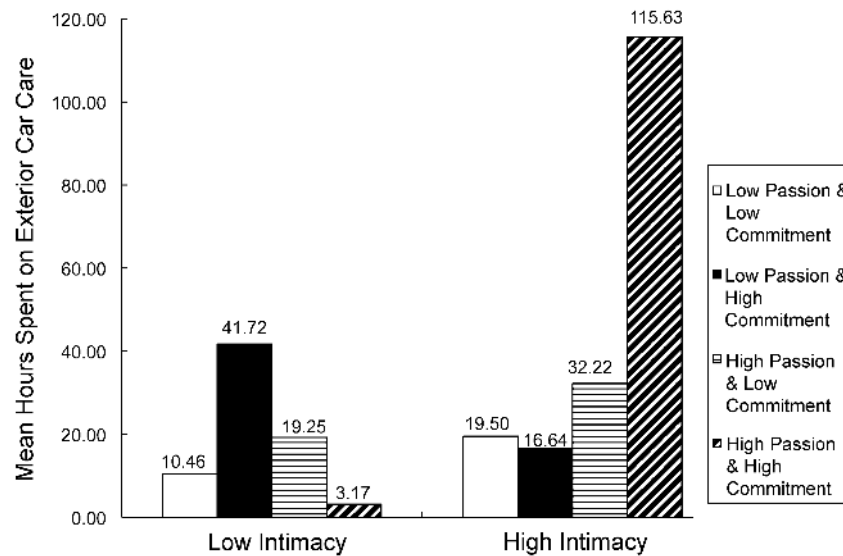
The first stage of the regression model aimed at explaining WOM, with attitude as the sole independent variable, shows that attitude has an effect on WOM ($R^2_{\text{adj}} = .28$, $R^2 = .29$; $F(1, 125) = 50.80$, $p < .05$). In the second

FIGURE 1

STUDY 2: ROMANTIC LOVE AND ENDURING ROMANTIC LOVE EFFECTS ON HOURS SPENT NURTURING AUTOMOBILES



(A) Interactive effects of passion and intimacy (romantic love)



(B) Interactive effects of passion, intimacy, and commitment (enduring romantic love)

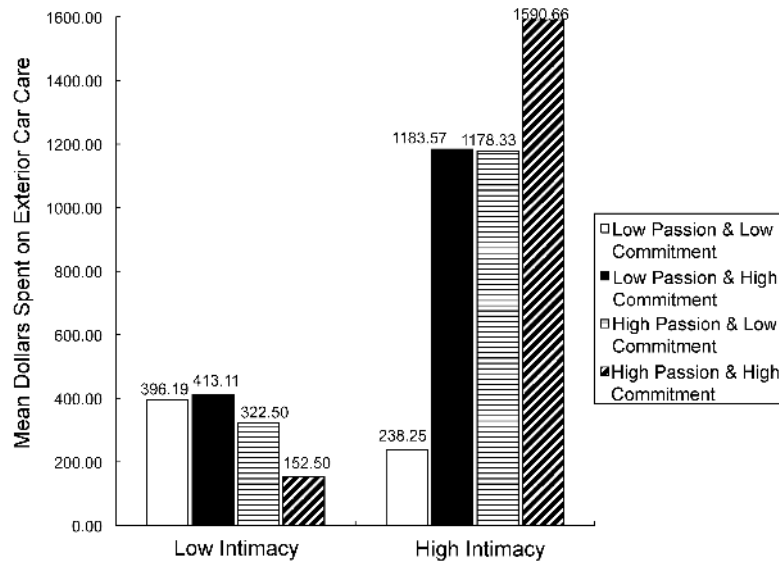
stage of the modeling, when the love components and all their interactions are also entered ($R^2_{adj} = .27$, $R^2 = .32$; $F(8, 118) = 6.89$, $p < .05$), no additional explanatory power is gained ($\Delta R^2 = .03$; $F(7, 118) = .74$, $p > .05$), and only the attitude coefficient shows an effect ($\beta = .29$, $t = 4.56$, $p < .05$). This means that while attitude explains WOM recommendations to family and friends, love offers no explanation of such WOM. This is consistent with the recognition that attitudes and love perform different functions; attitudes drive approach-or-avoid outcomes like

WOM to friends and family, and, in contrast, love drives possession-nurturing behaviors.

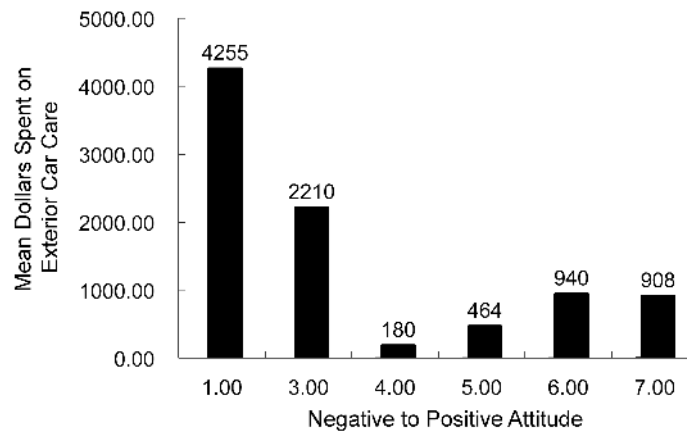
Discussion. Study 2 develops our measures of material possession love. These measures demonstrate reasonable factorial structure, reliabilities, and divergence from attitude. We also show the utility of love (over attitude) in explaining possession-nurturing behaviors and show how negative attitude and love both show effects on expenditures on a possession. In contrast, we also show the utility of attitude (over

FIGURE 2

STUDY 2: ENDURING ROMANTIC LOVE AND ATTITUDE EFFECTS ON DOLLARS SPENT NURTURING AUTOMOBILES



(A) Interactive effects of passion, intimacy, and commitment (enduring romantic love)



(B) Effect of attitude

love) in explaining WOM recommendations to buy. This suggests that love and attitude are distinct and that both can function differently.

SUBSEQUENT EMPIRICAL RESEARCH IN THREE OTHER CONTEXTS

To test the robustness of our measures and ideas beyond autos, we examined possession love—and its antecedents

and consequences—in three other categories: computers, bicycles, and firearms. All are replete with both instrumental and hedonic value (Dittmar 1992). Concerning antecedents, we examined interpersonal deficits.

Qualitative Data

We conducted qualitative research in each context prior to collecting sample survey data. For example, for firearms,

TABLE 2
MEASUREMENT AND INTERPERSONAL DEFICIT MEDIATION ANALYSES IN STUDIES 3, 4, AND 5

Analysis	Statistic	Study 3: Computers (n = 110)	Study 4: Bicycles (n = 142)	Study 5: Firearms (n = 41)
Measurement analyses of passion, intimacy, and commitment scales:				
Three-factor, model-fit statistics with Φ 's unrestricted in estimation	TLR	.93	.90	.86
	CFI	.94	.92	.90
Fit difference between prior model and a more restricted factor model with Φ 's set to 1.00 during model estimation	$\Delta\chi^2$ (3)	48.61*	30.20*	25.60*
Cronbach α internal-consistency reliability estimates	Passion α	.90	.82	.91
	Intimacy α	.89	.82	.90
	Commitment α	.85	.77	.78
Passion mediation analyses:				
(1) Lonely = $\beta_1 + \beta_2$ (int. deficit)	β_2	1.63*	1.38*	5.08*
(2) Passion = $\beta_3 + \beta_4$ (int. deficit)	β_4	2.30*	1.26*	3.95*
(3) Passion = $\beta_5 + \beta_6$ (int. deficit) + β_7 (lonely)	β_6	.74	.83	.83
	β_7	.89*	.31*	.57*
Sobel's z-test of ($\beta_4 - \beta_6$)	Z_P	2.46*	1.99*	2.74*
Intimacy mediation analyses:				
(1) Lonely = $\beta_1 + \beta_2$ (int. deficit)	β_2	1.63*	1.38 *	5.08*
(2) Intimacy = $\beta_3 + \beta_4$ (int. deficit)	β_4	2.79*	1.28*	3.50*
(3) Intimacy = $\beta_5 + \beta_6$ (int. deficit) + β_7 (lonely)	β_6	.82	.86	.46
	β_7	1.44*	.30*	1.54*
Sobel's z-test of ($\beta_4 - \beta_6$)	Z_I	2.28*	2.07*	2.38*
Commitment mediation analyses:				
(1) Lonely = $\beta_1 + \beta_2$ (int. deficit)	β_2	1.63*	1.38*	5.08*
(2) Commitment = $\beta_3 + \beta_4$ (int. deficit)	β_4	.78*	1.15*	2.15*
(3) Commitment = $\beta_5 + \beta_6$ (int. deficit) + β_7 (lonely)	β_6	.09	1.05*	.83
	β_7	.54	.07	.28
Sobel's z-test of ($\beta_4 - \beta_6$)	Z_C	2.48*	.89	2.66*

* $p < .05$.

this included depth interviews, participant observation at a firing range, and observations of cleaning guns and firing them in the field. This provided insights for relevant measures of nurturing in each context. Moreover, this guided our adaptations of the love items. While the nonitalicized parts of the items listed in table 1 served as stems for the items used in all contexts, the appendix contains the other italicized leaf adaptations of each item in each context.

Sample Survey Measures

Studies 3, 4, and 5 included the context-adapted love measures, context-relevant measures of nurturing, the revised UCLA loneliness scale (Russell et al. 1980), and measures of dating and marital status. The UCLA scale assesses feelings of social isolation with items like "People are all around me but not with me." We asked current marital status (i.e., married, single—never married, widowed, divorced, or separated) and, if not married, asked about dating (not dating, actively dating, or in a committed relationship). We expected that interpersonal deficit drives loneliness. Hence, we constructed a three-level measure of interpersonal deficit ($-1 =$ married, $0 =$ not married but dating or in a committed relationship, $1 =$ not married and neither dating nor

in a committed relationship), with higher scores meaning greater deficit.

Samples

We collected online data from three convenience samples of ($n = 110$) computer forum members, ($n = 142$) bicycle forum members, and ($n = 41$) firearm forum members. We became members of online discussion forums dedicated to one of the three contexts and then posted an invitation to participate in our online research project.

Measurement Qualities

The top of table 2 summarizes factor-analytic-fit results and scale reliabilities in the new contexts. In all contexts, the three-factor model fit the data. Also, tests of discriminant validity (comparing the fit of models with ϕ 's restricted to unity versus without that restriction) show three distinct factors. This demonstrates that our measures of possession love are portable to other consumer contexts.

TABLE 3
REGRESSION ANALYSES EXAMINING THE INFLUENCE OF LOVE ON NURTURING IN THREE CONTEXTS

	Study 3: Computers (<i>n</i> = 110)	Study 4: Bicycles (<i>n</i> = 142)	Study 5: Firearms (<i>n</i> = 41)
Dependent variable	Dollars spent in past 12 months on enhancements (overclocking processor, water cooling processor, case lighting, glass panels for case, painting case)	Dollars spent in past 12 months on enhancements (brakes, bars, gears, derailleurs, suspension, seats), maintenance (tires, tubes, lubes, tools), and cycling clubs and magazines	Dollars spent in past 12 months on enhancements (sights, scopes, grips, machining, engravings, plating, polishing, painting)
Regression model fit statistics:			
R^2	.22	.15	.42
$F(df)$ of SS for R^2	$F(7, 103) = 4.24^*$	$F(7, 134) = 3.39^*$	$F(7, 33) = 3.40^*$
F_{adj}^2	.17	.11	.30
Love form effect and corresponding two- and three-way interaction regression coefficients:			
Romantic love: $\beta_{(P \times I)}$	44.30*	5.28*	87.99*
Companionate love: $\beta_{(I \times C)}$	7.83*	11.98*	17.26
Fatuous love: $\beta_{(P \times C)}$	4.35*	1.76	26.20
Enduring romantic love: $\beta_{(P \times I \times C)}$.09	.33	25.78

* $p < .05$.

Interpersonal Deficits and Possession Love

In study 1, we described an informant as filling an interpersonal void with love for his car. This suggests a mediated structure in which an interpersonal deficit (e.g., not married but also neither dating nor in a committed relationship) leads to loneliness, which then invites possession love.

With reference to table 2's equations, evidence for mediation (Baron and Kenny 1986) requires: (1) a significant β_2 coefficient showing a relationship between interpersonal deficit and loneliness, (2) a significant β_4 coefficient linking interpersonal deficit and a love component, and (3) when both interpersonal deficit and loneliness are considered independent variables, then (a) the mediating influence of loneliness, β_7 , should be significant, and (b) any effect of interpersonal deficit, β_6 , detected when also controlling for loneliness should be less than β_4 . Sobel's (1982) z -test is the crux of mediation, namely, $\beta_4 - \beta_6$. With the computer owners in study 3, Sobel tests show the effect of interpersonal deficit on each love component is mediated through loneliness ($z_p = 2.46, p < .05$; $z_l = 2.28, p < .05$; $z_c = 2.48, p < .05$). In the last column of table 2, comparable results are found with firearms ($z_p = 2.74, p < .05$; $z_l = 2.38, p < .05$; $z_c = 2.66, p < .05$). Finally, evidence for mediation with study 4's cyclists is found with passion and intimacy ($z_p = 1.99, p < .05$; $z_l = 2.07, p < .05$), but not commitment ($z_c = .89, p > .05$).

As we have previously suggested, in modern consumption cultures, one adaptation—in reaction to failures to achieve satisfactory interpersonal relationships—is to remedy the resultant loneliness with safer relationships in the marketplace (Shaver and Mikulincer 2006). While prior research limits the benefits of consumers' bonds with their posses-

sions to self-definition (Ahuvia 2005) and affiliation (Kleine et al. 1995), this finding suggests another locus of consumer well-being rooted in humans' deep-seated interpersonal needs and in some consumers' interpersonal deficits.

Love as Antecedent to Nurturing

We conclude our empirical reporting with study 3's, 4's, and 5's evidence for the role that love plays in explaining nurturing behaviors. Table 3 describes the measures of nurturing used in each context and the regression models involved. Because noninteractive effects were not detected, table 3 only reports interaction coefficients. As before, these results again show love explaining nurturing.

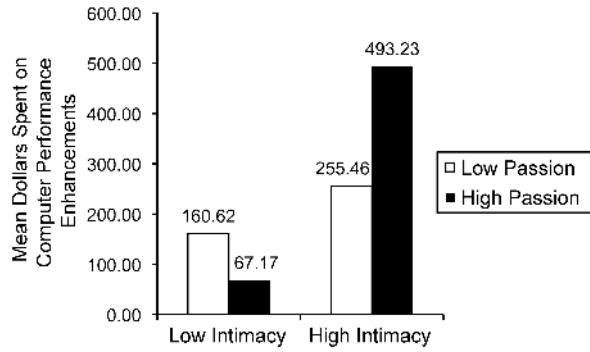
However, unlike the automotive context, which only detected romantic love and enduring romantic love effects, these three additional contexts contain two additional forms of possession love. Subsequent to this paragraph, we restrict our discussion of this section of findings to only these two new forms of love—as the romantic-love effects we detect in these three contexts (see panels A, B, and C of fig. 3) are like the romantic-love effects previously detected with autos. For example, in testimony to the commercial value of romantic love, figure 3C shows that firearms owners in romantic love spent some six times more ($M_{P=hi, I=hi} = \$571.90$) on their prized gun than other ($M_{\text{all conditions other than } P=hi, I=hi} = \90.71) gun owners ($t = 2.56(39), p < .05$).

As shown in table 3, the $\beta_{(I \times C)}$ effects in studies 3 and 4, and the $\beta_{(P \times C)}$ effect in study 3, suggest two additional forms of love, namely, companionate love and fatuous love, respectively. We now consider the evidence for these two additional forms of love.

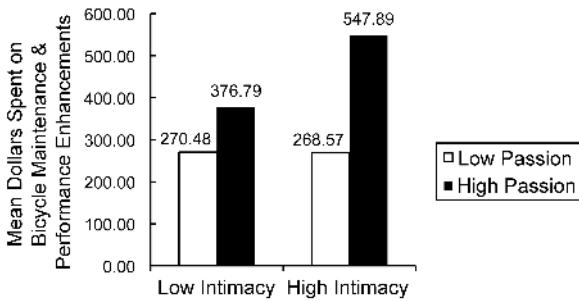
As figure 4A shows, computer owners characterized by high intimacy and high commitment—or those in com-

FIGURE 3

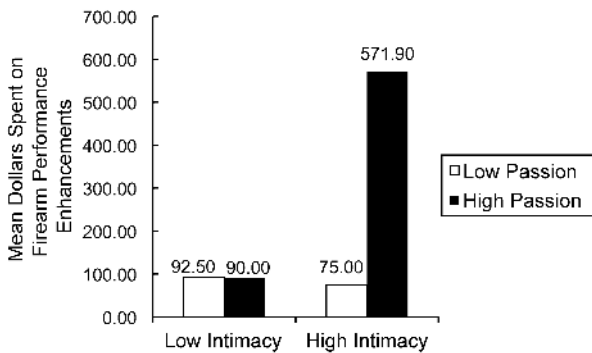
ROMANTIC LOVE EFFECTS ON NURTURING IN STUDIES 3, 4, AND 5



(A) Study 3: Interactive effects of passion and intimacy (romantic love) for computers



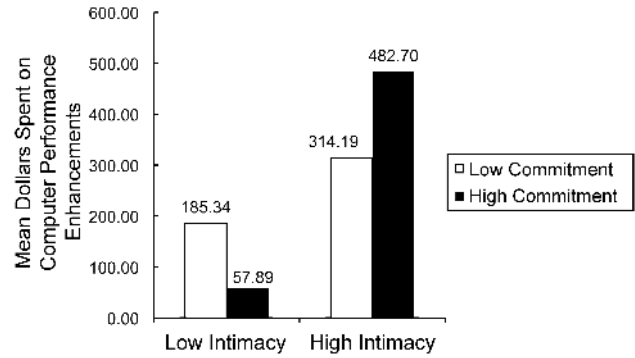
(B) Study 4: Interactive effects of passion and intimacy (romantic love) for bicycles



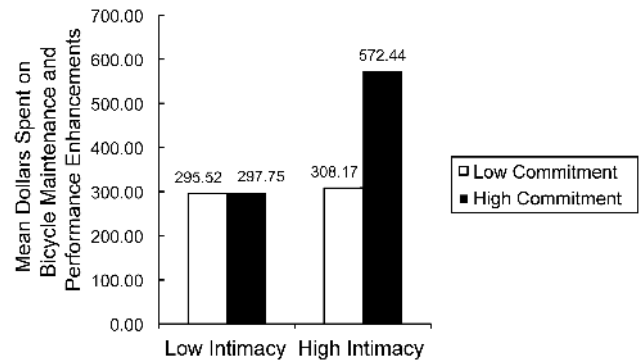
(C) Study 5: Interactive effects of passion and intimacy (romantic love) for firearms

FIGURE 4

COMPANIONATE LOVE EFFECTS ON NURTURING IN STUDIES 3 AND 4



(A) Study 3: Interactive effects of intimacy and commitment (companionate love) for computers



(B) Study 4: Interactive effects of intimacy and commitment (companionate love) for bicycles

panionate love—spent on average over twice as much ($M_{I=hi,C=hi} = \$482.70$) on their computers than that spent ($M_{\text{all conditions other than } I=hi,C=hi} = \187.53) by other computer owners ($t = 3.05(109), p < .05$). Likewise, figure 4B shows that those cyclists in companionate love spent nearly twice as much ($M_{I=hi,C=hi} = \$572.44$) on their rides than that

spent ($M_{\text{all conditions other than } I=hi,C=hi} = \300.23) by other cyclists ($t = 3.91(140), p < .05$).

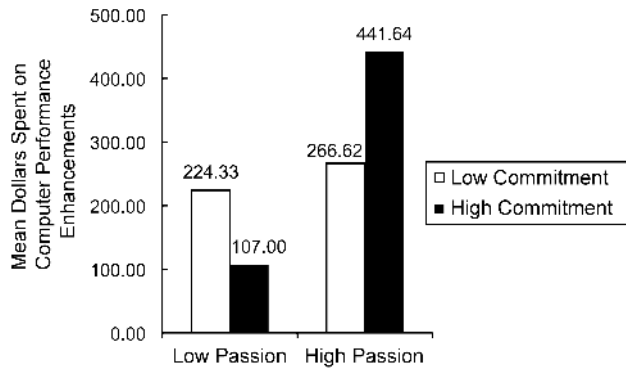
Figure 5 examines the passion \times commitment interaction found with computer owners. Those characterized by high levels of both passion and commitment—or those in fatuous love—spent on average over twice as much ($M_{P=hi,C=hi} = \$441.64$) enhancing their computers than that spent ($M_{\text{all conditions other than } P=hi,C=hi} = \203.39) on average by others during the past 12 months ($t = 2.45(109), p < .05$).

Discussion

Our concluding empirical work demonstrates the portability of our measures and ideas to three additional categories, namely, computers, bicycles, and firearms. These final studies detected two additional forms of love, fatuous love and companionate love. Mediation analyses show interpersonal deficit, and the loneliness resulting from such deficit, as one route leading to possession love. Finally, as

FIGURE 5

FATUOUS LOVE EFFECTS ON NURTURING COMPUTERS:
STUDY 3: INTERACTIVE EFFECTS OF PASSION AND
COMMITMENT (FATUOUS LOVE)



in study 2, these final studies found consumers in love lavishly spending on their possessions.

GENERAL DISCUSSION

We articulate the nature of material possession love and provide context-free measures of this multifaceted construct. We also shed some new light on how the perspective of possession love offers both commercial opportunities to marketers, and we suggest a new source of consumer well-being based in consumers' social deficits. Our research also provides evidence that attitude and love are distinct and have separate functions. We now discuss this work and consider implications for future research.

Relationships and the Forms of Material Possession Love

Material possession love is a property of a consumer's relationship with an appropriated possession; we consider both the nature and degree of love that a consumer may have for a possession. We assume that early interpersonal attachments form basic patterns for subsequent relationships and that some consumer-possession relationships may be metaphorically enacted within those underlying interpersonal patterns. As our data revealed, some consumers do form relationships that—in their own minds—blur the distinction between human and object relationships.

Possession relationships are inherently asymmetric, as material objects are nonsentient beings—without consciousness and volition—that are unable to love the consumer back. However, many satisfactory interpersonal loving relationships are also asymmetric. For example, Sternberg's (1998) narrative approach examines the roles enacted in interpersonal loving relationships; this approach describes numerous kinds of satisfactory and asymmetric person-as-object relationships, where each party plays a disparate but

complementary role. For instance, in an "Art Story," one values another due to physical beauty, while the other receives the resources to maintain the beauty. Likewise, in a "Recovery Story," one is the recovering party and the other is the codependent, striving to save the other. We see comparable narrative perspectives—capturing consumers' perceptions of the roles of both parties in asymmetric relationships—as offering an additional lens for an understanding of consumers' loving relationships. We urge future work to explore this more dyadic and narrative perspective.

Our research found that consumers' love for their material possessions manifests itself in several different forms, with each form reflecting a qualitatively distinct form of the positive emotional attachment that consumers may have for their possessions. We now discuss the four different forms of possession love that we have detected, namely, romantic love, enduring romantic love, fatuous love, and companionate love.

Romantic love—reflecting both passion and intimacy, but not a commitment to always continue the relationship—was the love form we detected across all consumption contexts. Romantic love is light, playful, and pluralistic and—although passionate—is free of the commitment found with enduring romantic love and fatuous love. As such, romantic love presents marketers with consumers who are open to relationships with other comparable possessions. This may manifest in either polygamous relationships in collections or serial monogamies with one beloved after another. Unlike the taboo on polygamy in interpersonal love, polygamy flourishes in possession love. Indeed, in our qualitative work, some informants reported multiple loves; some had only one brand, but others' favorites were different brands. Hence, we urge future work to distinguish between the commitment to keep and the exclusivity of the relationship. Moreover, future work should consider the roles of both possession love and brand love.

Three of the four forms of love we detected (romantic, enduring, and fatuous) are steeped in the intense and not always easily controlled component of passion. While romantic and enduring loves also include intimacy, fatuous love is devoid of intimacy.

The fatuous love found with computer owners is colored by passion and commitment, but without intimacy, deep knowledge of the other is absent (Sternberg 2006). Therefore, this is fatuous—or considered foolish—as commitment is apparently made due to a love-at-first-sight infatuation, without deeply knowing the other. Fatuous love is often problematic with interpersonal relationships. For example, Las Vegas's quick marriage laws likely facilitate Nevada having the highest divorce rate among residents of any U.S. state (U.S. Census Bureau 2008). In consumption relationships, however, we believe fatuous love typically has less serious consequences. Fatuous consumer love characterizes relationships likely born in an infatuation, when the consumer's initial hands-on encounter with an object's total sensory experience (i.e., its look, motion, feel, scent, taste, and sound) elicits a captivating aesthetic response. Objects

eliciting such reactions rely on what industrial design theorist Donald Norman (2005) calls visceral design, meaning designs that do what nature does when eliciting biologically prewired emotive reactions. Consequently—at the visceral level—the look, feel, sound, speed, and other sensory experiences of initial reactions to products should be examined by future work.

We believe it is not a coincidence that the objects that we found devoid of fatuous love—firearms, bicycles, and automobiles—all originated in the nineteenth century or earlier and, as such, rely on technologies with visible moving mechanical parts. Hence, because such technology is relatively more accessible to the average consumer, we believe intimacy has more of an opportunity to develop. In contrast, today's computers are based on early twenty-first-century microcircuits without visible moving parts and, as such, are undecipherable black boxes for many consumers. As a result, technology may be a barrier to intimacy for many, thereby facilitating fatuous love. However, romantic love was also detected with computer owners. Indeed, our qualitative work found some consumers illuminating their computer's interiors by inserting clear panels and lighting the interiors of their computer cases. Such modifications likely served to facilitate intimacy.

Only one form of possession love detected in our data was devoid of passion. The companionate love we detected among cyclists and computer owners reflects committed relationships where consumers have intimate knowledge of their beloved possession. Companionate love is stronger than friendship because of the element of a commitment to keep; it is also similar to enduring romantic love, but without passion. While passion may have once burned hot, in companionate love, the passion has cooled. While enduring romantic love has more excitement, companionate love is more colored by warmth and compatibility; it reflects a steady, comfortable, and affectionate relationship, without the volatility of passion (Sprecher and Regan 1998). Although those in companionate love may have lost the thrill of having, for example, an exciting bicycle or the very latest computer, such consumers have an enduring and comfortable relationship with a possession that they know well and that they plan to keep and use into the future.

Our findings are circumscribed, however, in not detecting three additional nascent forms of love that are defined by only one love component; these forms are infatuation, friendship, and empty love. In particular, consider the absence of infatuation in our data. Our methods, while effective in sampling owners, omitted nonowners. Those nonowners in infatuated love—who are driven by a passion to possess a given object, but who are without first-hand intimacy or any years of ownership reflecting commitment—were omitted in our samples. Therefore, we urge future research to sample nonowners to study infatuated consumers and, in so doing, also assess both possession and brand love longitudinally. We speculate that brand love is most operant during infatuation, especially prior to owning, when largely only a love for an idea exists and not necessarily the love for some specific object. Moreover,

we conjecture that as a material object becomes less of the marketplace, and becomes more appropriated by a consumer, then—among smitten consumers—possession love may overshadow brand love.

Antecedents of Material Possession Love

We have viewed loneliness as an antecedent to possession love. This is but one of several routes to object love, rooted in the characteristics of both objects and consumers.

To begin, with respect to characteristics of objects, it is important to note that our empirical work examined durable goods, allowing for a temporal stability and concrete consistency to enhance consumers' forming of loving relationships with singular possessions. With nondurables—that may be replaced weekly or monthly—there is less opportunity for material possession love to develop with a singular object. However, with nondurables, it is likely that marketers' successful branding efforts provide the stability and consistency facilitating brand love.

Considering the psychological characteristics of objects, we suspect that there are aesthetic durable object qualities that encourage possession love through an activation of passion. With few exceptions, such as Townsend, Ariely, and Sood (2010), aesthetics have largely been ignored in consumer research. With respect to encouraging passion and initial infatuation, we suspect that physical features of objects—that is, the look, feel, sound, motion, scent, taste—do matter. We encourage consumer researchers to consider what is known about the psychology of attractiveness. Therefore, to consider a single example of one visual cue, attractive human faces reflect classical man-made design cannons—e.g., symmetry and the golden ratio (Schmid, Marx, and Samal 2008). Indeed, properties that are attractive in nature are also found attractive in the human-made, built environment (Aggarwal and McGill 2007; Windhager et al. 2008).

With respect to consumer characteristics, our mediation modeling supports the idea of loneliness as an antecedent to possession love. However, it is also plausible that an all-consuming love for a possession may in itself create social isolation and loneliness. Therefore, we urge future research to use longitudinal data to untangle this relationship and to identify the conditions where the directions of causality may differ. Moreover, while we portray loneliness as a consequence of deficits in marital status and dating status, our assessment of interpersonal deficit is incomplete. Other bases of interpersonal deficit rooted, for example, in siblings, children, or friendships should also be examined. While social deficits rooted in marriage and dating may be compensated for with the romantic form of material possession love, deficits rooted in a dearth of friendships may be compensated for with the companionate form of possession love.

However, in addition to loneliness, we believe there are at least three other constructs intertwined with additional routes to possession love, namely, affiliation, self-identity, and the need for control. Consumer research has already made progress in understanding how both identity and af-

filiation are associated with attachment forms such as possession love (Kleine and Baker 2004). For example, with respect to affiliation, Kleine et al. (1995) found possession attachments rooted in consumers' family ties.

With respect to identity, Ahuvia (2005) portrays consumers who are led to caring for a beloved object, to provide an anchor for identity construction. In contrast, we believe that what our view emphasizes—namely, a route to possession love that is rooted in interpersonal deficit—is a complementary alternative to the identity perspective focusing on possessions as extensions of the self. The identity view treats meaningful possessions as means to an end, that is, as anchors for personal identity and as a basis for communicating identity both to oneself and to others. But the identity perspective is only a partial account of human-object relationships. As abundantly illustrated in our data, lonely consumers do attach to beloved possessions in ways that are structurally identical to the love found in human relationships. We also reported on consumers who consciously blurred the boundaries of the human-object distinction. Therefore, a relationship with a beloved possession can also be an end in itself; a possession is not necessarily only a means to some other end, such as maintaining self-identity. Indeed, Belk (1987, 162) speculated that when different meanings are held, then “[an] automobile may change from being a sexual extension of self to a sex object (end rather than means).” Whether an object is a means, or an end, depends on the life trajectory and goals of the consumer involved and ultimately upon the meaning of the object to the consumer.

We suspect that another, and yet unexamined, route to possession love may be found in the influences of the need-for-control personality trait (Burger 1992). Because material objects are not sentient beings, without consciousness and free will, such objects offer consumers relatively predictable and controllable—albeit one-sided—relationships. Therefore, those exhibiting this trait seem more susceptible to possession love. A desire for control likely facilitates anthropomorphizing (Aggarwal and McGill 2007) so as to create explanations of, and consequently, control over the actions of objects like the automobiles, guns, or computers, which we have examined.

Whereas we have focused on only one route to possession love, we encourage future research to simultaneously examine multiple routes to consumer love. Comparable to how both loneliness and gregariousness have been found to jointly drive heavy computer usage (Whitty and McLaughlin 2007), we suspect that—while loneliness may drive possession love—affiliation needs may also be satisfied with possession love among those who are more socially capable. That is, those who are already rich in interpersonal relationships may also be drawn to consumption love as means of further expanding their social network among those who share comparable loves.

We also suspect some routes, such as a need for self-identity, drive brand love more than possession love; this is due largely to marketers' efforts to develop distinctive brand

meanings. Other antecedents, like the need-for-control trait, seem less satisfied by brand love due to—from a consumer's perspective—uncontrollable marketing efforts. In contrast, the need-for-control trait seems more satisfied by possession love than brand love, due to consumers' dominion over decommodification, singularity, and indexicality.

Consequences of Material Possession Love

We found possession love driving nurturing, meaning consumers giving of their time, energy, and other resources to foster their beloved possessions and their relationships with such possessions. Nurturing is accomplished, in part, by buying complementary products and services, in deference to the beloved; thus, the assortment of products and services nurturing beloved possessions represents substantial revenue opportunities for marketers. For example, our statistical findings report that gun owners in romantic love spent on average six times more on their gun in a year relative to other gun owners. Whether the smitten are acquiring more items or are more willing to pay premium prices—or both—is not clear. However, it is clear that the smitten spend more.

Initially, we found such substantial statistical findings startling. The consistent and large effects of love on dollars spent nurturing that we observed changed our thinking about the power of love. Echoing the poetry in the epigraph at the beginning of this article, we are reminded of Helen Fisher's (2004) portrayal of love as a powerful motivation deeply embedded in human nature. She notes that love has fueled much of humankind's most compelling work (e.g., art, wars, myths, legends). “Drenched in . . . focus, stamina and vigor,” those madly, truly, and deeply in love are motivated by “Herculian” forces (Fisher 2004, 72). Accordingly, for those in the throes of possession love, it should be no wonder that they so freely spend their time and money on their beloved.

Nurturing itself also deserves further research. We found nurturing was manifest in complementary constellations of do-it-yourself activities and in the acquisition of assortments of products and professional services to benefit the beloved. We encourage future research to uncover other aspects of nurturing. We suspect that searching for—and then mastering—the information needed to know how to nurture is also part of this phenomenon. In extreme manifestations of nurturing, we suspect consumers also create possession-centric lifestyles for themselves, which include employment and residential choices. Moreover, we believe nurturing includes elements of play and recreation. An understanding of those potential aspects of nurturing, however, awaits future research.

Our findings showed the positive emotion of love as not explaining WOM recommendations to friends or family to buy a possession like that owned by the smitten consumer. However, we suspect that future work may also show that love drives WOM under the right circumstances, namely, when a smitten consumer's WOM is directed at a fellow enthusiast known to be interested in nurturing a love object.

If a consumer-consumer dyad exhibits a shared self (Las-tovicka and Fernandez 2005), then such WOM should be more likely.

Our data show love and attitude as distinct and function-ing separately, with only love linked to nurturing, and at-titude tied to WOM. We believe this perspective is impor-tant. While some consumer research explicitly distinguishes between attitudes and emotions (e.g., Allen, Machleit, and Kleine 1992), we believe consumer researchers too often erroneously assume that love and attitude are just different regions on the same construct and that both function in the same manner. In contrast, we offer a different perspective, and we offer data that run counter to what is commonly assumed. Indeed, we report an intriguing case of attitudes working opposite to the effect of love. While we could only speculate on the exact mechanism for that finding, future work should continue examining the disparate effects of attitudes versus possession love.

We have interpreted the empirical linkages between lone-liness and the components of love as suggesting an adaptive coping mechanism (Shaver and Mikulincer 2006), where con-sumers avoid the negative outcomes of loneliness. Hence, a loving attachment to a possession presumably contributes to consumer well-being in a relative manner, especially when

compared to less desirable alternative outcomes from lone-liness, which include alcohol abuse, delinquency, and de-pression (Lynch 1976; Nerviano and Gross 1976; Russell et al. 1980). However, while our data do not directly tie pos-session love to the avoidance of such negative outcomes, other empirical work nearly has. For example, attachments to pets have been empirically linked to reduced depression among the elderly (Garrity et al. 1989), and, more recently, Banks, Willoughby, and Banks (2008) report that attach-ments to robotic pets bring enhanced well-being to lonely residents in long-term-care facilities like nursing homes. We encourage further empirical work that directly considers both possession love and direct assessment of well-being outcomes.

In conclusion, from a more macroperspective, we call for future research examining the relationship between posses-sion love, nurturing, and sustainability (Cooper 2000). If consumers would love their possessions more and then in-creasingly nurture what they have, rather than looking for something new, then that already owned would be used and not be found in landfills. While consumers have been crit-icized for being too focused on the possessions they love, from the standpoint of sustainability, we argue that there is too little material possession love.

APPENDIX ADAPTATIONS OF SCALE ITEMS

Computers	Bicycles	Guns
1. Sitting behind my computer	Riding my bike	Firing my gun
2. My computer	My bike	My gun
3. Being around my computer	Being around my bike	Being around my gun
4. How it feels when I'm sitting at the helm of my computer	How it feels to be riding my bike	How it feels to hold my gun in my hands
5. My computer, I find myself longing to use it	My bike, I find myself longing to ride it	My gun, I find myself longing to fire it
6. My computer	My bike	My gun
7. My computer	My bike	My gun
8. My computer	My bike	My gun
9. My computer is working just right	My bike is working just right	My gun is working just right
10. My computer looks cool	My bike is always looking good	My gun is always looking good
11. My computer	My bike	My gun
12. My computer	My bike	My gun
13. My computer	My bike	My gun
14. My computer	My bike	My gun
15. My computer	My bike	My gun
16. My computer	My bike	My gun
17. My computer	My bike	My gun

REFERENCES

- Aggarwal, Pankaj and Ann L. McGill (2007), "Is That Car Smiling at Me? Schema Congruity as a Basis for Evaluating Anthropomorphized Products," *Journal of Consumer Research*, 33 (4), 468–79.
- Ahuvia, Aaron C. (2005), "Beyond the Extended Self: Loved Objects and Consumers' Identity Narratives," *Journal of Consumer Research*, 32 (1), 171–84.
- Albert, Noel, Dwight Merunka, and Pierre Valette-Florence (2008), "When Consumers Love Their Brands: Exploring the Concept," *Journal of Business Research*, 61 (10), 1062–75.
- Allen, Chris T., Karen A. Machleit, and Susan Schultz Kleine (1992), "A Comparison of Attitudes and Emotions as Predictors of Behavior," *Journal of Consumer Research*, 18 (4), 493–504.
- Ball, Dwayne A. and Lori H. Tasaki (1992), "The Role and Measurement of Attachment in Consumer Behavior," *Journal of Consumer Psychology*, 1 (2), 155–72.
- Banks, Marian R., Lisa M. Willoughby, and William A. Banks (2008), "Animal-Assisted Therapy and Loneliness in Nursing Homes: Use of Robotic versus Living Dogs," *Journal of the American Medical Directors Association*, 9 (3), 173–77.
- Baron, Rueben M. and David A. Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research," *Journal of Personality and Social Psychology*, 51 (6), 1173–82.
- Beck, Alan M. and N. Marshall Meyers (1996), "Health Enhancement and Companion Animal Ownership," *Annual Review of Public Health*, 17, 247–57.
- Belk, Russell W. (1987), "Identity and the Relevance of Market and Personal Objects," in *Marketing and Semiotics*, ed. Jean Umiker-Sebeok, New York: de Gruyter, 151–64.
- (1992), "Attachment to Possessions," in *Place Attachment: Human Behavior and Environment*, Vol. 12, ed. Irwin Altman and Setha M. Low, New York: Plenum, 37–62.
- Belk, Russell W. and Gregory S. Coon (1993), "Gift Giving as Agapic Love: An Alternative to the Exchange Paradigm Based on Dating Experiences," *Journal of Consumer Research*, 20 (3), 393–417.
- Bentler, Peter M. (1990), "Comparative Fit Indices in Structural Models," *Psychological Bulletin*, 107 (2), 238–46.
- Bernstein, Ellen (1988), "What Ever Happened to Old Fashioned Lust?" in *The Psychology of Love*, ed. Robert J. Sternberg and Michael L. Barnes, Binghamton, NY: Vail-Ballou, 359–75.
- Bowlby, John (1969), *Attachment and Loss*, Vol. 1, New York: Basic.
- Branden, Nathaniel (2008), *The Psychology of Romantic Love*, New York: Tarcher/Penguin.
- Browne, Michael W. and Robert Cudeck (1993), "Alternative Ways of Assessing Model Fit," in *Testing Structural Equation Models*, ed. Kenneth A. Bollen and J. Scott Long, Newbury Park, CA: Sage, 136–62.
- Burger, Jerry M. (1992), *Desire for Control: Personality, Social and Clinical Perspectives*, New York: Plenum.
- Cacioppo, John T., Wendi L. Gardner, and Gary G. Berntson (2002), "The Affect System Has Parallel and Integrative Processing Functions," in *Foundations in Social Neuroscience*, ed. John T. Cacioppo and Gary G. Berntson, New York: Psychology Press, 493–522.
- Carroll, Barbara A. and Aaron C. Ahuvia (2006), "Some Antecedents and Outcomes of Brand Love," *Marketing Letters*, 17 (2), 79–89.
- Carter, C. Sue (2002), "Neuroendocrine Perspectives on Social Attachment and Love," in *Foundations in Social Neuroscience*, ed. John T. Cacioppo and Gary G. Berntson, New York: Psychology Press, 853–90.
- Cohen, Jacob, Patricia Cohen, Stephen G. West, and Leona S. Aiken (2003), *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, Mahwah, NJ: Erlbaum.
- Cooper, T. (2000), "Product Development Implications of Sustainable Consumption," *Design Journal*, 3 (2), 46–57.
- Creswell, John W. and Vicki L. Plano Clark (2007), *Designing and Conducting Mixed Methods Research*, Thousand Oaks, CA: Sage.
- Dittmar, Helga (1992), *The Social Psychology of Material Possessions: To Have Is To Be*, New York: St. Martin's.
- Epp, Amber M. and Linda L. Price (2010), "The Storied Life of Singularized Objects: Forces of Agency," *Journal of Consumer Research*, 36 (5), 820–37.
- Fisher, Helen (2004), *Why We Love*, New York: Henry Holt.
- Fournier, Susan (1998), "Consumers and Their Brands: Developing Relationship Theory in Consumer Research," *Journal of Consumer Research*, 24 (4), 343–73.
- Garrity, Thomas F., Lorann Stallones, Martin B. Marx, and Timothy P. Johnson (1989), "Pet Ownership and Attachment as Supportive Factors in the Health of the Elderly," *Anthrozoos*, 3 (1), 35–44.
- Grayson, Kent and Radan Martinec (2004), "The Influence of Iconic and Indexical Cues of Consumer Assessments of Authentic Market Offerings," *Journal of Consumer Research*, 31 (2), 296–312.
- Griskevicius, Vladas, Michelle N. Shiota, and Stephen M. Nowlis (2010), "The Many Shades of Rose-Colored Glasses: How Positive Emotions Influence Desire for Consumer Products," *Journal of Consumer Research*, 37 (2), 238–50.
- Hazan, Cindy and Phillip R. Shaver (1987), "Romantic Love Conceptualized as an Attachment Process," *Journal of Personality and Social Psychology*, 52 (3), 511–24.
- Herr, Paul M., Frank R. Kardes, and John Kim (1991), "Effects of Word-of-Mouth and Product-Attribute Information on Persuasion: An Accessibility-Diagnosticity Perspective," *Journal of Consumer Research*, 17 (4), 454–62.
- Horton, Donald and Richard Wohl (1956), "Mass Communication and Parasocial Interaction: Observations on Intimacy at a Distance," *Psychiatry*, 19 (3), 215–29.
- Ji, Mindy F. (2002), "Children's Relationships with Brands: 'True Love' or 'One-Night' Stand?" *Psychology and Marketing*, 19 (4), 369–87.
- Kamat, Vikram and Ajit Arun Parulekar (2007), "Brand Love—the Precursor to Loyalty," in *Advertising and Consumer Psychology: New Frontiers in Branding: Attitudes, Attachments, Relationships*, ed. Joseph R. Priester, Deborah J. MacInnis, and C. Whan Park, Santa Monica, CA: Society for Consumer Psychology, 94–95.
- Keh, Hean Tat, Jun Pang, and Siqing Peng (2007), "Understanding and Measuring Brand Love," in *Advertising and Consumer Psychology: New Frontiers in Branding: Attitudes, Attachments, Relationships*, ed. Joseph R. Priester, Deborah J. MacInnis, and C. Whan Park, Santa Monica, CA: Society for Consumer Psychology, 84–88.
- Kleine, Susan Schultz and Stacey Mezel Baker (2004), "An In-

- tegrative Review of Material Possession Attachment," *Academy of Marketing Science Review*, 2004 (1), 1–35.
- Kleine, Susan Shultz, Robert E. Kleine III, and Chris T. Allen (1995), "How Is a Possession 'Me' or 'Not Me'? Characterizing Types and an Antecedents of Material Possession Attachment," *Journal of Consumer Research*, 22 (3), 327–43.
- Lastovicka, John L. and Karen V. Fernandez (2005), "Three Paths to Disposition: The Movement of Meaningful Possessions to Strangers," *Journal of Consumer Research*, 31 (4), 813–23.
- Lastovicka, John L. and Erich A. Joachimsthaler (1988), "Improving the Detection of Personality-Behavior Relationships," *Journal of Consumer Research*, 14 (4), 583–88.
- Lastovicka, John L., Nancy J. Sirianni, and Danny Kunz (2009), "Can Buy Me Love (17:50)," in *Advances in Consumer Research*, Vol. 36, ed. Ann L. McGill and Sharon Shavitt, Duluth, MN: Association for Consumer Research, 801.
- Lewis, C. S. (1960), *The Four Loves*, New York: Harcourt Brace.
- Lutz, Richard J. (1977), "An Experimental Investigation of Causal Relations among Cognitions, Affect, and Behavioral Intention," *Journal of Consumer Research*, 3 (4), 197–208.
- Lynch, James J. (1976), *The Broken Heart: The Medical Consequences of Loneliness in America*, New York: Basic.
- Marsh, Herbert W., Kit-Tai Hau, and Zhong Wen (2004), "In Search of Golden Rules: Comment on Hypothesis-Testing Approaches to Setting Values for Fit Indices," *Structural Equation Modeling*, 11 (3), 320–41.
- McClelland, Gary H. and Charles M. Judd (1993), "Statistical Difficulties of Detecting Interactions and Moderator Effects," *Psychological Bulletin*, 114 (2), 376–90.
- McCracken, Grant (1988), *The Long Interview*, Newbury Park, CA: Sage.
- McPherson, Miller, Lynn Smith-Lovin, and Matthew E. Brashears (2006), "Social Isolation in America: Changes in Core Discussion Networks over Two Decades," *American Sociological Review*, 71 (3), 353–75.
- Nerviano, Vincent J., and William F. Gross (1976), "Loneliness and Locus of Control for Alcoholic Males: Validity against Murray Need and Cattell Trait Dimensions," *Journal of Clinical Psychology*, 32 (2), 479–84.
- Norman, Donald (2005), *Emotional Design: Why We Love (or Hate) Everyday Things*, New York: Basic.
- Park, C. Whan and Deborah J. MacInnis (2006), "What's In and What's Out: Questions on the Boundaries of the Attitude Construct," *Journal of Consumer Research*, 33 (1), 16–18.
- Price, Linda L. and Eric J. Arnould (1999), "Commercial Friendships: Service Provider-Client Relationships in Context," *Journal of Marketing*, 63 (October), 38–56.
- Roberts, Kevin (2004), *Lovemarks: The Future beyond Brands*, New York: Powerhouse.
- Rook, Dennis W. (2003), "Four Questions about Consumer Motivation Research," in *The Why of Consumption: Contemporary Perspectives on Consumer Motives, Goals, and Desires*, ed. S. Ratneshwar, David Glen Mick, and Cynthia Huffman, London: Routledge, 315–19.
- Rosenbaum, Mark S., James Ward, Beth A. Walker, and Amy Ostrom (2007), "A Cup of Coffee with a Dash of Love: An Investigation of Commercial Social Support and Third Place Attachment," *Journal of Service Research*, 10 (1), 43–59.
- Russell, Dan, Letitia A. Peplau, and Carolyn E. Cutrona (1980), "The Revised UCLA Loneliness Scale: Concurrent and Discriminant Validity Evidence," *Journal of Personality and Social Psychology*, 39 (3), 472–80.
- Schmid, Susan E., David Marx, and Ashok Samal (2008), "Computation of Face Attractiveness Index Based on Neoclassical Canons, Symmetry, and Golden Ratios," *Pattern Recognition*, 41 (8), 2710–17.
- Schultz, Susan E., Robert E. Kleine, and Jerome B. Kernan (1989), "'These Are a Few of My Favorite Things': Toward an Explication of Attachment as a Consumer Behavior Construct," in *Advances in Consumer Research*, Vol. 16, ed. Thomas K. Srull, Provo, UT: Association for Consumer Research, 359–66.
- Schwarz, Norbert and Gerald L. Clore (2007), "Feelings and Phenomenal Experiences," in *Social Psychology: A Handbook of Basic Principles*, 2nd ed., ed. E. Tory Higgins and Arie Kruglanski, New York: Guilford, 385–87.
- Shaver, Robert P. and Mario Mikulincer (2006), "A Behavioral Systems Approach to Romantic Love Relations," in *The New Psychology of Love*, ed. Robert J. Sternberg and Karin Weis, New Haven, CT: Yale University Press.
- Shimp, Terence A. and Thomas J. Madden (1988), "Consumer-Object Relations: A Conceptual Framework Based Analogously on Sternberg's Triangular Theory of Love," in *Advances in Consumer Research*, Vol. 15, ed. Michael J. Houston, Provo, UT: Association for Consumer Research, 163–68.
- Sobel, Michael E. (1982), "Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models," in *Sociological Methodology*, ed. Samuel Leinhard, San Francisco: Jossey-Bass, 290–312.
- Sprecher, Susan, and Pamela C. Regan (1998), "Passionate and Companionate Love in Courting and Young Married Couples," *Sociological Inquiry*, 68 (2), 163–85.
- Steck, Loren, Diane Levitan, David McLane, and Harold H. Kelley (1982), "Care, Need and Conceptions of Love," *Journal of Personality and Social Psychology*, 43 (3), 481–91.
- Sternberg, Robert J. (1986), "A Triangular Theory of Love," *Psychological Review*, 93 (2), 119–35.
- (1987), "Liking versus Loving: A Comparative Evaluation of Theories," *Psychological Bulletin*, 102 (3), 331–45.
- (1998), *Love Is a Story: A New Theory of Relationships*, New York: Oxford University Press.
- (2006), "A Duplex Theory of Love," in *The New Psychology of Love*, ed. Robert J. Sternberg and Karen Weis, New Haven, CT: Yale University Press.
- Thomson, Matthew, Deborah J. MacInnis, and C. Whan Park (2005), "The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands," *Journal of Consumer Psychology*, 15 (1), 77–91.
- Tiedens, Larissa Z. and Susan Linton (2001), "Judgment under Emotional Certainty and Uncertainty: The Effects of Specific Emotions on Information Processing," *Journal of Personality and Social Psychology*, 81 (6), 973–88.
- Townsend, Claudia, Dan Ariely, and Sanjay Sood (forthcoming), "The Intelligence of Judging Products Based on Looks," in *Advances in Consumer Research*, Vol. 37, ed. Margaret C. Campbell, Jeff Inman, and Rik Pieters, Duluth, MN: Association for Consumer Research.
- Tucker, Ledyard R and Charles Lewis (1973), "A Reliability Coefficient for Maximum Likelihood Factor Analysis," *Psychometrika*, 38 (1), 1–10.
- U.S. Census Bureau (2008), *American Community Survey*, Washington, DC: Government Printing Office.
- Wallendorf, Melanie and Eric J. Arnould (1988), "'My Favorite Things': A Cross-Cultural Inquiry into Object Attachment," *Journal of Consumer Research*, 14 (4), 531–47.
- Walster, Elaine, Vera Aronson, D. Abrahams, and L. Rottman

- (1971), "Importance of Physical Attractiveness in Dating," *Journal of Personality and Social Psychology*, 7, 173-79.
- Whang, Yun-Oh, Jeff Allen, Niquelle Sahoury, and Haitao Zhang (2004), "Falling in Love with a Product," in *Advances in Consumer Research*, Vol. 31, ed. Barbara E. Kahn and Mary Frances Luce, Valdosta, GA: Association for Consumer Research, 320-27.
- Whitty, Monica T. and Deborah McLaughlin (2007), "Online Recreation: The Relationship between Loneliness, Internet Self-Efficacy and the Use of the Internet for Entertainment Purposes," *Computers in Human Behavior*, 23 (3), 1435-46.
- Windhager, Sonja, Dennis E. Slice, Katrin Schaefer, Elisabeth Oberzaucher, Truls Thorstensen, and Karl Grammer (2008), "Face to Face: The Perception of Automotive Designs," *Human Nature*, 19 (4), 331-46.