# Love, Lies, and Money: Financial Infidelity in Romantic Relationships

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> Romantic relationships are built on trust, but partners are not always honest about their financial behavior-they may hide spending, debt, and savings from one another. This article introduces the construct of financial infidelity, defined as "engaging in any financial behavior expected to be disapproved of by one's romantic partner and intentionally failing to disclose this behavior to them." We develop and validate the Financial Infidelity Scale (FI-Scale) to measure individual variation in consumers' financial infidelity proneness. In 10 lab studies, one field study, and analyses of real bank account data collected in partnership with a couples' money-management mobile application, we demonstrate that the FI-Scale has strong psychometric properties, is distinct from conceptually related scales, and predicts actual financial infidelity among married consumers. Importantly, the FI-Scale predicts a broad range of consumption-related behaviors (e.g., spending despite anticipated spousal disapproval, preferences for discreet payment methods and unmarked packaging, concealing bank account information). Our work is the first to introduce, define, and measure financial infidelity reliably and succinctly and examine its antecedents and consequences.

> Keywords: financial infidelity, consumer financial decision-making, interpersonal relationships, scale development

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nfidelity is common in romantic relationships and often cited as a major source of relationship breakdown and divorce (Betzig 1989; Buss 1994). A considerable body of literature has examined the antecedents and consequences of sexual infidelity (e.g., engaging in sexual activity with someone other than one's partner, devoting emotional resources to someone other than one's partner) in romantic relationships (Shackelford and Buss 1997; Shackelford, Buss, and Bennett 2002). In the current work, we focus on another type of infidelity with direct implications for consumption—financial infidelity, which we define as engaging in any financial behavior expected to be disapproved of by one's romantic partner and intentionally failing to disclose this behavior to them. Although financial infidelity is common among couples, prior work has done little to characterize it, understand the behaviors considered financially unfaithful, assess whether it differs from related constructs (e.g., financial harmony), or examine how it impacts consumption behaviors.

Financial matters are frequently cited as a source of marital conflict and stress (Betcher and Macauley 1990; Bodnar and Cliff 1991: Dew. Britt. and Huston 2012). Because relationship conflicts over money are usually more recurrent and problematic and less likely to be resolved than nonmonetary issues, they have become a leading cause of divorce (Amato and Rogers 1997; Dew 2007; Papp, Cummings, and Goeke-Morey 2009). Financial infidelity has been recognized as a prominent phenomenon by popular press outlets and industry surveys of consumer finances (Godfrey 2017; Hamm 2013; LeTrent 2013; Mehta 2015; Singletary 2017). A recent survey of more than 5,000 American adults identified keeping moneyrelated secrets in relationships as the "no. 1 financial deal breaker" (Huddleston 2019b). Financial infidelity admission rates range between 13% (TD Bank 2017) and 22% (Huddleston 2019a), with hidden bank accounts (35%), significant credit card debt (23%), unpaid student loans (8%), and bad credit scores (8%) cited as the most pervasive financial secrets consumers keep from significant others (Barrett 2015; TD Bank 2017). Financial infidelity admission rates are stronger among those explicitly combining finances with partners or spouses, where 41% admit to committing financial deceptions and 75% say financial deceit has negatively affected their relationships (National Endowment for Financial Education 2018).

We believe the current lack of financial infidelity research is due to three reasons. First, financial infidelity is difficult to study because it is frequently hidden and hard to observe. Ethical concerns prevent researchers from randomly assigning couples to engage in financial infidelity and observing its effects on consumption choices and relationship health. Second, no agreement has been reached on a definition of financial infidelity nor on the exact behaviors falling under this umbrella term. For example, does the term extend beyond maintaining a secret bank account and gambling at the local racetrack to buying a candy bar without telling one's partner? Third, no measure capturing consumer financial infidelity proneness on an individual level has been established and validated, making it difficult for researchers and practitioners to identify consumer segments more or less susceptible to engaging in the behaviors. A validated measure of financial infidelity in close relationships is critical to discovering the consequences of engaging in these behaviors, given the ethical concerns with random assignment.

#### WHAT IS FINANCIAL INFIDELITY?

We define financial infidelity as engaging in any financial behavior expected to be disapproved of by one's romantic partner and intentionally failing to disclose this behavior to them. We argue financial infidelity arises from conflict between one's own financial preferences, goals,

and desires, and those dictated by a significant other. The disagreement represents a form of normative conflict (Ottar Olsen and Grunert 2010; Packer 2008). For example, conflict could arise if the couple has a joint goal to limit their spending in favor of debt repayment, yet one or both partners have a desire for immediate gratification. When normative conflicts arise, partners must make a choice: forgo their own preference, follow their own preference at the risk of partner disapproval, or follow their own preference and hide the behavior (Thomas, Jewell, and Wiggins Johnson 2015). It is this latter behavior—hidden financial behavior that one anticipates will elicit disapproval from their partner—that describes how we conceptualize financial infidelity.

A few caveats regarding our definition, and the populations it applies to, warrant attention. First, our definition of financial infidelity is comprised of two components: (1) engaging in a financial behavior expected to elicit disapproval from one's partner and (2) intentionally failing to disclose this behavior to one's partner. Financial infidelity therefore includes both an act and subsequent concealment. We argue both components are necessary; if a behavior does not reflect both, it is not considered financial infidelity. For instance, if a consumer spends lavishly on clothes, expecting disapproval from a spouse, the purchases do not constitute financial infidelity if the partner is aware of the spending. (Component 2, concealment, is absent.) Likewise, secretly saving money to buy a birthday gift for one's spouse does not constitute financial infidelity because, while involving concealment, it is not expected to elicit disapproval. (Component 1, an act eliciting expected disapproval, is absent.) Anticipated disapproval can be driven by the amount involved in the financial behavior (e.g., the price of a product, the extent of hidden savings or income) or nature of the product (e.g., a vice product). However, our definition remains agnostic to the amount and nature of products involved in the financial infidelity. as a seemingly trivial amount to one couple could be substantial for another. Similarly, the types of products eliciting anticipated disapproval may vary across couples.

Our conceptualization of financial infidelity does not require actual partner disapproval of a behavior. Rather, it is the *expectation* of disapproval that (ultimately) drives one to commit financial infidelity. This proposition is consistent with the theory of planned behavior (Ajzen and Fishbein 1980, 2005), which states that one of the central predictors of individuals' deliberate behavior is their beliefs about how people they care about view the behavior.

We propose that anticipated disapproval arises because financial infidelity potentially poses harm to one's partner or the couple as a whole. However, we remain agnostic to the nature and amount of harm inflicted. The harm could be financial, reducing the couple's ability to achieve goals, or emotional, damaging to the couple's relationship.

Hiding extra savings or income from one's partner is unlikely to result in direct financial harm, but it could imply an unwillingness to share monetary resources or lack of trust, producing emotional distress.

Our definition assumes a degree of financial interdependence between members of the couple. According to transactive goal dynamics theory, in interdependent relationships, the "relationship partners' goals and pursuits are so strongly interdependent that they are most accurately characterized as one system" (Fitzsimons, Finkel, and vanDellen 2015, 651). The two people in an interdependent relationship are not completely autonomous beings; rather, they coexist and exert mutual influence on each other. Because relationship partners are a single unit, whatever one does affects the other's financial well-being and the couple's financial health as a whole.

To ensure financial interdependence, we focus our empirical investigation primarily on marital relationships. Married couples are legally bound, have shared financial responsibilities (e.g., a mortgage, children's tuition payments), and frequently pool finances (Heimdal and Houseknecht 2003; Pahl 1995). Even when married couples do not pool finances, imprudent financial decisions made by one partner can still have negative implications for the other due to the inability of the former to cover a share of responsibilities. Although we acknowledge that financial interdependence can exist within other types of relationships (e.g., cohabitation), our decision to focus (almost exclusively) on married couples sets a conservative threshold of financial interdependence.

Finally, we propose that consumers' tendency to engage in financial infidelity (referred to as "financial infidelity proneness") is a function of both individuals and their current relationships. Contemporary personality psychology research views behavior as the product of a person's relatively stable personality and social and environmental context (Fleeson and Noftle 2009). Traits like financial infidelity proneness are considered density distributions of behaviors (Fleeson 2001), such that behavior can vary around the individual's mean trait level depending on context. Because committed romantic relationships profoundly shape social context (Cavanaugh 2016), we expect consumers' inherent financial infidelity proneness to be mitigated or exacerbated by partners (e.g., different partners might be expected to disapprove of different expenditures, such as gambling vs. daily lattes) and relationship dynamics, such as financial responsibility distribution (Ward and Lynch 2019), relative power (Sprecher and Felmlee 1997), and resource management. We argue that financial infidelity proneness is a function of both the individual and the current relationship; as such, the trait is likely to remain

stable within the same relationship but fluctuate from one to the next, a hypothesis tested in studies 1B and 1C.

# HOW DOES FINANCIAL INFIDELITY DIFFER FROM RELATED CONSTRUCTS?

Financial infidelity as we have defined it is conceptually distinct from secret consumption, general secrecy, and financial harmony. While secret consumption involves hiding spending from scrutiny (Forbes, Kahiya, and Balderstone 2016; Goodwin 1992; Kukar-Kinney, Ridgway, and Monroe 2009; Thomas et al. 2015), financial infidelity encompasses a broader set of behaviors, including resource acquisition (e.g., opening secret savings accounts or concealing income) and consumption. Financial infidelity is focused solely on financial behaviors, whereas secret consumption encompasses behaviors in other domains such as food choices (Forbes et al. 2016).

Financial infidelity is conceptually distinct from general secrecy, defined as the intent to conceal information from one or more individuals without specifying their identity (Slepian, Chun, and Mason 2017). This construct is related to self-concealment, or actively hiding personal information perceived as negative and distressing from other, unspecified people (Larson and Chastain 1990). Like secret consumption, general secrecy and self-concealment are broader constructs spanning various domains, such as romantic desires, drug use, traumatic experiences, stealing, and work performance. General secrecy and selfconcealment do not require interdependence with the individual from whom one conceals information. Secret consumption, general secrecy, and self-concealment are stable, individual traits, while financial infidelity proneness may fluctuate across different relationships.

Financial infidelity also differs from financial harmony, defined as a couple's experienced degree of conflict over finances (Rick, Small, and Finkel 2011). Financial harmony captures partners' attitudinal similarities and differences (e.g., "when it comes to our finances, my spouse and I agree"), amount of conflict (e.g., "it is hard for my spouse and I to discuss our finances without getting upset"), and overall need for financial change (e.g., "the way my spouse and I handle our finances needs improvement"). Financial harmony, as a construct and 10-item scale, assesses the extent to which partners are satisfied with the way they handle finances. In contrast, financial infidelity proneness is behavioral and assesses the likelihood a partner will engage in financial behaviors expected to elicit the other's disapproval and intentionally avoid disclosing them. While the financial harmony scale incorporates the perspective of both relationship partners, our scale assesses single partners.

Financial harmony could be an antecedent to financial infidelity (e.g., a partner dissatisfied with how little money the other spends may be likely to hide purchases) or consequence (e.g., finding out about a partner's hidden income

<sup>1</sup> An exception is the analysis of bank account data in study 6, where the marriage restriction was determined unnecessary, as all participants had elected to use a money management mobile application for joint finances.

could lead to arguments and conflict). There are no clear theoretical grounds to hypothesize a specific, causal direction *a priori*. Instead, we rely on an empirical test of the relationship between financial harmony and financial infidelity proneness (study 2) to provide insight.

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#### **OVERVIEW OF STUDIES**

Across 12 studies, we develop and validate a brief measure to capture individual variation in consumers' financial infidelity proneness and examine its impact on consumption behavior (table 1). In the pilot study, we asked married participants to list behaviors they would consider financial infidelity. A trained research assistant used a coding dictionary to classify the behaviors into 12 categories, which were then used for scale-item generation. In study 1A, we refined the initial list of 30 scale items into a 12-item measurement tool (the Financial Infidelity Scale, or FI-Scale) and tested for its unidimensionality. Studies 1B and 1C demonstrate the FI-Scale has strong test-retest reliability within the same relationship but may fluctuate across different relationships (i.e., financial infidelity proneness is likely a joint product of individuals and relationships). In study 2, we examined psychological antecedents and/or consequences of financial fidelity. In studies 3A-3D, we demonstrate that FI-Scale scores predict the likelihood both of engaging in a financial act expected to elicit spousal disapproval and of concealing the act via a variety of marketing-relevant consumption behaviors (e.g., discreet payment methods). Study 4 rules out anticipated guilt as an alternative explanation for concealing financial decisions via secretive purchase options. The final two studies provide evidence of the FI-Scale's predictive validity in the field. Study 5 presented married participants with an opportunity to commit financial infidelity. Results show that FI-Scale scores predict both the likelihood of engaging in the act and subsequent concealment. In study 6, we partnered with a couples' money-management mobile application (app) to examine whether the FI-Scale predicts consumers' concealment of objective bank account information from their partners.

# PILOT STUDY: FINANCIAL INFIDELITY BEHAVIOR IDENTIFICATION

We conducted a pilot study with married individuals to identify archetypical behaviors of the financial infidelity construct. We recruited 150 married individuals (age range: 21–67, mean age = 39, 47% female) via Amazon Mechanical Turk (MTurk). Participants first responded to several marriage-related questions, such as length of marriage (M=11.27 years, SD = 10.05), number of children (M=1.76, SD = 1.42), long-distance relationship status (0%), and whether they or their spouse had been married before (23%).

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Study	Objective
Pilot	Identification of financial infidelity behavior (item development)
1A	Financial infidelity item purification and scale construction
1B	Stability of financial infidelity within the same relation- ship (test-retest reliability)
1C	Fluctuation of financial infidelity across different relationships
2	Psychological antecedents and consequences of fi- nancial infidelity
3A	Consumption-related consequences: Joint versus personal credit card
3B	Consumption-related consequences: Cash versus credit card
3C	Consumption-related consequences: Marked versus unmarked packaging
3D	Consumption-related consequences: Specialty store versus general store
4	Ruling out guilt as an explanation of preferences for se- cretive purchase options
5	Field study: Predictive validity with married individuals and packaging choice
6	Field data: Predictive validity with objective money- management data

Participants were provided with a broad, working definition of financial infidelity: "Financial infidelity can be broadly defined as 'cheating with money." Based on the definition, they listed up to 10 distinct behaviors they would consider financial infidelity in their marriage.

After data collection, the authors read the 699 participant-generated examples of financial infidelity. The goal was to create a typology of domains in which financial infidelity manifests. Using an inductive approach, the authors identified 12 categories of financial infidelity behaviors: (1) hiding or lying about savings (e.g., amount of savings, presence of account); (2) hiding or lying about spending; (3) spending saved money; (4) lying about paying bills/expenses; (5) creating undisclosed debt; (6) hiding personal financial matters; (7) undisclosed gambling; (8) hiding or lying about investments; (9) directly harming spouse financially (one's gain is the other's loss); (10) giving money to others; (11) inappropriate tax behavior; and (12) hiding or lying about income (e.g., source or amount, additional income received).

We assessed the frequency with which married individuals spontaneously mentioned financial infidelity behaviors by creating a dictionary (web appendix A) and coding participants' example behaviors. A trained research assistant recorded the total number of behaviors listed (0–10) and

We intentionally provided participants a broad definition so they could generate as many examples as possible. We ran a second version of the pilot study (n=150, age range: 23–74, mean age = 36, 42% female) featuring our two-component financial infidelity definition. The results were not substantively different.

TABLE 2
FREQUENCY WITH WHICH PARTICIPANTS MENTIONED CATEGORIES OF FINANCIAL INFIDELITY BEHAVIORS

Category	М	SD	Min	Max	% listing the behavior at least once
Hiding or lying about spending	1.55	1.14	0	5	85.33%
Hiding or lying about savings (e.g., amount, presence of account)	.82	.87	0	4	58.67%
Creating undisclosed debt	.63	.95	0	4	40.00%
Giving money to others	.41	.69	0	4	33.33%
Undisclosed gambling	.21	.41	0	1	20.67%
Hiding or lying about income (e.g., source/amount, additional income received)	.25	.54	0	3	20.00%
Directly harming spouse financially (one's gain is the other's loss)	.21	.52	0	4	17.33%
Hiding personal financial matters	.20	.49	0	3	16.67%
Lying about paying bills/expenses	.18	.49	0	3	14.67%
Spending saved money	.09	.28	0	1	8.67%
Hiding or lying about investments	.09	.28	0	1	8.67%
Inappropriate tax behavior	.03	.16	0	1	2.67%
Total	4.66	2.40	0	10	

total number of behaviors listed for each of the 12 categories (table 2).

We used the top six categories (in terms of both the average number of examples and percentage of participants providing at least one example in the category) as our conceptual structure for scale-item development. The categories were: (1) hiding or lying about spending; (2) hiding or lying about savings (e.g., amount of savings, presence of account); (3) creating undisclosed debt; (4) giving money to others (which we later reframed as gift-giving); (5) undisclosed gambling; and (6) hiding or lying about income (e.g., source or amount, additional income received). Note that three of the categories match the categories included in the classification of financial decisions proposed by Lynch Jr. (2011): spending and resource allocation, borrowing and repaying, saving and purchase of complex financial products. This conceptual overlap ensures the behaviors we included are "financial." Moreover, the high percentage of people spontaneously mentioning examples of financial infidelity from these categories, and the high number of examples provided in each category, indicate that these are the types of behaviors that the majority of married consumers most closely associate with financial infidelity.<sup>3</sup>

# STUDY 1A: ITEM PURIFICATION AND SCALE CONSTRUCTION

After identifying the six primary financial infidelity domains, we proceeded with scale-item generation. Based on

the examples provided by married individuals in the pilot study and considering face validity and semantic redundancy, we generated 30 items, five from each domain, intended to measure financial infidelity proneness. Measuring each domain with multiple items improves reliability and captures a broader range of behaviors (Baumgartner and Homburg 1996; Churchill Jr. 1979). We expected the behaviors to form a single, unidimensional scale. The 30 items should represent specific examples of the broader financial infidelity construct (i.e., the act and/or concealment). Thus, the goals of study 1A were to refine the list of 30 scale items into a reliable and parsimonious financial infidelity proneness measurement tool and test for unidimensionality.

#### Participants and Procedure

We recruited 1,003 married adults via MTurk (age range: 19–83, mean age = 40, 66% female) who had been married for 11.9 years on average. Participants were presented with the 30 financial infidelity proneness scale items in a randomized order (web appendix C). Participants responded to each item using a seven-point scale (1 = strongly disagree, 7 = strongly agree). Included in the item list was an attention check: "Please select 'agree' to show that you read questions carefully." A total of 979 (98%) participants passed the attention check; the remaining 24 participants were removed from further analyses (Oppenheimer, Meyvis, and Davidenko 2009). The study concluded with demographic questions.

#### Results

The study's objective was to purify and validate the financial infidelity proneness scale. We used principal components analysis (PCA) to assess the factor structure and eliminate ill-fitting items. We found five components with eigenvalues greater than 1. The first component (eigenvalue: 12.2) accounted for 40.5% of total variance. The

The remaining six categories were less strongly associated with financial infidelity among married individuals (less than 20% of participants spontaneously listed relevant examples), and some could be subsumed by the six focal categories. A follow-up classification of participant responses using the six focal categories confirmed this (web appendix B). The six focal categories subsequently used for scale development accounted for 90% of the behaviors listed by participants.

**TABLE 3**FI-SCALE ITEMS AND DESCRIPTIVE STATISTICS

FI category	Item #	Item	М	SD
Spending 1		If I really wanted to purchase something but my partner did not approve of the price, I would consider buying it anyway and not telling him/her.	2.66	1.67
	2	I do not want my partner reading my purchase receipts, in case s/he disapproves of my spending.	2.30	1.58
Saving	3	I am always honest with my partner about the amount of savings I have.*	2.22	1.57
J	4	Sometimes I pretend to be saving money when, in reality, I am not.	1.96	1.35
Debts	5	I would hide a bill from my partner to avoid upsetting him/her.	2.60	1.84
	6	If I needed the money just for a few days, I would take out credit and not tell my partner.	2.17	1.58
Gift-giving	7	Sometimes I avoid telling my partner how much money I spend on gifts to avoid confrontation.	2.53	1.72
	8	My partner knows exactly how much money I spend on gifts for friends and relatives.*	2.92	1.77
Gambling	9	I would not tell my partner if I lost money gambling.	2.27	1.63
•	10	If I won a bet, I might buy myself a treat and not tell my partner.	2.71	1.77
Income	11	If I received an unexpected inheritance, it would be nice to buy things without my partner having to know.	2.20	1.59
	12	I prefer to keep information about my income private from my partner.	1.88	1.34
		Total	2.37	1.13

NOTE.—Items with an asterisk (\*) are reverse-scored.

remaining four components (eigenvalues: 1.9, 1.4, 1.3, and 1.1) explained 6.3%, 4.6%, 4.3%, and 3.7% of the variance. Using parallel analysis with 1,000 repetitions, we retained four factors (web appendix C, figure C1).

After applying a varimax rotation, we inspected component loadings. To reduce the list of 30 items to a smaller, internally consistent set, we balanced psychometric properties with efficiency, as a measure with too many items would be time-consuming and too few items would not provide sufficient reliability. We retained items based on high loadings to the most common factor, one at a time. For example, the item with the lowest factor loading (.104) was "I sometimes play the lottery without telling my partner." We removed this item and repeated the PCA. We repeated the process until 12 items remained, two from each of the six financial infidelity domains.

Rerunning the PCA on the 12 items revealed one component with an eigenvalue greater than 1. The component explained 48.7% of the variance. The next highest component had an eigenvalue of .83, explaining 6.9% of the variance and suggesting that a single-factor model is adequate to represent financial infidelity. The internal consistency of the 12-item scale was high, with a Cronbach's  $\alpha$  of .90, which did not improve by removing any individual item(s) from the scale. The average variance extracted (AVE)—the level of variance captured by a construct versus the level due to measurement error—was .44 (Fornell and Larcker 1981).<sup>4</sup>

Confirmatory Factor Analysis. To examine the psychometric properties of the 12-item financial infidelity proneness measure, we conducted a confirmatory factor analysis (CFA) using maximum likelihood.<sup>5</sup> Standardized factor loadings ranged from .56 to .74, and were all highly significant (< .001), suggesting there were no problematic items needing removal (web appendix C, table C3; Hair et al. 2006). Further analyses revealed that the 12-item solution had an acceptable model fit (RMSEA = .077; SRMR = .039; CFI = .936), suggesting that the items are reliable indicators of the financial infidelity construct. The final 12-item measure of financial infidelity proneness (i.e., the Financial Infidelity Scale, or FI-Scale) is presented in table 3.

Demographic Differences. Next, we examined the FI-Scale's relationship with demographic variables. We considered whether male consumers have a stronger propensity to engage in financial infidelity than females. Traditional gender stereotypes portray married men as breadwinners and women as caretakers in marriage, with some exceptions (Commuri and Gentry 2005). Previous research suggests partners with greater economic resources, usually males in heterosexual unions, have more power and control over them (Blumstein and Schwartz 1983; Rodman 1972). Thus, it is possible that men feel more entitled to independent financial decisions than women on

While the AVE was below the .5 threshold typically deemed acceptable, we reran AVE on our 12-item scale across all subsequent online samples and consistently found a score above .50. (study 2=.50; study 3A=.57; study 3B=.55; study 3C=.56; study 3D=.54; study 4=.51).

Because running exploratory and confirmatory analysis on the same set of participants may bias results, we reran CFA on responses from a new sample of 500 married participants recruited through Prolific Academic (age range: 22-75, mean age = 42, 68.6% female). Standardized factor loadings ranged from .57 to .74 and were all significant (p < .001). Cronbach's  $\alpha$  was .90. Model fit was within acceptable bounds (RMSEA = .099, SRMR = .052, CFI = .889).

average, resulting in greater opportunity for financial infidelity. However, we found no significant difference between the financial infidelity proneness of men and women (M = 2.39, SD = 1.08 vs. M = 2.36, SD = 1.15; t(976) = .42, p = .67).

We also examined whether the FI-Scale was correlated with participant age and socioeconomic status (1 = lower class to 5 = upper class). The results revealed no significant relationships between FI-Scale scores and age (b = .002, SE = .003, t(976) = .55, p = .58) or socioeconomic status (b = .001, SE = .05, t(976) = .02, p = .98).

#### Discussion

In study 1A, we identified a parsimonious set of six internally consistent categories capturing the full breadth of financial infidelity. Through item refinement and a CFA, we created our 12-item FI-Scale to assess consumer financial infidelity proneness. One remaining question is whether financial infidelity proneness reflects an individual trait or is a function of an individual and his or her current relationship. Because we conceptualize financial infidelity as a function of individual and relationship factors, we predicted that FI-Scale scores would be relatively stable over time within the same relationship (tested next in study 1B), but vary across different relationships (study 1C).

# STUDY 1B: STABLILITY WITHIN THE SAME RELATIONSHIP

#### Participants and Procedure

We contacted the same 979 married adults from study 1A (age range: 19–83, mean age = 41, 67% female) via MTurk approximately six weeks later and asked them to complete a follow-up survey. A total of 510 participants (age range: 19–75, mean age = 42, 67% female) responded to our request, a 52% response rate. The follow-up survey (time 2) included the FI-Scale ( $\alpha$  = .92), basic demographic questions, and an attention check. Six individuals failed the attention check and were removed from analyses.

#### Results and Discussion

We assessed the FI-Scale's test–retest reliability by computing the intraclass correlation coefficient (Deyo, Diehr, and Patrick 1991; Elkin 2012) between participants' FI-Scale scores obtained in study 1A (time 1) and the follow-up survey

(time 2). The coefficient was .78, suggesting an acceptable level of reliablity; between-person variance was greater than within-person variance over the two FI-Scale administration periods (Elkin 2012). The zero-order correlation between scores at time 1 and 2 was positive and significant (r(503) = .80, p < .001), also indicating high test–retest reliability. The results demonstrate that financial infidelity proneness is a relatively stable and reliable trait over time within the same relationship.

# STUDY 1C: FLUCTUATION ACROSS DIFFERENT RELATIONSHIPS

#### Participants and Procedure

We recruited 301 married participants via MTurk (age range: 24–69, mean age = 41, 58% female, marriage length range: 1–46 years). After completing the 12-item FI-Scale for their current marriage ( $\alpha$  = .91) and a picture-rating filler task, participants were asked about previous romantic relationships. A total of 40 participants indicated they were previously married, 65 indicated they had been in a committed relationship where they cohabitated for more than six months, and 98 indicated they had been in a committed relationship without cohabitation for more than six months. The three groups completed the FI-Scale again for their previous relationship ( $\alpha$  = .92). Ninety-eight participants reported having no committed relationships before their current marriage and were omitted from further analyses.

We asked three exploratory questions to compare financial infidelity in current and past relationships generally: "How would you compare your approach to financial matters in your current relationship compared to past relationships?" (1 = much less transparent, 7 = much more transparent; 1 = much less honest, 7 = much more honest) and "Did you keep fewer/more financial secrets in your past relationships compared to your current relationship?" (1 = definitely kept fewer financial secrets in my past relationships, 7 = definitely kept more financial secrets in my past relationships). The items were averaged to form an index where higher scores reflect greater transparency/lower financial infidelity ( $\alpha = .78$ ).

#### Results and Discussion

To examine the stability of financial infidelity proneness across different relationships, we correlated current FI-Scale scores with previous scores, controlling for previous

There was no difference in the gender composition (67% female vs. 66% female;  $\chi^2(1)=.10, p=.76$ ) or FI-Scale scores of participants who completed the second survey and those who did not (M=2.33, SD=1.09 vs. M=2.41, SD=1.17; t(975)=1.13, p=.26). Compared to participants who did not complete the second survey, those who did were, on average, older (M=42.17, SD=11.84 vs. M=38.81, SD=11.24; t(976)=4.54, p<.001) and married longer (M=13.69, SD=11.76 vs. M=11.12, SD=10.46; t(975)=3.60, p<.001).

<sup>7</sup> Excluded participants did not differ from included participants in terms of age (M = 39.93, SD = 11.71 vs. M = 41.03, SD = 9.96; t(293) = .84, t = .40), the number of months they had been with their current partner (M = 206.22, SD = 149.03 vs. M = 186.42, SD = 119.15; t(299) = 1.24, t = .22), their gender (58% female vs. 58% female;  $\chi^2(1) = .008$ , p = .93), or their FI-Scale scores (M = 2.51, SD = 1.21 vs. M = 2.30, SD = 1.08; t(297) = 1.49, p = .14).

relationship type (married, cohabitation, no cohabitation), previous relationship length (M = 3.31 years, SD = 3.64), current relationship length (M = 15.54 years, SD = 9.93), how long ago the previous relationship ended (M = 17.96 years, SD = 11.32), age, and gender. The partial correlation was r(196) = .36, p < .001. The zero-order correlation was r(196) = .35, p < .001. According to Cohen (1992), these correlations are moderate in magnitude, indicating some variability in consumer financial infidelity proneness across different relationships.

Participants reported lower mean FI-Scale scores in their current relationships compared to past relationships  $(M=2.32, \mathrm{SD}=1.09 \ \mathrm{vs.}\ M=3.90, \mathrm{SD}=1.48;\ t(198)=14.92,\ p<.001)$ , regardless of type (all p<.001). The transparency index yielded similar results, with participants reporting greater financial transparency in current versus past relationships  $(M=5.75, \mathrm{SD}=1.23)$ , higher than the midpoint (4) of the scale  $(t(198)=20.03,\ p<.001)$ .

Although consumers' FI-Scale scores showed stability over a six-week period within the same relationship (study 1B), the moderate correlation between scores in current and past relationships in study 1C suggests that financial infidelity proneness is a function of both an individual and his or her current relationship. In other words, there is an individual personality component of financial infidelity proneness, but this proneness may exacerbate or mitigate depending upon specific relationship dynamics. Furthermore, we note that the correlation between FI-Scale scores taken six weeks apart within the same relationship in study 1B (r = .80) is significantly stronger than the correlation between FI-Scale scores in current and past relationships in study 1C (r = .35; z = 8.78, p < .001), which further supports the role of relationship-specific factors in determining consumers' financial infidelity proneness.

# STUDY 2: POTENTIAL PSYCHOLOGICAL ANTECEDENTS AND CONSEQUENCES

Studies 1A, 1B, and 1C provide evidence of the FI-Scale's basic psychometric properties. Next, we identify possible psychological antecedents and consequences of financial infidelity. What factors facilitate it, and what effects might it have on relationship functioning?

We began study 2 by examining the relationships between financial infidelity proneness and 35 scales from the marketing, psychology, and relationship science literatures (web appendix D). Although the results revealed significant correlations between the FI-Scale and a range of individual difference measures (web appendix D, table D1), two tests of discriminant validity demonstrated the FI-Scale is empirically distinguishable from the 35 measures (web appendix D, tables D2 and D3). The FI-Scale was most highly correlated with financial harmony in marriage

at r = -.61 (Rick et al. 2011). To examine the temporal direction of the relationship, we resurveyed participants from the initial test several months later. We estimated a cross-lagged panel model (Campbell and Stanley 1963; Kessler and Greenberg 1981), in which both synchronous and asynchronous associations were calculated. Unlike other panel data models (e.g., change scores, lagged dependent variables), the design accounts for inertial effects (i.e., the influence of financial infidelity proneness at time 1 on the measure at time 2) and reciprocal effects (i.e., the influence of financial infidelity proneness at time 1 on the measure at time 2 and vice versa).

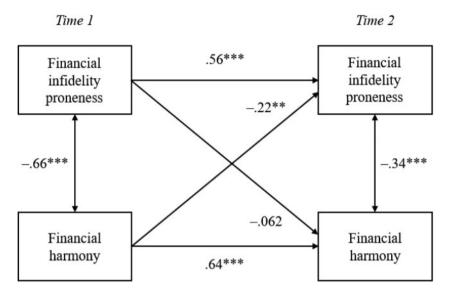
To gain insight into other potential antecedents and consequences of financial infidelity, we examined the relationship between the FI-Scale and five scales from our initial examination (web appendix D): self-esteem (Rosenberg 2015), relationship satisfaction, investment, quality of perceived alternatives, and commitment (Rusbult, Martz, and Agnew 1998). We chose the five scales based on prior research on sexual and emotional infidelity. For example, lower self-esteem has been linked to engaging in sexual infidelity (Sheppard, Nelson, and Andreoli-Mathie 1995) and responses to a partner's sexual and emotional infidelity (e.g., increased self-doubt; Buunk 1995; Goldenberg et al. 2003). Engaging in financial infidelity may also be expected to lower self-esteem, given the role of guilt following partner transgressions (Baumeister, Stillwell, and Heatherton 1995) and the need to maintain a sense of moral integrity (Steele and Liu 1983). Rusbult's (1980) investment model argues that highly committed partners are less likely to engage in infidelity because the long-term consequences outweigh the potential short-term benefits (Drigotas, Safstrom, and Gentilia 1999). Similarly, couple members more satisfied in their relationships are less likely to engage in infidelity (Atkins, Baucom, and Jacobson 2001; Buss and Shackelford 1997; Treas and Giesen 2000). Thus, study 2 examines whether higher financial harmony. self-esteem, and perceived relationship functioning (e.g., greater commitment, satisfaction) predict lower financial infidelity proneness and/or greater financial infidelity proneness predicts lower levels of financial harmony, selfesteem, and perceived relationship functioning.

#### Participants and Procedure

Study 2 was conducted via MTurk approximately nine months after the initial examination presented in web appendix D (time 1). We contacted the same 313 married adults from sample A and 306 married adults from sample B to complete the follow-up study. A total of 167 individuals each from samples A (age range: 21–71, mean age = 38, 55% female, marriage length range: less than 1–54 years) and B (age range: 21–75, mean age = 42, 62% female, marriage length range: less than 1–49 years)

FIGURE 1

CROSS-LAGGED ANALYSIS BETWEEN FINANCIAL INFIDELITY PRONENESS AND FINANCIAL HARMONY



NOTE.—Coefficients are standardized. The difference between times 1 and 2 was approximately nine months. Financial infidelity proneness was measured via the 12-item FI-Scale. \*\* $p \le .01$ , \*\*\* $p \le .01$ .

responded to the request, yielding response rates of 53% and 55%.

In the follow-up survey (time 2), sample A participants completed the FI-Scale ( $\alpha=.92$ ) and financial harmony scale ( $\alpha=.91$ ) in a randomized order. Sample B participants completed the FI-Scale ( $\alpha=.92$ ), self-esteem scale ( $\alpha=.94$ ), satisfaction subscale ( $\alpha=.96$ ), investment subscale ( $\alpha=.85$ ), quality of perceived alternatives subscale ( $\alpha=.91$ ), and commitment subscale ( $\alpha=.87$ ) in a randomized order.

#### Results

We conducted cross-lagged panel analyses; to aid interpretation, all results feature standardized *z*-score coefficients.

Financial Harmony. Figure 1 illustrates the temporal relationship between financial infidelity proneness and financial harmony. FI-Scale scores and financial harmony were stable between times 1 and 2 ( $\beta$  = .56, SE = .07, z(14) = 8.48, p < .001 and  $\beta$  = .64, SE = .07, z(14) = 9.77, p < .001, respectively). Results reveal financial harmony at time 1 predicts FI-Scale scores at time 2 ( $\beta$  = -.22, SE = .07, z(14) = -3.03, p = .002), but the FI-Scale scores at time 1 do not predict financial harmony at time 2 ( $\beta$  = -.062, SE = .07, z(14) = -.83, p = .41). Thus, financial harmony appears to be an antecedent of financial infidelity proneness, as greater financial harmony predicts a lower likelihood of engaging in financial infidelity.

Self-Esteem and Investment Model Subscales. Cross-lagged figures for each of the five remaining scales are provided in web appendix E. The results reveal FI-Scale scores at time 1 predict lower self-esteem at time 2 ( $\beta = -.09$ , SE = .04, z(14) = -2.02, p = .04), but lower self-esteem at time 1 does not predict FI-Scale scores at time 2 ( $\beta = -.01$ , SE = .05, z(14) = -.14, p = .89). Lower self-esteem appears to be a consequence of financial infidelity proneness.

We find suggestive evidence that relationship satisfaction and investment are antecedents of financial infidelity proneness. Relationship satisfaction ( $\beta = -.09$ , SE = .05, z(14) = -1.69, p = .09) and investment ( $\beta = -.09$ , SE = .05, z(14) = -1.75, p = .08) at time 1 are marginally

In both samples, no differences were observed in gender composition (sample A: 55% female vs. 60% female,  $\chi^2(1) = .57$ , p = .45; sample B: 62% female vs. 65% female,  $\chi^2(1) = .38$ , p = .54), nor in FI-Scale scores between participants completing and not completing the second survey (sample A: M = 2.87, SD = 1.27 vs. M = 2.85, SD = 1.32; t(311) = .15, p = .88; sample B: M = 2.70, SD = 1.24 vs. M = 2.84, SD = 1.37; t(304) = .89, p = .38). Compared to participants who did not complete the second survey, those who did were, on average, older (sample A: M = 38.28, SD = 10.25 vs. M = 34.77, SD = 8.79; t(304) = 3.18, p = .002; sample B: M = 41.70, SD = 12.04 vs. M = 37.60, SD = 11.26; t(297) = 3.01, p = .003) and married longer (sample A: M = 10.36, SD = 9.01 vs. M = 7.85, SD = 7.93; t(304) = 2.56, p = .011; sample B: M = 12.37, SD = 10.52 vs. M = 8.87, SD = 8.89; t(296) = 3.05, p = .002).

significant predictors of FI-Scale scores at time 2, but not vice versa ( $\beta = -.005$ , SE = .05, z(14) = -.09, p = .93 and  $\beta = .02$ , SE = .06; z(14) = .30, p = .77, respectively). We find a reciprocal relationship between commitment and financial infidelity proneness. Commitment at time 1 is a marginally significant predictor of FI-Scale scores at time 2 ( $\beta = -.08$ , SE = .05, z(14) = -1.75, p = .08), while higher FI-Scale scores at time 1 are marginally related to lower commitment at time 2 ( $\beta = -.12$ , SE = .07, z(14) = -1.77, p = .08). No significant relationships were found between FI-Scale scores and the desirability of perceived alternatives (both p > .33).

#### Discussion

Study 2 identifies financial harmony between marital partners, relationship satisfaction, and relationship investment as potential antecedents of financial infidelity. The results provide some evidence that lower self-esteem is one consequence of financial infidelity proneness. Some evidence indicates that relationship commitment is both an antecedent and consequence of financial infidelity proneness. These latter relationships were marginally significant, however, so we hesitate to interpret them with any precision.

#### STUDIES 3A-3D: CONSUMPTION-RELATED CONSEQUENCES

Given that financial infidelity proneness is fundamentally related to consumption choices, we next examine its consumption-related consequences. We anticipated that partners with greater financial infidelity proneness would exhibit a greater likelihood of engaging in financial behaviors expected to elicit spousal disapproval (the act) and choose secretive purchase options to hide evidence (concealment).

#### Participants and Procedure

We recruited married individuals via MTurk to complete a short survey for studies 3A–3D. The independent samples ranged from 303 to 320 participants each. <sup>9</sup> In all four studies, participants completed the following scales in a randomized order: FI-Scale, financial harmony scale (Rick et al. 2011), self-concealment scale (Larson and Chastain

1990), and impression management and self-deceptive positivity subscales from the Balanced Inventory of Desirable Responding (BIDR; Paulhus 1984). See web appendix F, table F1, for descriptive statistics. We included the latter scales to examine the predictive ability of the FI-Scale relative to conceptually related constructs (e.g., individuals exhibiting higher general self-concealment may choose to hide purchases perceived as negative).

Participants read and indicated how they would respond to a consumer decision-making scenario. In all studies, the order of the scales and scenario was counterbalanced and separated by a filler task in which participants indicated how much they liked a series of affect-neutral pictures. The four consumer decision-making scenarios ensured participants perceived each financial behavior as eliciting anticipated spousal disapproval. If the act is not expected to elicit disapproval (component 1 of our financial infidelity definition), we would not expect FI-Scale scores to predict behavior. We assessed whether participants' FI-Scale scores predicted (1) their likelihood of engaging in the financial behavior expected to elicit spousal disapproval (the act) and (2) their likelihood of choosing purchase options allowing them to hide the behavior (concealment). Across all studies, participants were asked the second set of questions about concealment regardless of whether they chose to incur the potentially disapproved expense (i.e., they were asked to imagine they had engaged in the act). We anticipated higher FI-Scale scores to be correlated with both components of financial infidelity. Summaries of the scenarios are provided below (full text and measures are available in web appendix F).

Study 3A: Joint versus Personal Credit Card. In study 3A, participants were told they were considering going to a new, upscale restaurant with friends, but their spouse would be unable to join. The restaurant was expensive, and the dinner bill would likely be three times higher than typical. Participants were told they could pay the bill with one of two credit cards: a joint card, with a promotional 0% interest rate for the next 12 months, to which their spouse also had access, or their personal card, with an 18% interest rate, to which their spouse did not have access. Participants first indicated whether they were likely to go to the dinner on a seven-point scale (1 = definitely will not go,7 = definitely will go) and as a binary choice (1 = yes,0 = no). They then indicated which credit card they would be more likely to use on a seven-point scale (1 = joint)credit card, 7 = personal credit card) and as a binary choice (1 = personal, 0 = joint).

Study 3B: Cash versus Credit Card. In study 3B, participants imagined spending the day at an amusement park with friends; however, their spouse could not join. One of the friends insisted on purchasing "fast pass" tickets for \$100 each, twice the price of general admission (\$50). Participants were told they anticipated that their spouse

Demographic details are as follows: study 3A: n=312, age range: 22-75, mean age =39, 54.9% female, marriage length range: less than 1-54 years, mean marriage length =11 years; study 3B: n=308, age range: 22-73, mean age =41, 56.5% female, marriage length range: less than 1-53 years, mean marriage length =13 years; study 3C: n=303, age range: 20-75, mean age =41, 58.5% female, marriage length range: less than 1-53 years, mean marriage length =12 years; and study =320, age range: =320, age range: =320, =320, age range: =320, =320, age range: =320, =320, =320, age range: =320, =320, =320, age range: =320,

would disapprove of the purchase because they had recently agreed to cut back on spending. Participants were asked about their likelihood of purchasing the fast pass ticket on a seven-point scale (1 = definitely will not purchase, 7 = definitely will purchase) and as a binary choice (1 = yes, 0 = no). Participants next indicated their preference for paying for the ticket with cash versus a credit card with paper statements mailed to the house on a seven-point scale (1 = credit card, 7 = cash) and as a binary choice (1 = cash, 0 = credit card).

Study 3C: Marked versus Unmarked Packaging. In study 3C, participants considered purchasing a \$400 hiking jacket on Amazon. The item was four times more than they typically spend on clothes, and the participants anticipated that their spouses would disapprove of buying the jacket, because the couple had recently decided to save money for an upcoming purchase. When checking out, participants were given the choice between receiving the jacket in packaging making the item clearly visible to whomever took receipt or a discreet, generic Amazon package. Participants indicated their likelihood of purchasing the jacket on a seven-point scale (1 = definitely will not, 7 = definitely will and as a binary choice (1 = yes, yes)0 = no). Participants indicated their relative preference for receiving the item in unmarked versus marked, visible packaging on a seven-point scale (1 = the item's own packaging (marked packaging), 7 = Amazon's packaging (unmarked packaging)), and as a binary choice (1 = Amazon's packaging, 0 = the item's own packaging).An Amazon.com screenshot of the packaging option is available in web appendix F.

Study 3D: Specialty versus General Store. In study 3D, participants considered purchasing new cookware. Because they did all of the home cooking, their spouse would be unlikely to notice new kitchen equipment. However, participants were told they anticipated that their spouse would disapprove of the purchase because they had agreed to minimize spending. Participants would use a joint credit card, to which they and their spouse had access, to make the purchase. The same cookware selection (i.e., identical brands and prices) was available at a specialty store, "Chef's Best," and nearby at the grocery store. Although shopping at the specialty store was more enjoyable, with a quieter atmosphere and friendlier staff, purchasing the cookware from the grocery store would allow the participant to hide the expenditure within a larger bill. Participants first indicated whether they would purchase the cookware on a seven-point scale (1 = definitely willnot, 7 = definitely will) and as a binary choice (1 = yes,0 = no). Participants also indicated their store preference on a seven-point scale (1 = specialty, 7 = grocery) and as a binary choice (1 = grocery, 0 = specialty).

In all studies, we asked participants to indicate how guilty they expected to feel if they incurred the focal

expense (1 = not at all, 7 = very) to assess guilt as an alternative explanation of consumer concealment. Consumers might use secretive purchase options to conceal spending not specifically from their spouses, but from other people and themselves to avoid reminders of guilt. Bechler, Morris, and Huang (2019) find that consumers are more likely to use cash than a credit card for guilt-inducing purchases to decrease the likelihood of being reminded of the purchase.

Manipulation and Potential Confound Checks. A separate pretest (n = 104, age range: 19–76, mean age = 41, 57.4% female, marriage length range: less than 1–48 years, mean marriage length = 13 years) confirmed that participants think it would be easier to hide a financial expense expected to elicit spousal disapproval by using more secretive purchase options (i.e., a personal credit card, cash, unmarked packaging, and making the purchase at a grocery store; all p < .001). See web appendix F, table F2, for full results.

To ensure that committing the focal financial act was associated with anticipated spousal disapproval, we asked participants to answer two questions in all studies: "To what extent do you think your spouse would disapprove if you decide to purchase X?" and "To what extent do you think your spouse would disapprove if you decide not to purchase X?" (1 = not at all, 7 = very much). We compared anticipated spousal disapproval of incurring the expense versus not, consistent with our reasoning that the presence, rather than level, of disapproval drives our effects. In other words, purchasing a \$5 latte from Starbucks might elicit a low mean level of anticipated spousal disapproval (e.g., a 3 out of 7), but if greater disapproval results from incurring the expense than not (e.g., 3 vs. 1), we still expect the first component of financial infidelity to be satisfied. If purchasing the latte and forgoing the latte are associated with the same level of anticipated disapproval (e.g., 3 vs. 3), financial infidelity is not present. Thus, we need the relative comparison between acting and not acting to determine whether anticipated disapproval is present. In all studies, making the focal purchase was associated with greater anticipated spousal disapproval than not making it (all p <.001). See web appendix F, table F3, for full results.

To assess the believability of all scenarios, we asked participants to indicate their agreement with the statements, "I could imagine the scenario well," "The scenario was realistic," and "The scenario was relevant to me," on a seven-point scale (1 = strongly disagree, 7 = strongly agree). All scenarios were characterized by high levels of ease-of-imagination, realism, and relevance (web appendix F, table F4). In some studies, participants responded to additional questions relevant to scenario context (e.g., how likely they are to pay credit card balances in full the next billing cycle in study 3A; whether they usually receive credit card statements in paper or electronically in study 3B). The

TABLE 4
REGRESSION ANALYSES RESULTS

PANEL A: Likelihood of engaging in the financial act anticipated to elicit spousal disapproval

	Study 3A: Dinner expense		Study 3B: Fast pass ticket expense		Study 3C: Jack	et expense	Study 3D: Cookware expense	
	Continuous DV	Choice DV	Continuous DV	Choice DV	Continuous DV	Choice DV	Continuous DV	Choice DV
FI-Scale	.24*	.27*	.43***	.39***	.58***	.64***	.52***	.55***
	(.11)	(.12)	(.11)	(.11)	(80.)	(.19)	(.11)	(.13)
Financial harmony	.12 <sup>°</sup>	.09	06	07	.03	<b>–</b> .10	.37**	.35 <sup>*</sup>
·	(.14)	(.15)	(.15)	(.16)	(.10)	(.24)	(.14)	(.16)
Self-concealment	02	–.1Ś	`.24 <sup>'</sup>	`.18 <sup>′</sup>	`.00 <sup>′</sup>	`.07 <sup>^</sup>	.27 <sup>†</sup>	`.21 <sup>′</sup>
	(.14)	(.15)	(.16)	(.16)	(.11)	(.26)	(.14)	(.16)
BIDR impression	–.2 <b>4</b>	–.2Ó	0 <del>4</del>	`.11 <sup>′</sup>	`.03 <sup>′</sup>	`.02 <sup>′</sup>	–̀.26 <sup>†</sup>	–ì.18 <sup>′</sup>
management	(.16)	(.16)	(.15)	(.16)	(.12)	(.27)	(.15)	(.16)
BIDR self-deceptive		`.30 <sup>′</sup>	.00 <del>4</del>	–.16	`.23 <sup>′</sup>	`.45 <sup>′</sup>	`.26 <sup>′</sup>	`.22 <sup>′</sup>
positivity	(.20)	(.21)	(.23)	(.24)	(.15)	(.38)	(.20)	(.22)
Intercept	2.37	_1.26	1.84	-1.53	7 <del>1</del>	–.93 <sup>*</sup> *	`.39 <sup>′</sup>	−3.35 <sup>*</sup>
'	(1.33)	(1.38)	(1.36)	(1.41)	(.91)	(2.17)	(1.21)	(1.35)

NOTE.—For all continuous dependent variables, the seven-point scales are coded such that higher numbers indicate a greater likelihood of engaging in the financial act anticipated to elicit spousal disapproval. The choice dependent variables are coded as 1 = choose to engage in the act and 0 = choose not to engage in the act. BIDR = Balanced Inventory of Desirable Responding. Standard errors are displayed in parentheses.  $^{\dagger}p \le .10$ ,  $^{*}p \le .05$ ,  $^{**}p \le .01$ ,  $^{**}p \le .001$ .

continued

results are available in web appendix F. Controlling for these variables did not change our results. All studies concluded with demographic questions.

#### Results

Likelihood of Committing the Financial Act. In each study, we analyzed participants' likelihood of committing the financial act expected to generate spousal disapproval using two regression models: (1) an ordinary least squares multiple regression featuring the continuous dependent variable and (2) a logistic regression featuring the choice dependent variable. Participants' likelihood of committing the act was predicted by their financial infidelity proneness scores), financial FI-Scale harmony, concealment, and the two BIDR subscales. Given the relatively strong zero-order correlations among the predictor variables (web appendix D), we assessed potential multicollinearity concerns in studies 3A-3D. The variance inflation factors for all coefficients were less than 2.00, below the standard cutoff of 5 (Hair et al. 2006).

Table 4, panel A, displays complete results from all regression models. For each study, we first report the results of the continuous outcome measure, followed by the choice outcome measure. The results demonstrated that participants' FI-Scale scores were a significant predictor of their likelihood of committing the financial act expected to elicit spousal disapproval in all studies: going to an expensive dinner in study 3A (b = .24, SE = .11, t(302) = 2.13, p = .034; b = .27, SE = .12, Wald  $\chi^2(1) = 5.18$ , p = .023), purchasing a fast pass ticket in study 3B (b = .43, SE = .11, t(293) = 3.81, p < .001; b = .39, SE = .11,

Wald  $\chi^2(1) = 11.47$ , p < .001), buying an expensive jacket in study 3C (b = .58, SE = .08, t(295) = 6.93, p < .001; b = .64, SE = .19, Wald  $\chi^2(1) = 11.52$ , p < .001), and purchasing new cookware in study 3D (b = .52, SE = .11, t(302) = 4.91, p < .001; b = .55, SE = .13, Wald  $\chi^2(1) = 18.83$ , p < .001).

These results were significant beyond individual differences in financial harmony, self-concealment, and the two BIDR subscales. We used a dominance analysis to calculate the relative importance of each scale in an estimation model based on contribution to an overall model fit statistic (Budescu 1993; Grömping 2007). For each scenario, the overall variance explained in the continuous dependent variable  $(R^2)$  was decomposed into the percentage attributed to each independent variable. While dominance analysis has been extended to allow the decomposition of pseudo- $R^2$  values from logistic regression models (Azen and Traxel 2009), it is difficult to interpret the metrics (Mittlböck and Schemper 1996), so we ran dominance analyses only via ordinary least squares regression. Using the percentages, known as standardized dominance statistics, as our comparison metric, FI-Scale scores explained a greater proportion of overall outcome variance than the financial harmony scale across all four studies (study 3A:  $R^2$ = .03, 50.49% vs. 4.94%; study 3B:  $R^2$  = .12, 55.66% vs. 13.59%; study 3C:  $R^2 = .20$ , 79.14% vs. 9.28%; study 3D:  $R^2 = .12, 61.96\%$  vs. 8.27%). Importantly, financial infidelity proneness explained more variance than any other predictor in all studies (web appendix F, table F6).

Likelihood of Concealing the Financial Act. We analyzed participants' preferences for purchase options

TABLE 4
CONTINUED

PANEL B: Likelihood of concealing the financial act anticipated to elicit spousal disapproval

	Study 3A: Credit card choice		Study 3B: Cash vs. card		Study 3C: Packaging choice		Study 3D: Store choice	
	Continuous DV	Choice DV	Continuous DV	Choice DV	Continuous DV	Choice DV	Continuous DV	Choice DV
FI-Scale	.55***	.42**	.31**	.32**	.55***	.50***	.25*	.24*
	(.12)	(.14)	(.12)	(.12)	(.12)	(.13)	(.12)	(.12)
Financial harmony	`.03 <sup>′</sup>	`.15 <sup>′</sup>	–.35 <sup>*</sup>	24	`.21 <sup>′</sup>	`.13 <sup>′</sup>	–.2Ś	22 <sup>°</sup>
•	(.15)	(.19)	(.16)	(.16)	(.15)	(.15)	(.16)	(.16)
Self-concealment	`.02 <sup>′</sup>	–.01	–.2Ś	−.11	`.14 <sup>′</sup>	`.05 <sup>°</sup>	`.07 <sup>′</sup>	04 <sup>°</sup>
	(.15)	(.18)	(.16)	(.16)	(.16)	(.16)	(.15)	(.15)
BIDR impression	33 <sup>*</sup>	–.38 <sup>†</sup>	–.14	–.21	–.12	`.01 <sup>′</sup>	.34* <sup>′</sup>	`.40 <sup>*</sup>
management	(.16)	(.20)	(.16)	(.16)	(.17)	(.17)	(.16)	(.17)
BIDR self-deceptive	.49*	`.17 <sup>′</sup>	`.24 <sup>′</sup>	.45 <sup>f</sup>	`.06 <sup>°</sup>	–̀.11́	–.0Ś	23 <sup>°</sup>
positivity	(.21)	(.26)	(.24)	(.24)	(.22)	(.22)	(.22)	(.21)
Intercept	`.47 <sup>′</sup>	<u>-2.00</u>	5.35**	–.21	2.46 <sup>†</sup>	–.84	2.94 <sup>*</sup>	–ì.50 <sup>°</sup>
·	(1.38)	(1.67)	(1.40)	(1.38)	(1.31)	(1.35)	(1.32)	(1.31)

NOTE.—For all continuous dependent variables, the seven-point scales are coded such that higher numbers indicated a greater likelihood of concealing the financial act through secretive purchase options (e.g., a preference for personal credit card vs. joint credit card use). For choice dependent variables, the choice of the secretive purchase option is coded as 1 (vs. 0). BIDR = Balanced Inventory of Desirable Responding. Standard errors are displayed in parentheses.  $^{\dagger}p \leq .10, ^{*}p \leq .05, ^{**}p \leq .01, ^{***}p \leq .001$ .

allowing them to conceal an act of financial infidelity using two regression models: (1) an ordinary least squares multiple regression featuring the continuous dependent variable and (2) a logistic regression featuring the choice dependent variable. The variance inflation factors for all coefficients were less than 2.00 in all studies, below the standard cutoff of 5 (Hair et al. 2006).

Table 4, panel B, displays complete results from all regression models. For each study, we first report the results of the continuous outcome measure, followed by the choice outcome measure. The results revealed that FI-Scale scores were a significant predictor of participants' preference for discreet purchase options (study 3A: personal vs. joint credit card, b=.55, se=.12, t(302)=4.68, p<.001; b=.42, se=.14, Wald  $\chi^2(1)=8.93$ , p=.003; study 3B: cash vs. credit card, b=.31, se=.12, t(293)=2.67, p=.008; b=.32, se=.12, Wald  $\chi^2(1)=7.48$ , p=.006); study 3C: unmarked vs. marked packaging, b=.55, se=.12, t(295)=4.53, p<.001; b=.50, se=.13, Wald  $\chi^2(1)=13.81$ , p<.001; and study 3D: t=10 grocery store vs. a specialty store, t=12, t=12

Note that the results were significant after controlling for financial harmony in marriage, self-concealment, and the two BIDR subscales. The standardized dominance statistic showed that FI-Scale scores explained more variance in whether participants conceal their behavior than financial harmony (study 3A:  $R^2 = .13$ , 64.92% vs. 6.81%; study 3B:  $R^2 = .07$ , 49.99% vs. 35.96%; study 3C:  $R^2 = .11$ , 69.73% vs. 6.05%; study 3D:  $R^2 = .06$ , 39.40% vs. 33.96%, respectively), as well as all other predictors (web appendix F, table F6).

To assess the role of anticipated guilt in predicting concealment (i.e., preferences for secretive purchase options), we examined whether the FI-Scale was a better predictor than feelings of guilt. Results demonstrated that anticipated guilt did not predict participants' preferences for secretive purchase options in any of the studies (all p > .14). The effect of participants' FI-Scale scores remained significant across studies and dependent variable specifications after controlling for anticipated guilt. Additional dominance analyses revealed that a relatively small percentage of variability in consumers' preferences for secretive purchase options was explained by anticipated guilt (study 3A: 2.67%; study 3B: 6.57%; study 3C: 1.22%; study 3D: 3.02%).

Finally, we tested whether participants' responses to the dependent variables varied depending on the order of the scenario and individual difference scales. The interaction of FI-Scale scores and order was not significant on any of the dependent variables across studies. Similarly, the effects of FI-Scale scores on both the likelihood of committing the act and its concealment held after controlling for order in all studies.

#### Discussion

The results of studies 3A-3D demonstrate that consumers' financial infidelity proneness influences both the act

Cookware purchased from a grocery store was considered more utilitarian than cookware purchased from a specialty store (M = 5.68, SD = 1.28 vs. M = 3.94, SD = 1.91; t(310) = 13.64, p < .001). Given that utilitarian purchases are more easily justified than hedonic purchases (Okada 2005), it is possible that participants higher in financial infidelity proneness may prefer grocery stores for this reason.

<sup>11</sup> We ran versions of the studies measuring only the second component of financial infidelity (i.e., concealment). The results were substantively similar to studies 3A–3D (web appendix F, table F5).

associated with anticipated spousal disapproval (component 1 of financial infidelity) and its subsequent concealment (component 2 of financial infidelity). Consumers who score higher on the FI-Scale were more likely to engage in financial behaviors expected to elicit spousal disapproval when anticipated disapproval was low (e.g., study 3A: M = 3.10, SD = 1.74) or high (e.g., study 3C: M = 5.45, SD = 1.67), suggesting that whether the act is expected to elicit any level of disapproval is the critical component, rather than the degree of disapproval. The studies show that consumers' financial infidelity proneness influences a variety of consumption-relevant choices; consumers more prone to financial infidelity exhibited a stronger preference for secretive purchase options, ambiguous packaging, and shopping at inconspicuous stores. Each of these choices is directly relevant to marketers, as the prevalence of financial infidelity among consumers and variation on the trait impacts purchasing behaviors across domains.

### STUDY 4: RULING OUT ANTICIPATED GUILT

Study 4's first goal was to provide additional evidence against anticipated guilt as an alternative explanation for concealing financial behaviors expected to elicit spousal disapproval through secretive purchase options. Rather than measuring anticipated guilt, in study 4 we manipulated the amount of guilt the focal purchase would elicit (low vs. high), while holding the degree of expected spousal disapproval constant. If the effects are driven by guilt, the FI-Scale should predict financial infidelity behaviors only in the high-guilt condition (i.e., there should be a significant interaction of FI-Scale scores and guilt condition on concealment). If the effects are driven by financial infidelity proneness, the FI-Scale should predict the likelihood of concealment to the same extent in both conditions, as both were designed to elicit an equal level of anticipated spousal disapproval.

The second goal of study 4 was to rule out feelings of financial constraint as an alternative mechanism. Paley, Tully, and Sharma (2019) demonstrate that consumers who feel financially constrained are less likely to talk about purchases because post-purchase word of mouth reminds them of their limited financial resources. In studies 3A–3D, participants may have felt financially constrained because they were considering spending more money than would be approved. It is possible that consumers are therefore more likely to use secretive purchase options to avoid reminders of their financial constraints. We tested this possibility in study 4 by measuring how financially constrained participants felt and examining whether financial infidelity proneness predicted preferences for secretive purchase options above and beyond perceived financial constraints.

#### Participants and Procedure

Participants (n = 610, age range: 21–79, mean age = 40. 59.3% female, marriage length range: less than 1–50 years, mean marriage length = 12 years) were recruited via Prolific Academic. The study used a two group betweensubjects design, with participants' FI-Scale scores as a second, continuously measured factor. We manipulated the amount of guilt the focal purchase would elicit by varying whether the purchase would be for hedonic (i.e., a vacation) or utilitarian (i.e., work) purposes. The manipulation was in line with prior research showing that hedonic purchases induce more guilt than utilitarian ones (Garbinsky and Gladstone 2019; Okada 2005; Sela, Berger, and Liu 2009). Participants were randomly assigned to one of two conditions: in the high-guilt purchase condition participants thought about spending \$200 on beach attire for an upcoming vacation, whereas in the low-guilt purchase condition participants thought about spending \$200 on work attire for an upcoming business trip. Expected spousal disapproval was held constant, as all participants contemplated an equally expensive purchase for which they anticipated disapproval, because the couple had agreed to save money for a big-ticket purchase.

Participants indicated whether they would make the purchase on a seven-point scale (1 = definitely will not, 7 = definitely will) and as a binary choice (1 = yes, 0 = no). Regardless of their decision, as in study 3C, all participants indicated the type of packaging they would prefer if they made the purchase using a seven-point scale (1 = marked packaging, 7 = unmarked packaging) and as a binary choice (1 = unmarked packaging, 0 = marked packaging).

To examine feelings of financial constraint as an alternative mechanism, we asked participants to respond to two questions: "To what extent did you feel financially constrained in the situation described?" (1 = not at all, 7 = very)and "To what extent did you feel like you could spend as much as you liked in the situation described?" (1 = not at all,7 = very much; reverse-coded). The two questions were averaged (r(608) = .48, p < .001) to create an index. Participants also rated anticipated spousal disapproval for both making and not making the purchase and indicated the perceived ease-of-imagination, realism, and relevance of the scenario, using the same questions as in studies 3A-3D. Participants completed a three minute filler task in which they created as many meaningful words as possible using a string of letters (Dewall et al. 2011). Finally, participants completed the FI-Scale ( $\alpha = .91$ ) and demographic questions.

#### Results

Manipulation Checks. A separate pretest (n = 84, age range: 24–66, mean age = 39, 63.4% female, marriage length range: less than 1–44 years, mean marriage length = 10 years) confirmed that participants anticipated feeling

significantly more guilty about spending \$200 on beach attire than work attire (M = 5.17, SD = 1.73 vs. M = 4.24, SD = 1.89; t(83) = 4.69, p < .001).

The current study revealed that purchasing the attire was associated with greater anticipated spousal disapproval than not purchasing the attire (M=5.12, SD = 1.68 vs. M=1.89, SD = 1.39; t(609)=32.64, p<.001), regardless of participants' FI-Scale scores or guilt level, suggesting that expected spousal disapproval was equivalent across conditions. We also see that the scenario was characterized by high levels of ease-of-imagination (M=5.71, SD = 1.48 vs. scale midpoint; t(608)=28.45, p<.001), realism (M=5.69, SD = 1.44 vs. scale midpoint; t(609)=28.90, p<.001), and relevance (M=4.51, SD = 1.96 vs. scale midpoint; t(609)=6.46, p<.001), regardless of FI-Scale scores or guilt condition.

Likelihood of Committing the Financial Act. We conducted two separate regressions: a multiple regression predicting participants' likelihood of purchasing the attire (continuous dependent variable) and logistic regression predicting participants' choice to purchase the attire (binary dependent variable). In both models, we included participants' FI-Scale scores, their assigned experimental condition (1 = high-guilt purchase, 0 = low-guilt purchase), and the interaction of the two as independent variables. Results revealed a significant main effect of FI-Scale scores (continuous DV: b = .54, SE = .07, t(600) = 7.78, p < .001; binary DV: b = .62, SE = .13, Wald  $\chi^2(1) = 23.25$ , p < .001), such that participants more prone to financial infidelity indicated a greater likelihood of making the purchase. This occurred regardless of whether the purchase was low- or high-guilt. The main effect of the guilt condition was also significant (continuous DV: b = -.63, SE = .27, t(600) = 2.35, p = .019; binary DV: b = -1.60, SE = .74, Wald  $\chi^2(1) = 4.60$ , p =.032), indicating participants were less likely to make the purchase in the high- than low-guilt condition. The FI-Scale scores and guilt condition interaction was not significant in either regression (continuous DV: b = .07, SE = .10, t(600)= .71, p = .48; binary DV: b = .29, SE = .22, Wald  $\chi^2(1)$  = 1.69, p = .19). Consistent with studies 3A–3D, a dominance analysis indicated that FI-Scale scores explained more variance in committing the financial act than guilt ( $R^2 = .20$ , 88.49% vs. 11.51%).

Likelihood of Concealing the Financial Act. We conducted two separate regressions: a multiple regression on participants' preference for Amazon's unmarked packaging (continuous dependent variable) and logistic regression on participants' packaging choice (binary dependent variable), with participants' FI-Scale scores, the experimental guilt condition, and their interaction as the independent variables. Results showed only a significant main effect of participants' FI-Scale scores (continuous DV: b=.44, SE = .11, t(600) = 4.03, p < .001; binary DV: b=.39, SE = .08, Wald  $\chi^2(1) = 25.57$ , p < .001), such that participants

with higher FI-Scale scores exhibited stronger preferences for unmarked packaging. Neither the main effect of the guilt condition (continuous DV: b = -.09, SE = .41, t(600) = .21, p = .83; binary DV: b = -.11, SE = .20, Wald  $\chi^2(1)$  = .31, p = .58) nor interaction (continuous DV: b = .23, SE = .16, t(600) = 1.45, p = .15; binary DV: b = -.03, SE = .08, Wald  $\chi^2(1)$  = .20, p = .66) was significant, suggesting anticipated guilt does not play a role in determining consumers' preferences for secretive purchase options.

To assess the role of perceived financial constraint in concealment choices, we added participants' self-reported feelings of constraint to the regressions. Consistent with Paley et al. (2019), feelings of financial constraint were a significant predictor of preferences for unmarked packaging (continuous DV: b = .26, SE = .07, t(599) = 3.95, p < .001; binary DV: b = .25, SE = .06, Wald  $\chi^2(1) = 15.51$ , p < .001). The effect of participants' FI-Scale scores remained significant (continuous DV: b = .46, SE = .11, t(599) = 4.31, p < .001; binary DV: b = .40, SE = .11, Wald  $\chi^2(1) = 13.73$ , p < .001), while guilt and the interaction term did not (all p > .13). Additional dominance analysis showed that FI-Scale scores explained more variance in participants' financial act concealment than both guilt and perceived financial constraint ( $R^2 = .11$ , 73.29% vs. 8.12% vs. 18.60%, respectively).

#### Discussion

Study 4 replicates the findings of studies 3A-3D and demonstrates that consumers' FI-Scale scores predict both the likelihood of engaging in financial behaviors expected to elicit spousal disapproval and preference for secretive purchase options allowing them to conceal their financial transgressions. Study 4 rules out two alternative explanations for consumers' preference for secretive purchase options: anticipated guilt and feelings of financial constraint. One potential limitation of studies 3A-3D and study 4 warrants attention. Although participants evaluated the scenarios as being realistic, the dependent measures still captured behavioral intentions rather than actual behavior. Our next study addresses these concerns by testing the FI-Scale's predictive validity in the field and examining whether the FI-Scale predicts actual financial infidelity among married individuals. 12

## STUDY 5: PREDICTIVE VALIDITY IN THE FIELD

#### Participants and Procedure

We recruited a total of 133 individuals (age range: 24-79, mean age = 52, 53% female) married for an average of

<sup>12</sup> In another study reported in web appendix G, we found that FI-Scale scores were correlated with self-reported instances of past financial infidelity (controlling for tendency to engage in sexual infidelity and general unethical decision-making).

25 years. Data collection took place from 10:00 AM to 5:00 PM during two Fridays, one week apart, leading up to a home football game at a private, midwestern university. In exchange for their time, participants received a snack of their choosing and were entered into a lottery to win a free massage. We set up a table in a high-traffic area, approached adults, and asked whether they were married and willing to participate in a five minute study on personality and decision-making. To mimic the conditions under which financial infidelity is likely to take place, we aimed to recruit married individuals unaccompanied by their spouse.

Consenting participants were provided with a pen and clipboard containing the survey. Participants completed the FI-Scale ( $\alpha=.82$ ) first to ensure the maximum temporal lag between our independent measure (FI-Scale) and dependent variables (likelihood of engaging in the behavior anticipated to elicit spousal disapproval and likelihood of concealing it via unmarked packaging). After completing the FI-Scale, participants responded to several filler items, including a 10-item version of the Big Five Inventory (Rammstedt and John 2007), relationship-specific questions, and demographic questions. To prevent participants from guessing the nature of the survey, we asked them to indicate which snack they planned to choose for compensation. After answering, participants read the following:

In addition to a snack, you will be entered into a lottery to win a free massage at a location near you. If you win, we will contact you via e-mail and ask you to indicate the massage venue of your choice. Winners will receive either (1) one 75-minute massage for themselves, OR (2) two 30-minute massages for themselves and their spouse. Please circle which option you would prefer to win:

A 75-minute massage just for you (the massage certificate will have your name on it and is not transferrable), or

A couple's massage, consisting of two 30-minute massages for you and your spouse (the massage certificate will have your and your spouse's names on it and is not transferrable).

After participants circled which massage option they preferred, they handed their survey to one of the research assistants, who selected a lottery ticket from a stack on the table (web appendix H). Each ticket prominently displayed the participant's massage choice. The research assistant checked the box next to the massage option selected and asked which envelope they would like: (1) a marked envelope, bright teal with a label reading, "Lottery Ticket for a Massage"; or (2) an unmarked envelope, white with no label (web appendix H). Two boxes containing both types of envelopes were displayed on the table to prevent participants from inferring that one type of envelope was scarcer than the other. Participants were not permitted to forgo the envelope choice, as all envelopes contained debriefing information required to be provided upon survey completion. After participants selected an envelope, the research

assistant placed the lottery ticket inside, handed them the envelope, and thanked them for their time. The research assistant noted the type of envelope selected when the participants left the immediate vicinity.

In studies 3A–3D and 4, we asked participants to imagine they had committed the act of financial infidelity before answering the concealment questions, since the purchase options would otherwise be irrelevant. In study 5, we ensured the packaging options were relevant, regardless of whether participants chose to commit the financial act expected to elicit spousal disapproval.

Regarding massage choice (the act), we predicted a main effect, such that participants with high FI-Scale scores would be more likely to choose the massage associated with anticipated spousal disapproval (the personal massage). Regarding envelope choice (concealment), we predicted an interaction between FI-Scale scores and massage choice. We expected FI-Scale scores to predict the likelihood of choosing the unmarked envelope only for participants selecting the personal massage (i.e., the choice associated with anticipated spousal disapproval). We did not expect FI-Scale scores to predict envelope choice among those who chose the couple's massage, as the first component of financial infidelity (i.e., engaging in an act expected to elicit disapproval) was absent.

In a separate post-test (n = 106, age range: 23–73, mean age = 42, 54% female), participants were randomly assigned to imagine choosing either the personal or couple's massage. Using seven-point scales, they rated the extent to which they anticipated that their spouse would disapprove of their choice, criticize them, and react negatively (index  $\alpha$  = .90; web appendix H). As predicted, participants anticipated significantly greater spousal disapproval when choosing the personal massage versus the couple's massage (M = 3.23, SD = 1.99, range: 1–7 vs. M = 1.93, SD= 1.36, range: 1–6.67; F(1, 104) = 15.45, p < .001).

#### Results

Three participants indicated they did not wish to be entered into the lottery for a free massage, yielding 130 participants in the final sample. Of the participants, 43.8% chose the massage for themselves, while 56.2% chose the couple's massage ( $\chi^2(1) = 1.97, p = .16$ ); 63.8% of participants chose the marked envelope, while the remaining 36.2% chose the unmarked envelope ( $\chi^2(1) = 9.97, p = .002$ ).

Likelihood of Committing the Financial Act. We first tested whether participants' FI-Scale scores predicted their likelihood of choosing the massage for themselves. We ran a logistic regression with the massage choice as the dependent variable (0 = personal, 1 = couple's) and FI-Scale scores as the independent variable. The results demonstrated that higher FI-Scale scores were associated with a

stronger likelihood of choosing the personal massage (b = -.43, SE = .21, Wald  $\chi^2(1) = -2.10$ , p = .036).

Likelihood of Concealing the Financial Act. We examined participants' envelope choice contingent on massage choice. We ran a logistic regression model predicting participants' envelope choice (0 = marked, 1 = unmarked) by the interaction between participants' FI-Scale scores and massage choice (0 = personal, 1 = couple's). Results (figure 2) revealed a significant interaction between FI-Scale scores and massage choice (b = -1.18, SE = .50, Wald  $\chi^2$  (1) = -2.35, p = .019). For participants who chose the personal massage, the higher their FI-Scale score was, the more likely they were to choose the unmarked envelope (b = .24, SE = .05, Wald  $\chi^2$  (1) = 5.11, p < .001). Among participants who chose the couple's massage, FI-Scale scores did not predict envelope choice (b = .002, SE = .07, Wald  $\chi^2$  (1) = .04, p = .97).

#### Discussion

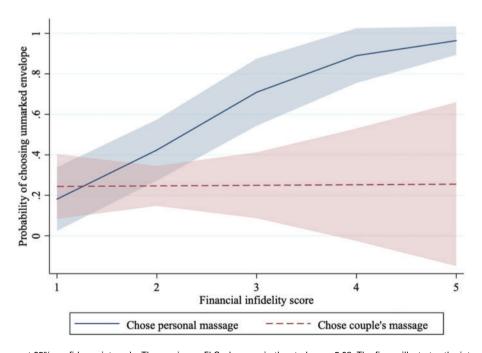
The results of study 5 provide additional evidence of the FI-Scale's predictive validity. Using real, consequential decisions, we demonstrate that participants' FI-Scale scores predict their decision to both (1) engage in behaviors

expected to elicit spousal disapproval and (2) hide the behaviors via unmarked packaging. Note that we conducted a conceptually similar field study, where spouses were presented with the opportunity to gamble bonus compensation and conceal their losses. We found some support for the FI-Scale's predictive validity in this more conservative context, where both spouses were physically present and the act had the potential to benefit the couple (web appendix I).

#### STUDY 6: FIELD DATA FROM A COUPLES' MONEY-MANAGEMENT MOBILE APP

We provide additional evidence for the predictive validity of the FI-Scale in study 6 using data collected from a money-management mobile app. The app is designed to help couples manage their finances by sharing financial information. During setup, the app allows users to decide which financial information (accounts, balances, and transactions) to share with their partner. Combining these objective behavioral data with users' FI-Scale scores obtained through a survey allowed us to examine the scale's predictive ability in a setting of high ecological validity.

FIGURE 2
FI-SCALE SCORES AND THE CHOICE OF UNMARKED ENVELOPE



NOTE.—Error bands represent 95% confidence intervals. The maximum FI-Scale score in the study was 5.08. The figure illustrates the interaction between FI-Scale scores and massage choice on whether participants chose the unmarked envelope using a logistic regression model.

#### Participants and Procedure

Study 6 proceeded in two parts. First, the app developer sent a message to his users on our behalf, inviting them to complete a short survey for a chance to win one of four iPads (the exact number of email recipients is unknown). Survey participants completed the FI-Scale ( $\alpha=.84$ ) and other relationship and financial measures (web appendix J). We included demographic and financial questions as covariates.

Second, we paired users' survey responses with their behavioral data collected through the mobile app. When joining the platform, couples can sign up together or one partner can invite the other. In both cases, each partner creates an individual profile automatically linked to the partner's. During setup, app users can connect any individual or joint bank accounts they own and specify visibility settings for each (i.e., what account information is viewable by their partner). Users can have one of the following visibility settings for each account: (1) Owner Onlycompletely private account the partner cannot see; (2) Balance Only—account balances are shared, but specific transactions are hidden; (3) All—all balance and transaction information is shared with the partner; (4) Hidden the account is disabled, with neither partner able to view it; or (5) Unknown—account visibility has not been set up. The default setting is All; selecting any other account setting represents an active user choice.

We conceptualized the Owner Only and Balance Only categories as instances of financial infidelity, as the choices reflect active concealment. Although study 6 allowed us to examine whether the FI-Scale predicts concealment of financial behaviors, it did not allow us to examine the likelihood of committing financial acts associated with anticipated spousal disapproval. The latter analysis would require access to transaction data and information about which transactions were expected to elicit spousal disapproval.

We collected survey responses and matched them with the app's behavioral data for 1,307 people with 10,007 accounts. Of respondents, 724 (55.4%) were married, 132 (10.1%) were engaged, 356 (27.2%) were cohabitating, and 75 (5.7%) were dating seriously. The remaining 20 participants (1.54%) indicated less interdependent relationship statuses and were removed from the sample. Restricting the sample to married participants was unnecessary in the study, as all participants had elected to use the app to manage their finances jointly, implying interdependence. Due to missing data on variables of interest, our final sample contained 1,169 users (age range: 18-78, mean age = 31, 38.9% male, 59.8%female, 1.3% nonbinary), with 9,010 accounts (24.9% joint). Participants had an average household income of \$107,730, assets of \$133,320, and debts of \$108,960. See web appendix J, table J1, for descriptive statistics. All participants consented to having their responses matched with their behavioral data as part of the research, and all customer data were fully anonymized prior to analysis.

#### Results

We tested whether app users' FI-Scale scores were associated with a greater likelihood of hiding accounts and transactions from their partners. As many users have multiple accounts (7.7 on average), we used multilevel models, with accounts clustered within individual users. Our primary dependent variable was whether users chose Owner Only or Balance Only (coded as 1) or any other account setting (coded as 0). As summarized in table 5 (model 1), a logistic regression revealed that higher FI-Scale scores were associated with a greater likelihood of hiding accounts or transaction details (b = .66, SE = .11, Wald  $\chi^2$  (1) = 6.03, p < .001). The effect remained stable after controlling for financial harmony, demographic variables, and financial covariates, as seen in model 2 (b = .67, SE = .12, Wald  $\chi^2$  (1) = 5.43, p < .001).

Model 2 included indicator variables representing participants' relationship status. Compared to married participants, those cohabitating or dating seriously were more likely to have hidden accounts (b=1.01, SE = .25, Wald  $\chi^2$  (1) = 4.04, p<.001 and b=1.46, SE = .52, Wald  $\chi^2$  (1) = 2.81, p=.005, respectively). The relationship between FI-Scale scores and hidden accounts remained significant when we focused exclusively on the 655 married

TABLE 5
PREDICTING BEHAVIOR WITH FI-SCALE AND CONTROLS

	Model	1	Mod	el 2
	b	SE	b	SE
FI-Scale Financial harmony Joint account Demographics Age Female Education Partner age Partner female Income (\$1,000) Assets (\$1,000) Debt (\$1,000) Number of children Relationship status	.66***	.11	.67*** 13 -5.12*** .025 .51 .013 025 .62† .0021† .000040 00056 48***	.12 .11 .38 .018 .35 .077 .026 .35 .0012 .00031 .00071
Married (comparison) Engaged Cohabiting Dating seriously Intercept	-4.21***	.28	.22 1.01*** 1.46** –5.32***	.36 .25 .52 .91

NOTE.—Multilevel logistic regression models with Huber-White robust standard errors were used. Analyses were based on 9,010 accounts from 1,169 users. Financial variables are in units of \$1,000. Joint account status is reported from mobile application data (1 = joint, 0 = separate). Demographics are self-reported in survey responses. Education is coded as 1 = some high school or less, 2 = high school, 3 = some college (not currently enrolled), 4 = some college (currently enrolled), 5 = two-year associate's degree, 6 = four-year bachelor's degree, 7 = master's degree, 8 = advanced professional degree (MD/JD) or doctoral degree (PhD).  $^\dagger p \leq .10, \ ^*p \leq .05, \ ^*^*p \leq .01, \ ^*^*p \leq .001.$ 

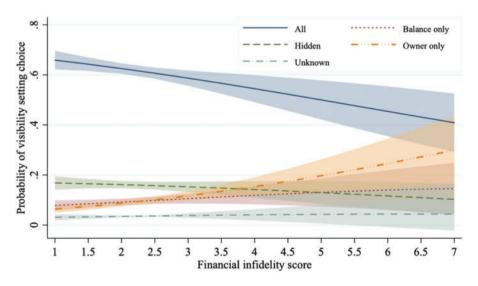
TABLE 6

MULTINOMIAL LOGISTIC REGRESSION RESULTS

	Balance only		Hidd	Hidden		Owner only		Unknown	
	b	SE	b	SE	b	SE	b	SE	
FI-Scale	.25*	.10	.031	.081	.42***	.094	.19	.16	
Financial harmony	.029	.091	0090	.059	042	.087	.0069	.14	
Joint account	-3.75***	.33	-1.41***	.13	-3.96***	.37	-18.6***	.18	
Demographics									
Age	0022	.016	.0040	.010	.013	.015	.043 <sup>†</sup>	.025	
Female	.44	.27	27	.21	.38	.27	090	.28	
Education	.015	.069	.041	.046	.014	.069	13	.11	
Partner age	.010	.0090	.014 <sup>†</sup>	.0077	.017*	.0070	016	.023	
Partner female	.70*	.28	065	.21	.23	.28	39	.29	
Income (\$1,000)	.00080	.00081	.00073	.00066	.00098	.0010	000030	.0016	
Assets (\$1,000)	.00015	.00018	.0000002	.00013	00014	.00022	000054	.00032	
Debt (\$1,000)	00023	.00057	00014	.00039	.00045	.00057	00090	.00080	
Number of children	−.19 <sup>†</sup>	.11	.14*	.059	14	.097	.030	.15	
Relationship status									
Married (comparison)									
Engaged	.27	.29	070	.20	.19	.28	–.71 <sup>†</sup>	.42	
Cohabiting	.32	.21	026	.17	.54*	.21	89***	.26	
Dating seriously	.77	.49	.41	.27	1.36***	.33	89	.79	
Intercept	-3.18***	.77	-1.92***	.48	-3.94***	.69	-2.40*	1.02	

NOTE.—Regression analyses are based on a sample of 9,011 accounts. The All category represents the comparison group. †p ≤ .10, \*p ≤ .05, \*\*p ≤ .001. \*\*\*p ≤ .001.

FIGURE 3
FI-SCALE SCORES AND ACCOUNT VISIBILITY SETTINGS



NOTE.—Error bands represent 95% confidence intervals. The figure illustrates the relationship between FI-Scale scores and account visibility settings using a multinomial logistic regression model.

users in the final sample (b = .56, SE = .15, Wald  $\chi^2$  (1) = 3.77, p < .001).

To better illustrate the results, we ran a multinomial logistic regression with accounts clustered within users. The model treats our dependent variable (account visibility setting choice) as categorical and simultaneously estimates

the likelihood that users chose each of the five account settings after adjusting for demographic and financial controls (table 6). The All category was largest and represented the comparison group. We plotted the probability of selecting different account settings across users' FI-Scale scores (figure 3). As users' FI-Scale scores increased, the

probability of one of their accounts being set to Owner Only or Balance Only increased relative to being set to All  $(b = .42, SE = .094, Wald \chi^2 (1) = 4.53, p < .001 and b = .25, SE = .10, Wald <math>\chi^2 (1) = 2.47, p = .013$ , respectively). In contrast, users' FI-Scale scores did not predict the probability of choosing the Hidden and Unknown settings  $(b = .031, SE = .084, Wald \chi^2 (1) = .38, p = .71$  and  $b = .19, SE = .16, Wald <math>\chi^2 (1) = 1.18, p = .24$ , respectively).

#### Discussion

Using objective behavioral data, study 6 demonstrates that the FI-Scale predicts actual financial infidelity behaviors—specifically, the second component of financial infidelity, concealment—in a context less susceptible to social desirability concerns and self-reporting biases. The results build on the findings of study 5 by testing the predictive validity of our scale using an objective measure of financial infidelity in a setting of greater ecological validity.

#### **GENERAL DISCUSSION**

Our research introduces a new phenomenon to the consumer behavior literature: financial infidelity, defined as engaging in any financial behavior expected to be disapproved of by one's romantic partner and intentionally failing to disclose this behavior to them. Our research (1) introduces and defines the construct of financial infidelity, (2) identifies a specific set of behaviors representing financial infidelity, (3) develops and validates a reliable tool for capturing consumers' financial infidelity proneness, (4) identifies individual-level and relationship-specific antecedents and consequences of financial infidelity, and (5) demonstrates that consumers' financial infidelity proneness predicts a range of consumption-related behaviors (e.g., spending despite anticipated spousal disapproval, preferences for discreet payment methods and unmarked packaging, concealing bank account information) in the lab and field.

#### Theoretical Contributions

To the best of our knowledge, our work is the first systematic investigation of financial infidelity in committed romantic relationships. Past research on the topic is lacking despite the prevalence of financial infidelity, its significant implications for consumer well-being, and the wealth of past research demonstrating that romantic partners can influence consumer choice. Our work responds to a call to further our understanding of consumer behavior in relationships (Cavanaugh 2016; Gorlin and Dhar 2012; Simpson, Griskevicius, and Rothman 2012). Our aim was not only to provide a theoretical understanding of financial infidelity, but also to develop and validate the FI-Scale, which will allow researchers to further expand our understanding of the

construct. Unlike other consumer behavior constructs, ethical considerations prevent researchers from conducting experiments on financial infidelity (e.g., researchers cannot ethically assign some partners to open secret savings accounts). Having a tool to capture consumers' individual variation in financial infidelity proneness is crucial for studying its consequences on joint financial decision-making in couples, as well as relationship and personal well-being.

Past research has acknowledged the destructive consequences of sexual infidelity in romantic relationships (Shackelford and Buss 1997). In a study spanning 160 cultures, affairs are one of the most common reasons cited for relationship dissolution (Betzig 1989), and numerous researchers have investigated both the antecedents and consequences of sexual infidelity (Buss 1994; Buss and Shackelford 1997; Shackelford, Buss, and Bennett 2002). We aim to advance the psychology literature by providing empirical evidence of another type of infidelity. Although sexual infidelity requires a third party to which advances and emotional resources are directed, financial infidelity does not (e.g., one can secretly save money to buy something for personal use). Still, financial infidelity has the potential to be as harmful for relationship health and longevity as sexual infidelity, as conflicts over money are also a primary reason for divorce (Dew et al. 2012).

#### **Practical Contributions**

Implications for Consumer Well-Being. Given the key role that finances play in determining relationship well-being (Betcher and Macauley 1990; Bodnar and Cliff 1991; Dew et al. 2012), consumers can benefit from an awareness of financial infidelity and its potentially negative consequences. Financial infidelity proneness predicts consumers' likelihood of engaging in financial behaviors expected to elicit partner disapproval (studies 3A-3D, 4, and 5), which can negatively impact a couple's ability to accomplish financial goals like building an emergency cash fund, saving for retirement, or paying off a mortgage. Moreover, it could negatively impact a couple's ability to enjoy shared, positive consumption experiences (e.g., a couple's massage; study 5), as these feelings of "togetherness" are associated with greater happiness and relationship satisfaction than solo experiences (Agnew et al. 1998; Aron, Aron, and Smollan 1992; Saslow et al. 2013).

An understanding of financial infidelity can also benefit financial services companies and advisors, as well as clinical therapists and relationship counselors, all of whom play a key role in promoting consumer well-being. If couples seek professional financial advice, they must be willing to openly discuss their spending and saving habits, assets, debts, and financial goals. If partners withhold information from each other, they may provide an incomplete picture of their financial circumstances to advisors. Based on informal interviews the authors conducted with a few

financial advisors, it became clear that financial infidelity is a barrier to effective planning (e.g., "couples who come to the office aren't always aligned in the information they're sharing"). Financial advisors might therefore try to encourage greater financial transparency during conversations with clients to prevent the potentially negative effects of financial infidelity on well-being.

Financial therapy, which aims to "help people reach their financial goals by...attending to the emotional, psychological, behavioral, and relational hurdles that are intertwined" (https://www.financialtherapyassociation.org), is growing in popularity. By understanding financial infidelity, mental health practitioners can help individuals improve not only their financial well-being, but their relationship well-being as well. The Catholic Church has also recognized the role of money in marriage, with an increasing number of parishes including instruction on finances in marriage preparation classes: "good discussion and instruction on money and finances in Catholic marriages can save a lot of fighting, marriage counseling, and therapy later" (Lifewise Strategies 2012). A discussion of financial infidelity and its potentially negative consequences could be featured in educational marriage preparation classes.

Implications for Companies and Policy Makers. Our work highlights several consequences of financial infidelity proneness relevant to marketers. Specifically, we find that higher FI-Scale scores predict a preference for personal versus joint credit cards (study 3A), cash versus credit cards (study 3B), unmarked product packaging (study 3C), and shopping at generic stores instead of specialty stores (study 3D). Some of these behaviors appear innocent—using cash minimizes transaction fees for small businesses, and basic packaging can deter delivery theft. Our research contends, however, that the behaviors may be committed in service of concealing information from a romantic partner. Therefore, companies could take action to mitigate instances of financial infidelity, such as encouraging increased transparency in consumer purchasing behavior (e.g., offering an incentive to use joint credit cards rather than cash). Doing so not only would minimize consumers' opportunities to commit financial infidelity, but may also promote responsible spending and benefit consumer financial well-being more generally. For example, recent research demonstrates those who spend using a joint credit card are more likely to choose utilitarian (vs. hedonic) products (Garbinsky and Gladstone 2019).

It is important for companies to be aware that consumer segments are variably prone to financial infidelity, as this practice may impact their bottom lines. The recent trend of businesses going cash-free (Visa 2017) may in fact hurt retailers like beauty salons and gift shops, due to high-FI-Scale consumers using cash to disguise purchases. While businesses may reduce costs through accepting only digital

payments (Chakravorti 2014), consumers strategically using cash may be less willing to shop at hedonic retailers.

Finally, it is important to recognize that some consumers may hide money from their partner to escape violence or protect their own safety, rather than simply to indulge in immediate gratification or because of a normative conflict between the individual and the couple. Abusive relationships—where women are predominantly the victims—are tragically common, with financial dependence often cited as a primary reason for why women cannot leave men in heterosexual relationships (Kim and Gray 2008). In environments characterized by strict religious adherence or conservative attitudes toward gender norms, women could risk violence if they are unable to conceal socially disapproved financial transactions, such as purchasing birth control or abortion services. Policies enacted by companies or governments unintentionally restricting concealed purchases could have detrimental consequences for vulnerable consumers. For example, policy makers addressing tax avoidance through banknote demonetization, as lawmakers in India did in 2016 (Watson 2016). should consider the potential impact on women attempting to hide resources to escape abuse.

#### Directions for Future Research

We find that financial infidelity is relatively stable over time within the same relationship but may vary across different relationships. Future research could examine specific factors, such as how financial responsibility is distributed within relationships, that may lead consumers to be more or less prone to financial infidelity. Recent research demonstrates that one partner typically takes on the role of chief financial officer (CFO) for the household, and that the divergence in financial knowledge between household CFOs and non-CFOs increases over time (Ward and Lynch 2019). Does a high level of financial responsibility make consumers more prone to financial infidelity, because they are the ones making the majority of the financial decisions? A low level of financial responsibility may also be associated with engaging in infidelity, as these individuals may want to avoid disapproval from the primary decision maker. Such an empirical question remains to be tested. Future research could consider the role of other relationship factors in exacerbating or mitigating financial infidelity proneness, such as relative decision-making power, separate versus joint resource management, and financial communication frequency.

Future research could investigate the types of behaviors associated with financial infidelity in different relationships. We have proposed financial infidelity behaviors manifest in relationships with financial interdependence. Although interdependence may occur in other types of dyads, the quintessential example is in marriage, where each partner's behavior influences the other's outcomes. Thus, the behaviors representing financial infidelity were identified and validated through married participants. However, the construct is likely

to generalize to nonmarital relationships with financial interdependence, such as cohabitating partners sharing expenses and budgets or parents and children with pooled bank accounts. While hiding gambling might represent financial infidelity for married couples, it is unlikely to apply to parent-child relationships; thus, future research could investigate the behaviors associated with financial infidelity in different types of relationships.

Finally, we identified the behaviors constituting financial infidelity and developed the FI-Scale exclusively using responses from American participants. Future research could examine the global nature of the phenomenon, such as whether different cultural dimensions like masculinity/femininity and power distance (Hofstede 2011) are reliably associated with the extent to which various behaviors constitute financial infidelity across different cultures, as well as consumer attitudes toward and the likelihood of engaging in financial infidelity. Secondary data from a large European bank with a nationally representative sample from 13 countries (n = 12,743) shows that 35.7% of participants indicate engaging in at least one financial infidelity behavior. The highest rates are in Turkey (53.7%); the lowest rates are in the Netherlands (22.7%). These findings across a range of cultures suggest that financial infidelity is not limited to the United States, and cultural factors might determine its prevalence.

#### DATA COLLECTION INFORMATION

Data for the pilot study, studies 1A-3D, and the additional studies reported in web appendixes D, F, and G were collected using a prescreened MTurk sample described in the methods sections. Data for study 4 were collected via Prolific Academic. Data for study 5 and the additional study reported in web appendix I were collected at a private midwestern university. Data for study 6 were collected in partnership with a couples' money-management mobile application. Hristina Nikolova managed data collection and analysis for the pilot study (June 2017), study 1B (September 2017), studies 3A-3D (May 2019), study 4 (May 2019), and the additional replication studies reported in appendix F (July-August 2018), as well as managed the data collection for study 1C (May 2019). Joe J. Gladstone managed data collection and analysis for study 1A (July-August 2017) and the additional study reported in web appendix G (December 2017), and conducted the analysis for study 1C (May 2019). Jenny G. Olson managed data collection and analysis for the additional study reported in web appendix D (October 2017), as well as the data collection for study 2 (June 2018) and study 6 (September 2018). Studies 2 and 6 were analyzed by Joe J. Gladstone. Jenny G. Olson and Emily N. Garbinsky jointly managed data collection for the additional study reported in web appendix I (November 2017), which were then analyzed by Hristina Nikolova. Emily N. Garbinsky managed data

collection for study 5 (September 2018), which were then analyzed by Joe J. Gladstone.

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