

On a Need-to-Know Basis: How the Distribution of Responsibility Between Couples Shapes Financial Literacy and Financial Outcomes

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Many consumers suffer from low levels of financial literacy, and attempts to increase this dimension of consumer expertise via educational interventions are typically unsuccessful. We argue that many of these apparent deficits are caused by the distribution of responsibility for knowledge and decision-making between relationship partners. Early in relationships, responsibility for financial matters is often determined not by differences in financial expertise, but by differences in relative contributions to other domains (study 3). Although responsibility may be initially unrelated to ability, responsibility predicts learning of new financial information (study 4). Cross-sectional data from consumers in long-term relationships show that as relationships lengthen, high levels of financial responsibility are associated with increases in financial literacy, whereas low levels of financial responsibility are not (study 1). These diverging trajectories of expertise cannot be explained by role switching or changes in the sample over time (study 2). The resulting gap in financial literacy is linked to corresponding differences in both financial decision-making and financial information search (studies 5, 5a). Consumers develop expertise on a “need to know” basis. Offloading responsibility to a relationship partner may eliminate this need in the present, while simultaneously creating barriers to developing expertise when needed in the future.

Keywords: consumer financial decision-making, financial literacy, transactive memory, expertise, relationships

A husband and wife read the paper with their morning coffee; one turns to the business section, the other to sports. They listen to talk radio on their morning commute; one notices the announcement of an upcoming IPO, the

other a new recipe for fruit salad. They shop for a new car; one grills the salesperson on loan terms, the other asks about safety ratings. Despite subscribing to the same paper, listening to the same radio program, shopping for the same

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car, and generally having access to the same information, these two individuals notice—and, over time, may come to know—very different things. Why?

In this article, we argue that relationship partners are not merely individuals, but are also part of something larger: a cognitively interdependent system in which each partner can rely on the expertise of the other. When relationship partners rely on each other for information and decision-making, they no longer need to know everything; they simply need to know who knows it. They adopt specialized domains of responsibility that subsequently guide attention, information search, and learning. Each partner may selectively seek out and process information related to his or her domains of responsibility, while letting other information pass by unnoticed. From this perspective, differences in the individual cognitive tendencies of husbands and wives are not merely reflections of each partner's idiosyncratic preferences, but are in fact created by the existence of the other person and the division of cognitive labor between them. Over time, this cognitively efficient specialization may affect each partner's ability to both meet the demands of day-to-day life and make potentially life-altering decisions.

We argue that people generally develop expertise on a “need to know” basis—they pay attention to what they think they need to know, when they think they need to know it—and that the need to know is at least partly determined by one's social relationships. More broadly, we suggest that many individual-level cognitive phenomena are best understood in an interpersonal context. This perspective is broadly applicable to many types of relationships, in many domains. However, our primary motivation for this research comes from the woeful state of financial literacy worldwide. In national surveys of US adults, shockingly low percentages can correctly answer elementary questions about credit card use, compound interest, effects of inflation, or properties of stocks and bonds (Lusardi and Mitchell 2011; Lusardi and Tufano 2009)—all crucial areas of knowledge for navigating a complex financial environment. Moreover, financial education interventions have miniscule effects, explaining on average .1% of the variation in “good” financial behaviors (Fernandes, Lynch, and Netemeyer 2014). We propose that people tend to be ignorant about money because they think they have it covered—not because they know about money, but because they believe they don't *need* to know about money.

In this research, we analyze (1) the factors that contribute to the division of cognitive labor between relationship partners in early-stage relationships and (2) how this initial division of cognitive labor may lead relationship partners to attend to—and fail to attend to—different types of potentially important information, and to accumulate different experiences and areas of expertise over time. We then (3) examine how these interpersonal factors affect independent financial decision-making, as they influence

both patterns of information search and the quality of financial decisions.

TRANSACTIONAL MEMORY: CONNECTING INDIVIDUAL AND DISTRIBUTED EXPERTISE

No one person can know all things. Despite the abundance of potentially important information available to consumers, individuals are capable of attending to and processing only a small amount of this information at any given time (Bettman, Johnson, and Payne 1991; Payne, Bettman, and Johnson 1988; Wyer and Srull 1986). They possess limited cognitive resources (Newell and Simon 1972), and limited willingness to use these resources (Fiske and Taylor 1991). Consumers may devote considerable cognitive resources to completing some tasks; however, they frequently opt for more cognitively efficient approaches. The strategies consumers use to manage information-processing costs when making decisions contribute to the development of expertise (or not) over time (Alba and Hutchinson 1987; Ariely 2000; Maheswaran, Sternthal, and Gürhan 1996).¹

Prior consumer research has focused on individual-level explanations of when and why consumers will take on the costs of developing expertise, suggesting that the extent to which consumers seek out, attend to, and use information in a given domain can be explained by individual difference factors—for example, one's degree of personal interest (Celsi and Olson 1988) or prior knowledge (Alba and Hutchinson 1987; Bettman and Park 1980; Wood and Lynch 2002). This individual-level analysis is equally characteristic of work on financial literacy and its link to financial decision-making—the focus of the present research. In contrast, we argue that what consumers know, learn, and even notice is often best understood in the context of their social relationships.

Specifically, we suggest that individuals intuitively develop “transactional memory systems” (e.g., Wegner 1986; Wegner and Wegner 1995) with their relationship partners. The core idea behind transactional memory is that relationship partners use each other as external sources of expertise. Transactional memory systems involve both the individual memory systems of each partner and the interpersonal “transactional” processes that coordinate the encoding, storage, retrieval, and use of information between partners. Each partner takes responsibility for information and decision-making in some domains and offloads responsibility for others. This distribution of responsibility

¹ In this research, we adopt Alba and Hutchinson's (1987) conceptualization of expertise as a combination of declarative knowledge (information stored in memory) and procedural knowledge (skills supporting the efficient use of this information) that enables the successful performance of domain-related tasks.

changes each individual's intuitions about what he or she "needs to know." These principles of transactive memory are quite general; however, they have not previously been brought to bear in understanding individual consumer decision-making, nor to the large literature on financial literacy and financial decision-making.

In efficient transactive memory systems, each member attends primarily to information in his or her areas of responsibility, or "specialization." Specialization within transactive memory systems generally occurs intuitively and automatically and is often guided by relative differences in access to information and prior expertise (Wegner, Erber, and Raymond 1991). However, role specialization may also be determined by factors unrelated to aptitude for or expertise in the focal domain. For example, partners faced with a new task may assign responsibility for this task according to relative expertise in some unrelated domain, the relative amount of free time possessed by each individual, or stereotypes associated with gender, age, or ethnicity (Giuliano and Wegner 1985; Hollingshead and Fraidin 2003; Wegner 1986, 1995). These sorts of factors may never be explicitly acknowledged, but may nevertheless produce role assignments and consequent patterns of selective attention that shape the developmental trajectory of each individual's expertise.

Within relationships, the partner who specializes in a given domain may attend to and seek out information, make and evaluate decisions, and use these experiences to develop an increasingly advanced level of domain-specific expertise. The nonspecialist partner may remain ignorant of the meaning of this information or the quality of these decisions. As relationship partners selectively attend to and engage with different types of information over time, they begin to develop "differentiated" domains of expertise, areas of knowledge that are unique to one individual. Ariely (2000) found that giving up control of information flow makes processing easier in the moment, but also causes one to learn less over time. Similarly, the specialization of responsibility and differentiation of expertise between partners may increase the cognitive efficiency with which couples navigate daily life, but also create individual-level cognitive deficits for each partner in his or her offloaded domains.

A partner may be inconveniently out of town for a week, leaving the other to navigate an unfamiliar informational environment on his or her own. More permanently, death, disease, cognitive impairment, or simply the fading of romantic interest may lead to the loss of a partner. Ultimately, all relationships end in either death or dissolution. The disruption of a transactive memory system—whether temporary or permanent—may leave the newly independent individual not just with a sense of personal loss, but also with sizable gaps in expertise (Wegner et al. 1985).

We therefore study the effects of financial responsibility (over time) on financial expertise, and the effects of financial expertise on the ability to make financial decisions

without access to one's partner. We show that romantic partners allocate financial responsibility early on for reasons unrelated to financial expertise; the "household CFO" (Chief Financial Officer) and "non-CFO" begin the relationship with equivalent financial expertise. But over time, the CFO gains expertise and ability to make good financial decisions, while the non-CFO does not. Thus, the longer the couple is together, the greater the gap between CFOs and non-CFOs in financial expertise and decision-making ability. Moreover, when forced to make decisions as individuals, non-CFOs show impaired ability to use external search to mitigate gaps in their knowledge. We argue that this increasing deficit of expertise of non-CFOs compared to CFOs is not by itself dysfunctional; we will show that household financial outcomes of intact couples are predicted by the financial literacy of the CFO and not the non-CFO. However, the result of these arguably efficient role allocations may put non-CFOs at an increasing disadvantage if they are forced later in life to make decisions for themselves.

FINANCIAL LITERACY AND FINANCIAL EDUCATION

Financial literacy is a personal finance form of consumer expertise, related to the ability to understand and engage in both short-term financial management and long-term financial planning (Remund 2010). This conceptualization of financial literacy encompasses declarative and procedural knowledge (Anderson 1982), as well as the ability to successfully use these forms of knowledge. Financial literacy is associated with behaviors and outcomes including day-to-day financial management skills (Hilgert, Hogarth, and Beverly 2003), retirement planning and accumulated wealth at retirement (Lusardi and Mitchell 2007, 2011), levels of debt and debt-related anxiety (Lusardi and Tufano 2009; Lusardi, Mitchell, and Curto 2010), and other outcomes related to financial and holistic well-being. For reviews, see Fernandes, Lynch, and Netemeyer (2014) and Hastings, Madrian, and Skimmyhorn (2013).

Despite the positive association of financial literacy with good financial behavior and well-being, consumers struggle to develop expertise in this area. National and international studies reveal that many consumers are unable to correctly answer even basic questions about credit card use, compound interest, the effects of inflation, or properties of stocks and bonds (Atkinson and Messy 2012; Jappelli 2010; Lusardi and Mitchell 2011; Lusardi and Tufano 2009)—all crucial areas of knowledge for navigating a complex financial environment. Educational interventions intended to improve consumer welfare in this area create billions of dollars of financial and opportunity costs for firms, governmental agencies, and consumers each year (Consumer Financial Protection Bureau 2013; Fernandes et al. 2014). However, the costs of these interventions are

not matched by benefits for consumers. In a meta-analysis of 90 interventions, [Fernandes et al. \(2014\)](#) found that financial education programs explain on average only .1% of the variation in “good” financial behaviors, and any positive effects of even the largest educational interventions are undetectable after two years.

Variation among consumers in financial literacy has been explained by individual differences in age, gender, income, education, ethnicity, and motivation ([Lusardi and Mitchell 2007](#); [Mandell and Klein 2007](#); [van Rooij, Lusardi, and Alessie 2011](#); [Stango and Zinman 2009](#)). Similarly, consumers’ failure to develop financial literacy, despite opportunities to do so, is often attributed to individual difference factors such as lack of interest in personal finance ([Mandell and Klein 2007](#)), unfamiliarity with financial matters ([Chen and Volpe 2002](#)), or inability to understand this domain ([Lusardi et al. 2010](#)). This focus on individual-level explanations of deficits in financial literacy and learning mirrors the more general tendency to explain individual cognition solely in terms of individual-level factors.

In contrast to this account of the consumer in a (social) vacuum, we propose that consumers’ interactions with financial information are often determined not by individual differences per se, but by role allocations within the context of social relationships. The specialization of responsibility for financial knowledge and decision-making between married or otherwise committed relationship partners is well documented in the domain of consumer finance. Although partners tend to explicitly endorse an equitable division of responsibility in this domain ([Burgoyne and Routh 2001](#)), studies of real-life couples indicate that one partner often assumes the bulk of responsibility for financial matters and for purchase decisions in specific categories ([Bernasek and Bajtelsmit 2002](#); [Bobinski and Assar 1991](#); [Burgoyne et al. 2007](#); [Davis 1970](#); [Ferber and Lee 1974](#); [Fonseca et al. 2012](#); [Hsu 2011](#); [Meier, Kirchler, and Hubert 1999](#); [Rosen and Granbois 1983](#); [Wood et al. 2012](#)). We examine the cognitive consequences of these role divisions.

THE PRESENT RESEARCH

In the present research, we provide evidence that relationship partners develop financial expertise on a need-to-know basis. Specifically, we show that individual differences in financial literacy and financial outcomes are predicted by how relationship partners divide responsibility for financial matters and how long they have been together—in other words, the amount of time each partner has taken on (or offloaded) financial responsibility. In study 1, we use cross-sectional data from dating and married individuals to show that financial responsibility and financial literacy are unrelated in early relationships, but are increasingly related in longer relationships. We interpret

this increasing gap in knowledge between household CFOs and non-CFOs as the cumulative effect of learning by doing (or not) for those who happen to be assigned more (or less) financial responsibility at the outset of the relationship.

At high levels of financial responsibility, increases in relationship length are associated with increases in financial literacy; at low levels of financial responsibility, financial literacy does not improve. This pattern, replicated in studies 1a, 2, 5, and 5a, is consistent with the hypothesis that distributions of financial responsibility shape the development of financial expertise over time. In study 2, we investigate the possibility that this pattern is produced not by changes in individuals (i.e., the development of expertise over time) but by changes in the sample (revised role assignments and/or selective attrition of “mismatched” couples); the data do not support these alternate interpretations. In studies 3 and 4, we focus on early relationships, when financial responsibility is unrelated to financial literacy. We find that, among other factors, comparative advantage ([Ricardo 1817](#)) can explain assignment of responsibility for household finances. In our studies, comparative advantage for financial matters is created by differences between partners in free time (study 3), nonfinancial contributions to the relationship (study 3), and relative expertise in nonfinancial domains (study 4). Studies 4, 5, and 5a show downstream consequences of these responsibility distributions. In studies 4 and 5, we provide evidence that one’s financial responsibility predicts learning (study 4) and information search (study 5)—two processes that may contribute to the development of financial literacy over time. In studies 5 and 5a, we provide evidence that emerging differences in financial literacy between those who take on versus offload financial responsibility predict the quality of financial decisions.

STUDY 1: FINANCIAL LITERACY ON A NEED-TO-KNOW BASIS

Prior research has overwhelmingly relied on individual-level factors to explain individual differences in financial literacy—most commonly, gender, age, and education (please see table 1 in the [web appendix](#) for a list of factors used in prior work on financial literacy). In study 1, our contribution is to show the considerable influence of dyadic role division on individual financial literacy, over and above the influence of these individual-level factors. We use cross-sectional data from individual members of dating and married couples to investigate the effects of financial responsibility, relationship length, and the interaction of these two factors on the development and decay of financial literacy. We find that financial responsibility and financial literacy are unrelated in shorter relationships, suggesting that prior expertise does not necessarily

determine financial responsibility. However, responsibility seems to influence the development of expertise. Increasing relationship length predicts increasing financial literacy for respondents with primary responsibility for financial matters (household CFOs), but not for those with little responsibility for financial matters (non-CFOs). The longer the relationship, the more strongly household CFOs dominate non-CFOs in financial literacy.

Method

Participant Recruitment. In studies 1, 1a, 2, 5, and 5a, we focus on the effects of transactive memory processes within stable dyadic relationships. For these studies, we used Amazon Mechanical Turk (MTurk) to recruit online samples of dating, cohabitating, and married United States residents who reported sharing financial resources and/or responsibilities with their partners. Participants were prescreened without being aware of our selection criteria. No individual participated in more than one study.

Participants. The final sample for study 1 consisted of 272 individuals (151 female, 121 male; $M_{\text{age}} = 34.5$); three participants were excluded from the original sample ($n = 275$) for providing incomplete data. Participants came from a wide variety of economic, educational, ethnic, and regional backgrounds. Most important for our purposes, this sample also captured a wide range of types and lengths of relationships; 125 participants were married, 70 were unmarried but cohabitating, and 14 were engaged, with relationship lengths ranging from just over one month to 49 years ($M = 9.1$ years). (Participants in all MTurk studies had very similar distributions of demographic characteristics.)

Procedure. Participants first indicated their current relationship status and provided an estimate of total relationship length in years. We measured each individual's degree of financial responsibility within his/her relationship by asking participants to answer the question "How responsible is each member of your relationship for making financial decisions?" Participants answered using a 100-point sliding scale anchored by "My partner is completely responsible" and "I am completely responsible"; for all analyses, we coded financial responsibility from -50 to $+50$, with 0 representing an equal division of responsibility.² Our primary

interest was in the interaction of relationship length with financial responsibility.

Next, participants completed the key dependent measure: a 13-item financial literacy quiz, previously validated as a unidimensional measure of financial literacy (Fernandes et al. 2014). Participants also completed a demographics questionnaire assessing individual-level factors used to predict financial literacy in prior research: age, gender, ethnicity, education, and income.

Results

Model Comparison. We predicted financial literacy scores ($M = 8.41$, $SD = 2.88$) using two OLS regressions. Table 1 shows both models. An initial demographics-only regression including common individual-level predictors of financial literacy was significant ($F(17, 254) = 8.82$, $p < .0001$, $R^2 = .371$). In a replication of prior research, this model revealed significant effects of age ($b = .044$, $p = .003$), gender (female $b = -1.934$, $p < .001$), ethnicity, and education.

Our focal dyadic-factors regression added three predictors: financial responsibility ($M = 8.88$, $SD = 22.36$, where $50-50$ is coded as 0), relationship length in years ($M = 9.11$, $SD = 9.28$), and the interaction of these two terms. This regression was also significant ($F(20, 251) = 10.12$, $p < .0001$, $R^2 = .446$). Critically, the dyadic-factors model fit significantly better than the nested demographics-only model ($F(3, 251) = 11.37$, $p < .0001$). This finding replicates in all following studies that allow for such a model comparison (studies 1a, 2, 5, and 5a).

Dyadic Factors Predicting Financial Literacy. Equally critical to our argument, the financial responsibility \times relationship length interaction significantly predicted financial literacy ($b = .003$, $t(251) = 3.87$, $p < .001$). Figure 1 displays this diverging fan interaction pattern of effects, comparing the regression simple slopes for those with 100% responsibility for financial decision-making (household CFOs), those with 50% responsibility, and those with 0% responsibility (non-CFOs). Please see web appendix tables 4–8 for evidence that the patterns in table 1 and figure 1 are robust to numerous alternative specifications.

We also found a significant simple main effect of relationship length on financial literacy ($b = .051$, $t(251) = 2.43$, $p = .016$) when financial responsibility was evenly shared (0 on a scale of -50 to $+50$). This significant effect indicates that longer relationships were associated with higher levels of financial literacy for partners who divided responsibility for financial matters equally. Because age was also in the model, this partial effect implies that

2 We conducted a pilot test ($n = 207$) to investigate the relationship between this single-item measure and more granular measures aggregating responsibility distributions for 53 specific financial behaviors. We found that subjects' overall ratings of financial responsibility were highly related to these behavioral indices, with multiple $R^2 = .59$. The pattern of correlations between the single-item measure and behavioral indices revealed that the single-item measure is highly related to being in charge of everyday budget setting ($r = .72$), tracking and monitoring budgets ($r = .71$), managing accounts and payments ($r = .65$), and managing decisions related to long-term financial planning ($r = .60$). The single-item measure is weakly related to being the primary earner for everyday expenses ($r = .24$) or investments ($r = .42$), and unrelated to being the primary shopper ($r = -.05$). Consistent with research

in other areas, the results of this pilot study indicate that people likely overclaim how much financial responsibility they carry; in our sample, the mean level of reported financial responsibility was significantly higher than the scale midpoint, $t(206) = 6.95$, $p < .001$. Please see the web appendix for full methodological details and analyses.

TABLE 1
DEMOGRAPHICS-ONLY AND DYADIC MODELS OF FINANCIAL LITERACY, STUDY 1

Model Coefficient	OLS regression, study 1		
	Demographics only <i>b</i> (SE)	+ dyadic factors <i>b</i> (SE)	β
Interaction: Financial responsibility \times relationship length		.003 (.001)**	.278
Relationship length		.051 (.021)*	.164
Financial responsibility		-.005 (.009)	-.037
Age	.044 (.015)**	.007 (.019)	.028
Female	-1.934 (.327)**	-1.671 (.315)**	-.289
Salary	.003 (.005)	.002 (.005)	.021
Partner works	-.072 (.215)	-.117 (.203)	-.042
Partner contributes to finances	.241 (.180)	.331 (.171) [†]	.144
Ethnicity:			
African-American	-1.377 (.638)*	-1.629 (.604)**	-.133
Hispanic	-1.076 (.727)	-1.384 (.688)*	-.099
Asian	-.425 (.678)	-.358 (.640)	-.280
Pacific Islander	-2.042 (1.712)	-1.944 (1.617)	-.058
Native American	—	—	—
Other	1.828 (1.685)	1.553 (1.592)	.046
Education:			
High school	1.724 (1.447)	2.257 (1.373) [†]	.239
Some college	2.198 (1.402)	2.482 (1.326) [†]	.386
Two-year college degree	2.181 (1.454)	2.499 (1.376) [†]	.277
Four-year college degree	4.026 (1.406)**	4.285 (1.331)**	.715
Masters degree	4.248 (1.462)**	4.162 (1.384)**	.461
Doctoral degree	4.724 (1.997)*	4.193 (1.891)*	.153
Professional degree	5.727 (1.843)**	6.378 (1.744)**	.267
Intercept	4.617 (1.416)	4.849 (1.366)	
R^2	.371	.446	

Gender (Female) is dummy-coded with Male as the reference group.

Ethnicity variables are dummy-coded with Caucasian as the reference group.

Education variables are dummy-coded with "less than high school" as the reference group.

Relationship length is coded in years. Financial responsibility is coded from -50 to +50.

[†] = $p < .10$ * = $p < .05$ ** = $p < .01$.

being in a relationship predicts the development of financial expertise over time, beyond any benefits associated with simply gaining experience with age. In fact, age (an individual-level factor) no longer predicts financial literacy ($p = .70$), but relationship length and the relationship length \times financial responsibility interaction (dyadic factors) do. This pattern of results supports our hypothesis that the "need to know" is created by relationship dynamics. The development of financial expertise seems to depend on the amount of time an individual spends *within a given financial role*.

We found no relationship between financial responsibility and financial literacy at year 0 of the relationship ($b = -.005$, $p = .60$), suggesting that partners at the very beginning of a relationship do not distribute financial responsibility by matching specialized financial roles with degrees of financial expertise. In studies 3 and 4, we examine this surprising finding in more depth by investigating the factors that contribute to the distribution of financial responsibility early in relationships.

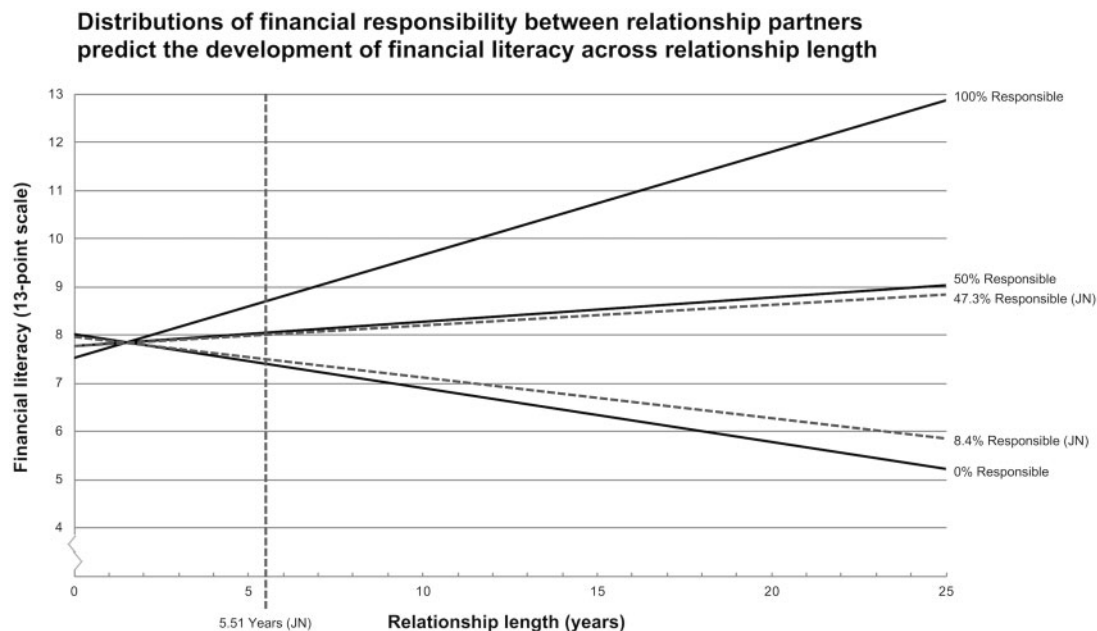
Floodlight Analyses. Figure 1 also shows the results of a series of floodlight analyses (Spiller et al. 2013) that

further explore the key interaction between financial responsibility and relationship length. Taking on higher levels of financial responsibility is associated with significant increases in financial literacy for all relationship lengths past the Johnson-Neyman point of 5.51 years. Being in a longer relationship predicts significant increases in financial literacy for those with at least 47.3% of the financial responsibility in their relationships, and significant decreases in financial literacy for those with less than 8.4% of this responsibility. The simple slope of the relationship between financial responsibility and financial literacy is exactly 0 at 34.4% responsibility, directionally positive above 34.4%, and directionally negative below 34.4%. These analyses suggest that partners do not necessarily have to take full control over financial matters in order to experience increases in financial literacy over the course of a relationship; they simply have to be involved roughly equally.

Statistically significant declines in financial literacy over the course of a relationship may be experienced only by the most extreme offloaders; only 1.5% of the sample reported having less than 8.4% of the financial responsibility within their relationships. A larger percentage of the

FIGURE 1

DISTRIBUTIONS OF FINANCIAL RESPONSIBILITY PREDICT THE DEVELOPMENT OF FINANCIAL LITERACY (OR NOT) ACROSS RELATIONSHIP LENGTH (STUDY 1)



population may fail to gain financial literacy as a consequence of fully or partially offloading financial responsibility to a relationship partner. In study 1, 22.8% of our sample reported having 47.3% or less responsibility. Across all studies, 64.4% of participants report levels of financial responsibility associated with significant increases in financial literacy across relationship length; 35.6% of participants report levels of financial responsibility not associated with increases in financial literacy. (Please see table 10 in the [web appendix](#) for study-by-study statistics.)

Discussion

Study 1 provides support for the overarching argument that investigations of consumer expertise may benefit from moving beyond individual-level explanations. Our initial demographics-only model significantly predicted financial literacy, and replicated standard relationships between financial literacy and individual-level factors (e.g., age, gender, ethnicity). However, when we added dyadic factors to the mix—financial responsibility, relationship length, and their interaction—the effect of age vanished, the effect of gender weakened, and the predictive value of the model as a whole increased ([table 1](#)).

Study 1 highlights the key regularities we examine in the rest of this article. First, at the start of relationships, there is no reliable tendency for higher financial

responsibility to be associated with higher financial literacy. Second, the longer the relationship lasts, the more it is true that the household CFO dominates the non-CFO in financial literacy. Third, controlling for age and other demographics, the greater the level of financial responsibility one has in the dyad, the greater the tendency for financial literacy to increase with relationship length. Fourth, those in the non-CFO role do not gain in financial literacy with longer relationships; non-CFOs with very low financial responsibility may actually decline in financial literacy as relationships lengthen. Together, these findings suggest that creating nominal household CFOs and non-CFOs at the start of sharing finances may *cause* these individuals to develop different levels of financial expertise over time.

We conducted study 1a to assess consumers' intuitions about these effects; full details and results are provided in the [web appendix](#). Participants ($n = 147$) first completed all measures from study 1, with results replicating the key financial responsibility \times relationship length interaction from this study ($b = .002$, $t(126) = 2.26$, $p = .026$). They were then asked to predict the number of financial literacy questions that would be answered correctly by an individual with a low (10%) or high (90%) degree of financial responsibility within either a short (1 year) or long (20 year) relationship. Participants predicted only a large main effect of financial responsibility ($F(1, 143) = 157.74$, $p < .001$, $\eta^2 = .53$). Their predictions missed all of the

aforementioned regularities we examine in this article: first, that financial literacy is unrelated to financial responsibility in early stage relationships; second, that financial literacy becomes more strongly related to financial responsibility as relationships lengthen; third, that financial literacy increases with relationship length for CFOs with high responsibility; and fourth, that financial literacy declines with relationship length for non-CFOs with very low responsibility. These faulty lay intuitions may make consumers unaware of the increasing divergence of financial capability between CFOs and non-CFOs over time; without awareness, couples may not consider whether the division of cognitive labor creates unwanted vulnerability for the non-CFO.

STUDY 2: TESTING SWITCHING AND SELECTION ACCOUNTS OF DIVERGING FINANCIAL LITERACY OVER TIME

We posit that the interaction shown in [figure 1](#) reflects a causal effect of role specialization on the development of financial expertise. Those who take on responsibility for financial matters develop financial literacy over time, and those who offload this responsibility do not. Financial responsibility remains relatively stable over time, and financial literacy changes.

In study 2, we evaluate two alternate interpretations of these results. First, a *switching* account suggests that the pattern of results in study 1 could also be observed if initially mismatched couples (where individuals with high financial literacy have low financial responsibility, or those with low financial literacy have high financial responsibility) are increasingly likely to change role assignments over time. Under this account, financial literacy remains stable over time and financial responsibility changes. Second, a *selection* account suggests that mismatched couples are more likely to drop out of the sample as they experience conflict that leads to relationship dissolution. Under this account, individuals' financial responsibility and financial literacy both remain stable over time, but the sample composition changes such that fewer mismatched couples survive at longer relationship lengths.

Method

Participants. The final sample for study 2 consisted of 275 individuals who reported sharing financial responsibility and resources with a relationship partner (144 female, 131 male; $M_{\text{age}} = 36.4$); eight participants were excluded from the original sample ($n = 283$) for providing incomplete data. Mean relationship length was 8.9 years.

Procedure. Participants first completed all measures from study 1. To address the switching account, we added measures assessing changes in the distribution of financial

responsibility over the course of the relationship. In addition to current financial responsibility, participants reported financial responsibility at the beginning of the relationship, whether there was an adjustment in responsibility during the relationship, and when/why any adjustments occurred. To address the selection account, we added measures of relationship satisfaction (seven items; [Hendrick 1988](#)), thoughts about divorce (five items; [Mead 2013](#)), and frequency of disagreements about money, religion, friends, aims/goals, amount of time spent together, leisure time activities, household tasks, career decisions, and other major decisions ([Spanier 1976](#)).

Results

Replication of Study 1. An OLS regression predicting financial literacy from the dyadic and demographic variables shown in [table 1](#) was significant, $F(20, 254) = 6.47$, $p < .0001$, $R^2 = .338$. We replicated the results found in study 1 for all dyadic factors in the model: a significant financial responsibility \times relationship length interaction ($b = .002$, $t(254) = 2.09$, $p = .037$), a significant effect of relationship length when financial responsibility was distributed equally ($b = .044$, $t(254) = 2.06$, $p = .041$), and no simple main effect of financial responsibility at zero years relationship length ($b = -.018$, $p = .103$). Please see [table 13](#) in the [web appendix](#) for full results.

Switching. We assessed financial role adjustment within relationships by asking participants "has the distribution of responsibility for making financial decisions in your relationship changed since you first started sharing responsibility for financial decision-making?" The majority of participants responded "no change at all" (73%). The remainder reported small adjustments (17%), large adjustments (7%), or switching roles (3%).

Might these adjustments explain the key finding that financial responsibility and financial literacy are increasingly related in longer relationships? If so, the responsibility \times relationship length interaction should be significant only for those who reported making adjustments to financial responsibility during their relationships. We created a dummy variable for whether the respondent reported any adjustment in financial responsibilities (0 = no adjustment, 1 = yes adjustment) and interacted this dummy with relationship length, financial responsibility, and their product. The three-way financial responsibility \times relationship length \times adjustment dummy interaction was not significant ($b = -.001$, $p = .602$), indicating that the two-way financial responsibility \times relationship length interaction (shown in [figure 1](#)) did not differ for those who did versus did not report making adjustments to the distribution of financial responsibility. This key responsibility \times relationship length interaction remained significant for the subset of respondents who never made adjustments

($b = .002$, $t(250) = 2.00$, $p = .047$), and was actually directionally weaker for the subset that did make adjustments ($b = .001$, $p = .436$). A switching account of the relationship between financial responsibility and financial literacy cannot explain the interaction shown in figure 1.

Selection. A selection account suggests that divorce selectively culls members of mismatched couples (where partners with high financial literacy have low financial responsibility, or those with low financial literacy have high financial responsibility) from the sample over time. Perhaps higher incidence of fighting about money leads to higher rates of relationship dissolution for mismatched, relative to well-matched, couples. This would predict an interaction like the one shown in figure 1, but due to changes in the sample rather than changes in any individual's level of financial literacy or financial responsibility.

We cannot perfectly test this account without a longitudinal design tracking couples over decades, but we can test for two patterns in the data that would be consistent with the idea that fighting about money limits relationship length for mismatched couples. First, among the (not-yet-divorced) respondents in our sample, the degree of match between one's financial responsibility and one's financial literacy should predict factors that may foreshadow relationship dissolution: disagreements about money, relationship satisfaction, and divorce-related thoughts. Second, increases in relationship length should predict decreases in disagreements about money, decreases in divorce-related thoughts, and increases in relationship satisfaction as members of mismatched couples are removed from the sample over time.

Contrary to a selection account, we found that longer relationships were characterized by directionally more disagreements over money ($b = .016$, $t(251) = 1.54$, $p = .125$), less relationship satisfaction ($b = -.003$, $t(251) = -.037$, $p = .711$), and more thoughts about divorce ($b = .008$, $t(251) = .74$, $p = .457$). These results hold when we account for potential curvilinear trends in relationship satisfaction over relationship length (Glenn 1990; Spanier and Lewis 1980; cf. VanLaningham, Johnson, and Amato 2001).

We also regressed measures of disagreements about money, relationship satisfaction, and divorce-related thoughts on financial literacy, financial responsibility, match (the product of financial responsibility centered at 50–50 and mean-centered financial literacy), relationship length, and all demographic controls used in study 1. Higher match predicted fewer disagreements about money ($b = -.003$, $t(251) = -2.17$, $p = .031$), higher relationship satisfaction ($b = .002$, $t(251) = 2.08$, $p = .031$), and less concrete thoughts about divorce ($b = -.003$, $t(251) = 2.04$, $p = .043$). However, higher match between financial responsibility and financial literacy also predicted less conflict in *nonfinancial* domains (e.g., religion, friends, leisure time activities) ($b = -.002$, $t(251) = -2.244$, $p = .026$). After we controlled for these nonfinancial disagreements

in selection models, match no longer predicted financial disagreements ($b = -.001$, $t(250) = -.95$, $p = .345$), relationship satisfaction ($b = .001$, $t(250) = .95$, $p = .344$), or thoughts about divorce ($b = -.001$, $t(250) = -1.04$, $p = .301$).

Discussion

Study 2 addresses two alternate interpretations of the finding that household CFOs and non-CFOs increasingly diverge in financial literacy as relationships lengthen. The data do not support a switching account; switching financial roles within relationships is an uncommon occurrence, and does not moderate the interaction in figure 1. Nor can a selection account explain the key relationship length \times financial responsibility interaction found in study 1 (and replicated in studies 1a, 2, 5, and 5a), for reasons outlined in the preceding paragraphs.

To salvage a selection account of the data in study 2, one must revise the argument that mismatched couples divorce due to fighting over money; instead, one might argue that couples who are bad at transactive role assignments across different shared tasks (including both money management and nonfinancial tasks) are poor communicators who fight about everything and are at higher risk of divorce. This would be a novel contribution to the literature on divorce if true. However, we doubt this interpretation of the pattern shown in figure 1. The interpretation of a finding should reflect prior probabilities of two or more alternative accounts and the diagnostic value of the evidence (Brinberg, Lynch, and Sawyer 1992). We are not aware of any literature supporting the idea that poor transactive allocation of tasks is responsible for divorce over time. However, there is considerable prior research suggesting that transactive role structures affect learning over time (Austin 2003; Lewis, Lange, and Gillis 2005), and we show additional data consistent with this transactive memory account in studies 4 and 5. Moreover, if mismatched couples with the less competent person in the CFO role are more likely to dissolve their relationships over time, we would expect individuals in longer-surviving relationships to report more marital satisfaction than those in shorter-surviving relationships. We find no such evidence in study 2. Thus, we interpret the key relationship length \times financial responsibility interaction in causal terms: taking on or off-loading financial responsibility causally predicts the development of financial literacy over time.

STUDY 3: COMPARATIVE ADVANTAGE GUIDES ROLE DIVISION IN EARLY-STAGE RELATIONSHIPS

We argue that assignments of financial responsibility shape the developmental trajectory of financial expertise. Consistent with this argument, studies 1 and 2 show that

the divergence in financial knowledge between household CFOs and non-CFOs grows with longer relationships. Somewhat surprisingly (at least to us), these studies also reveal that, early in relationships, more financially literate individuals are not more likely to be in the CFO role (figure 1). In study 3, we explore this finding further in a sample composed entirely of individuals currently in early-stage relationships. We first verify the finding of no early association between financial literacy and financial responsibility. We then explore what factors, if not financial expertise, might influence initial distributions of financial responsibility between relationship partners.

Prior research on household task-sharing provides supporting evidence that factors unrelated to financial expertise often determine who becomes the household CFO. Distributions of financial responsibility between partners have been linked to factors including partner differences in familial wealth and current income (Bernasek and Bajtelsmit 2002; Burgoyne et al. 2007; Grabka, Marcus, and Sierminska 2013; Pahl 2000), perceptions of each partner's employment as a career or "just a job" (Bobinski and Assar 1991; Rosen and Granbois 1983), relative education level (Fonseca et al. 2012; Lovingood and Firebaugh 1978), sex-role orientation (Bird, Bird, and Scruggs 1984; Weinstein 1986), and gender (Kirchler 1988; Wolgast 1958). These factors may override more substantively meaningful differences between partners, including differences in actual financial expertise (Meier, Kirchler, and Hubert 1999) and the ability to work with numbers (Smith, McArdle, and Willis 2010). Qualitative research indicates that differences in motivation or free time may push one partner to take on the "necessary evil" of money management, and that financial roles based on these nonfinancial factors rapidly become entrenched (Wood et al. 2012).

In study 3, we analyze distributions of financial responsibility in early-stage dyadic relationships as a function of four sets of factors: financial ability, motivation, division of labor, and demographics. Financial ability *should* matter when couples are distributing financial responsibility, and motivational factors may capture "fit," controlling for ability. However, we are particularly interested in factors related to the dyadic division of labor and the idea that coordination in transactive memory systems might be guided by comparative advantage. Evidence that these factors influence the distribution of financial responsibility would suggest that role specialization in dyadic transactive memory systems is an efficient approach to jointly navigating the cognitive demands of daily life. These dyadic factors may (at least partially) explain why the CFO role is not always assigned to the more financially literate partner.

Method

Participants. We partnered with the Marketing Science Institute and *Brides* magazine to solicit responses from a

panel of their subscribers. We originally sought a *Brides* sample of 500; however, only 200 *Brides* panelists responded. We subsequently collected responses from 300 MTurk participants to meet our target sample size. After we filtered responses to include only those who reported sharing finances for less than five years, our final sample consisted of 313 individuals (171 *Brides*, 142 MTurk) who reported sharing financial responsibility with a relationship partner (241 female, 72 male, $M_{\text{age}} = 31.39$), with an average elapsed time since responsibility distribution of 1.9 years.

Procedure. Participants were first screened to ensure that they shared financial resources and responsibility with a romantic relationship partner. Those who passed the screening were then instructed to "[think] back to the time when you and your partner first started sharing responsibility for financial decision-making" and were asked a series of questions assessing potential influences on the distribution of financial responsibility in early-stage relationships. Measures of financial ability, motivation, division of labor, and demographics are briefly described below, and details of all measures are provided in the web appendix. We measured relative financial responsibility using the same continuous slider as in studies 1 and 2.

Measures of Financial Ability. We measured three factors related to financial ability: financial literacy (13-item scale; $M_{\text{score}} = 7.00$, $SD = 3.37$, mean-centered for analysis), prior financial experience (self and partner), and estimated credit score (self and partner). Relative financial experience with making contributions to a rainy-day fund, saving for retirement, and investing in the stock market was coded from -3 (partner had experience in all three areas, respondent had none) to $+3$ (respondent had experience in all three areas, partner had none), with 0 indicating equal levels of prior experience ($M = .14$, $SD = 1.30$). Participants estimated their own and their partners' credit scores on a scale from 1 (very poor) to 10 (excellent); relative credit score was coded from -9 to $+9$ ($M = .07$, $SD = 2.93$). Lynch et al. (2009) found that self-assessments of credit scores using this method correlated $r = .825$ with actual FICO credit scores.

Measures of Motivation. We measured two factors related to motivation: preference for financial responsibility and confidence in financial information search. We measured relative personal preference for taking on financial responsibility using responses to three items assessing personal enjoyment, motivation to take financial responsibility, and motivation to avoid financial responsibility (reverse-scored). We averaged and mean-centered responses to create a scale ($\alpha = .78$) ranging from -3 (partner significantly higher) to $+3$ (respondent significantly higher) ($M = 0$, $SD = 1.21$). We assessed confidence in financial information search using a five-item scale from

Fernandes et al. (2014) ($\alpha = .92$); responses were mean-centered for analysis ($M = 0$, $SD = 1.25$).

Measures of Division of Labor. We measured two factors related to the division of labor: relative external demands on time and relative contributions to nonfinancial shared responsibilities. We operationalized relative external demands on time in terms of school- and/or work-related obligations. Participants' reports of self and partner student and employment status (none, part-time, full-time) were coded from -4 (full-time work and school for partner, no obligations for respondent) to $+4$ (full-time work and school for respondent, no obligations for partner), with 0 indicating equal obligations ($M = .04$, $SD = .89$). Participants also reported the number of hours per week that they and their partners dedicated to communal and nonfinancial tasks at the time they started sharing responsibility for financial matters. We computed difference scores (respondent's time minus partner's time) to create a measure of relative ongoing contributions to the relationship ($M = 3.63$, $SD = 11.19$). (Supplementary analyses revealed that participants in study 3 reported dedicating significantly more time than their partners to shared nonfinancial tasks, $t(312) = 5.74$, $p < .001$.)

Demographic and Individual Difference Measures. We measured three key demographic factors: gender (dummy-coded, with female coded as 1), relative age in years ($M = -.65$, $SD = 4.48$), and relative income in thousands when responsibility was first distributed ($M = -6.17$, $SD = 27.22$). We also measured a host of individual difference measures that did not affect initial responsibility distributions: willingness to take investment risk (Fernandes et al. 2014), general risk aversion (Mandrik and Bao 2005), conscientiousness (John and Srivastava 1999), preference for numerical information (Viswanathan 1993), desirability of control (Burger and Cooper 1979), and tightwad/spendthrift tendency (Rick, Cryder, and Loewenstein 2008). Omitting these nonsignificant predictors leads to identical conclusions (please see table 14 in the web appendix).

Results

Overall Regression and Sample Comparison. An OLS regression predicting initial distributions of financial responsibility ($M = 6.15$, $SD = 18.05$) from these factors was significant, $F(20, 292) = 15.50$, $p < .0001$, $R^2 = .515$. Table 2 shows the results of this primary specification. We tested for homogeneity across data sources (Brides, MTurk) in an alternative specification including a dummy for data source and data source \times predictor interactions for all other variables; these added predictors did not improve model fit, $F(21, 271) = 1.32$, $p = .163$. As in study 2, the majority of our sample (71%) reported making no adjustments to financial responsibility. An alternate specification of our model including an adjustment

dummy ($0 = \text{no adjustment}$, $1 = \text{yes adjustment}$) and all adjustment \times predictor interactions did not improve model fit, $F(21, 271) = 1.26$, $p = .202$. This analysis suggests that the factors predicting the distribution of financial responsibility between partners do not differ for those who do versus do not end up revising their roles in the future.

Predictors of Financial Responsibility. As shown in table 2, we replicated the finding from studies 1 and 2 that financial literacy does not predict financial responsibility in early-stage relationships. Moreover, neither relative prior financial experience nor relative credit score predicted distributions of financial responsibility. In contrast to these measures of actual experience and ability, motivational and demographic factors did predict who received financial responsibility in early-stage relationships.

Critically, and in support of the conceptual argument that role specialization represents an intuitive approach to managing joint task demands, both relative external obligations and relative time spent on nonfinancial joint responsibilities predicted financial responsibility. The more responsibilities an individual had outside the home, the less financial responsibility s/he received; similarly, the more an individual was already contributing to nonfinancial joint responsibilities, the less financial responsibility s/he received.

Discussion

Consistent with prior literature on household task sharing, the results of study 3 suggest that financial specialization in early-stage couples may often have little to do with preexisting financial experience, expertise, and/or aptitude. Echoing prior research, we found evidence that demographic and motivational factors influence initial distributions of financial responsibility. (However, with regard to motivation, we note potential concerns regarding discriminant validity between the predictive measure of who wanted financial responsibility and the outcome measure of who received this responsibility.) More central to the aims of this study, we also found that the division of cognitive labor may determine who becomes the household CFO. Relationship partners with fewer ongoing obligations may receive financial responsibility because they hold a comparative advantage in the domain of finances (Ricardo 1817), even in the absence of (or in opposition to) differences in financial ability. In study 4, we further examine the influence of comparative advantage in a controlled laboratory experiment.

TABLE 2

COMPARATIVE ADVANTAGE AND THE DIVISION OF LABOR PREDICT FINANCIAL RESPONSIBILITY IN EARLY-STAGE RELATIONSHIPS, STUDY 3

Factor type	Measure	Factor coefficients <i>b</i> (SE _{<i>b</i>})	β	<i>t</i>	<i>p</i> -value
Financial ability	Financial literacy (mean-centered)	-.384 (.275)	-.072	-1.399	.163
	Prior financial experience (relative)	-.189 (.711)	-.014	-.265	.791
	Credit score (relative)	.415 (.305)	.067	1.362	.174
Motivation	Preference for CFO job (relative, mean centered)	9.194 (.740)	.617	12.425	<.001**
	Confidence in financial information search	1.472 (.747)	.102	1.971	.050*
Division of labor	Demands on time from work/school (relative)	-2.135 (.993)	-.106	-2.150	.032*
	Contributions to nonfinancial tasks (relative)	-.205 (.081)	-.127	-2.520	.012*
Demographics	Age (relative)	.652 (.188)	.162	3.468	.001**
	Income (relative)	-.012 (.033)	-.018	-.357	.722
	Female	-4.148 (2.090)	-.097	-1.984	.048*

Additional nonsignificant control variables include time spent on work/school (relative), time spent on leisure activities (relative), preference for numerical information, conscientiousness, general risk aversion, willingness to take investment risk, tightwad/spendthrift orientation, and desirability of control (two factors).

Prior financial experience is coded from -3 to +3. Credit score is coded from -9 to +9. Preference is coded from -3 to +3. Demands on time is coded from -4 to +4. Contributions to nonfinancial tasks is coded in hours per week.

Model $R^2 = .515$, $F(20, 292) = 15.50$, $p < .001$.

* = $p < .05$ ** = $p < .01$.

STUDY 4: EXPERIMENTAL EVIDENCE THAT COMPARATIVE ADVANTAGE PREDICTS SPECIALIZATION IN AD HOC PARTNERSHIPS

In study 3, we found that comparative advantage based on differences in ongoing obligations predicted who became the household CFO. In study 4, we experimentally test a straightforward analogue of this comparative advantage effect by using false feedback to manipulate perceived ability in financial and nonfinancial domains. We show that new, ad hoc relationship partners will adopt specialized domains of responsibility even when both partners believe that they are equally unskilled in a given domain, as long as they believe they are differentially skilled in some other domain. Relationship partners intuitively distribute cognitive labor. They selectively attend to and remember information in different domains, even when prevented from explicitly communicating about their intentions.

Method

Participants. One hundred undergraduate students from a large North American university were recruited for a study on "Problem-Solving in Pairs." Ten students did not attend, one pair was excluded from analysis for failing to follow task instructions, and one pair was excluded from analysis for reporting prior knowledge of each other's expertise; 86 participants remained for our final analyses (27 female, 59 male; $M_{\text{age}} = 20.14$). We compensated participants with course credit, and ensured incentive compatibility by offering a bonus to the pair with the highest performance (a \$50 Amazon gift card for each partner).

Procedure. We first introduced participants to our focal pair-based learning task. We told them that they would be assigned to dyads, provided with new information on several topics, and evaluated based on the dyad's mastery of this information. They would receive one point for any item recalled by either partner, but would not receive additional points for items recalled by both partners; this "disjunctive" task structure mirrors the incentives for partners in real-world relationships (cf. Kerr and Bruun 1983; Owthoso, Messier, and Lynch 2002). We told participants that they could not communicate with their partners in any way during the study.

After ensuring that all participants understood the task instructions, we randomly assigned participants to dyads and ushered each ad hoc dyad into a separate testing room for the duration of the study. We manipulated perceived advantage structure and domains of advantage within each dyad using false feedback on an initial ability assessment related to two domains: finances and health care. We then exposed the dyad to new information in both domains. After a delay, we measured our key dependent variable: each participant's individual recall of content in each domain.

Manipulation of Advantage Structure. Each participant completed an individual ability assessment ostensibly measuring aptitude for the domains of finance and health care. We manipulated the advantage structure of each dyad by administering false feedback regarding each individual's ability in each domain ("low" or "high," relative to population average) to both partners simultaneously. Importantly, this feedback included enough information for participants to evaluate their relative strengths and weaknesses both

individually (across domains) and comparatively (across partners), but we did not instruct them to use, or even notice, any particular element of the feedback.

Individuals were randomly assigned to one of two domains of advantage (finance, health care) within their dyad, and dyads were randomly assigned to one of three pair advantage structure conditions (identical aptitude, comparative advantage, complementary advantage). Dyads in the identical aptitude condition were told that each partner had high aptitude for one domain but low aptitude for the other; both partners in each dyad had the same area of strength, and the same area of weakness. Dyads in the complementary advantage condition were also told that each partner had high aptitude for one domain but low aptitude for the other. However, partners within these dyads had opposite and complementary aptitudes; each partner's area of weakness was offset by the other's area of strength. Note that these conditions were identical from an individual-level perspective (each participant was strong in one domain and weak in the other), but different from a dyadic perspective.

We were primarily interested in the comparative advantage condition. Dyads in this condition were told that one partner had high aptitude for one domain and low aptitude for the other, and the other partner had equal aptitude for both domains (low/low or high/high). For example, partner A might have high aptitude for health care but low aptitude for finance, and partner B might have low aptitude for both health care and finance; here, partner B would have a *comparative advantage* in the domain of finance, despite having low personal aptitude for this domain. Specialization in this condition cannot be explained by individual-level factors.

Measurement of Specialization. Following the false feedback manipulation, we gave participants 5 minutes to read and remember as much new information as possible in the content domains of finance (stocks, vehicle financing, life insurance, credit cards) and healthcare (heart health, the endocrine system, cancer, mental illness). In order to prevent nonverbal coordination, we gave each partner a separate but identical information packet consisting of 48 factual statements, organized by topic into eight six-item lists.

After a 3 minute delay, we measured each partner's individual recall for content in each domain. We provided each participant with a partial form of each statement and gave him/her 5 minutes to correctly complete as many statements as possible. We wanted to know if participants would show higher recall for information in their domain of advantage relative to information in the other, non-advantaged domain. This served as our measure of specialization. We expected that participants in both the complementary advantage and comparative advantage conditions would intuitively adopt specialized domains of

responsibility. Although tangential to our primary motivation for this study, we note that neither result has been shown in prior research on transactive memory, where tacit coordination and role division has been observed only for preexisting dyads.

Results

Participants completed all phases of the study, including the recall task, without communicating with their partners, and the absence of within-cell correlations in memory performance between partners (reported in the [web appendix](#)) indicates that they did not explicitly coordinate their behavior. We therefore treated all participants as independent observations in a $3 \times 2 \times 2$ mixed-factorial design with the between-subjects factors of pair advantage structure (identical aptitude, comparative advantage, complementary advantage)³ and domain of advantage (finance, health care), and the within-subjects factor of recall for items in advantaged versus not advantaged content domains. By summing to get recall scores, we get conclusions that match what would be found if items were treated as a fixed repeated factor. As shown in the [web appendix](#), all results reported below replicate if items recalled are treated as count data and analyzed using a Poisson distribution.

The key result in study 4 is a significant two-way pair advantage structure \times content domain interaction, $F(2, 78) = 8.22, p = .001, \eta^2 = .17$, indicating that differences in advantage structure predict differences in recall for content in advantaged versus not advantaged domains. Participants recalled more items in their advantaged domains compared to their not-advantaged domains in the complementary advantage ($F(1, 78) = 14.75, p < .001, \eta^2 = .16$) and comparative advantage conditions ($F(1, 78) = 4.07, p = .04, \eta^2 = .05$), but not in the identical aptitude condition ($F(1, 78) = 2.68, p = .11$). See [figure 2A](#) for means and pairwise interactions.

Neither the two-way domain of advantage \times content domain interaction ($p = .14$) nor the three-way pair advantage structure \times domain of advantage \times content domain interaction ($p = .14$) was significant, indicating that the particular domain of information (finance, health care) did not affect participants' tendency to specialize.

3 We included a total of eight counterbalanced variants of pair advantage structure. Based on planned contrasts, they were collapsed into three conditions of interest. For example, in some comparative advantage conditions, partner A received feedback that (s)he was weak in both domains; in others, (s)he was strong in both domains. In some conditions, partner B was uniquely strong in health care; in others, (s)he was uniquely strong in finances. Analyses in the [web appendix](#) show that these variants did not differ and could be pooled for further analyses. Similarly, there were versions of the "identical aptitude" condition in which both partners were given feedback that they were good in health care but bad at finances, and counterbalanced conditions in which the feedback was reversed. These counterbalanced variants did not differ. Please see the [web appendix](#) for full details and analyses.

Rather, specialization was driven by dyadic factors—even though these ad hoc dyads were not given the opportunity to communicate about distributing responsibility for new information.

Discussion

Study 4 provides experimental evidence favoring one process account of why financial literacy and financial responsibility are unrelated in early-stage relationships but diverge over time (as observed in studies 1 and 2): considerations of comparative advantage dictate role responsibilities, which encourage differential attention to and learning of information about finances (figure 2A) and ultimately produce diverging trajectories of financial literacy (figure 1). In study 3, individuals with less responsibility in nonfinancial domains (relative to their partners) were more likely to become household CFOs, controlling for differences in financial expertise, experience, and interest. In study 4, we found a similar effect: individuals who are told they have less ability in nonfinancial domains (relative to their partners) are more likely to take on responsibility for new financial information. The measure of specialization in study 4—memory for new information in advantaged versus not-advantaged domains—provides strong support for our hypothesized causal relationship between financial responsibility and financial literacy; in a matter of minutes, differences in implied responsibility produced differences in knowledge.

One might argue that the effects of false feedback on specialization in study 4 are unsurprising; after all, what other information could participants have used to guide their behavior? However, we find these results compelling for four reasons. First, participants were not directed to specialize, and yet they chose to do so. Second, participants could have specialized according to their own prior beliefs about their abilities (we administered *false* feedback), and yet they did not. Third, participants could have specialized according to feedback about only their own abilities, and yet they did not; instead, they specialized in domains of advantage implied by the pattern of false feedback administered to the dyad as a whole.

Fourth, participants' behavior in study 4 runs counter to lay intuitions—particularly those concerning the effects of comparative advantage. In follow-up study 4A, we provided a separate sample ($n = 191$; $M_{\text{age}} = 35.5$) with a description of the procedure of study 4 from the perspective of a hypothetical individual in either the comparative advantage or complementary advantage condition and asked them to predict how many items this individual would recall from each domain. As shown in figure 2B, they correctly predicted specialization for individuals in complementary advantage dyads, but failed to predict specialization for those in comparative advantage dyads. (Please see the [web appendix](#) for full analyses.)

STUDY 5: EFFECTS OF FINANCIAL RESPONSIBILITY AND RELATIONSHIP LENGTH ON THE QUALITY OF INDEPENDENT FINANCIAL DECISIONS

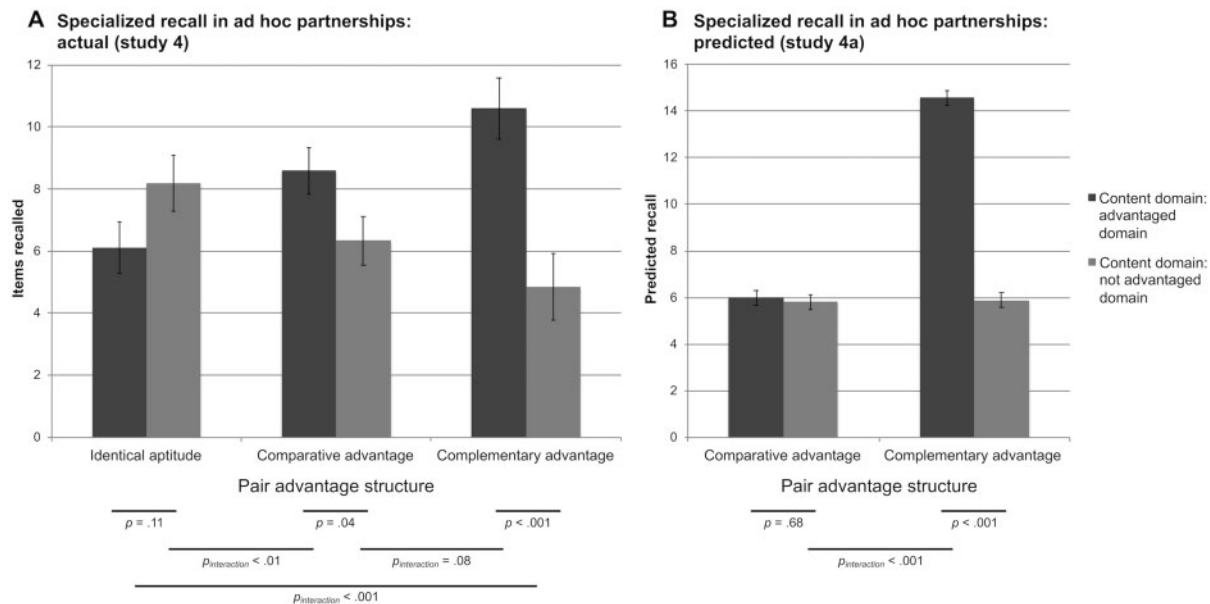
Studies 1 and 2 suggest that role specialization within relationships establishes the developmental trajectory of each partner's individual financial expertise. Financial responsibility and financial literacy are unrelated early in relationships, but increasingly related in longer relationships. As shown in figure 1, financial literacy increases along with relationship length at high levels of financial responsibility, but not at low levels of financial responsibility. Studies 3 and 4 zoom in on the origins of role assignments and investigate what predicts financial responsibility in early-stage relationships. The data show that distributions of financial responsibility are often guided more by nonfinancial factors—including comparative advantage in the division of labor—than by differences in financial experience or expertise. Those who get the job of household CFO may be more willing or more available than those who do not, but they are not necessarily more able. Study 4 also provides experimental evidence of the proposed causal link between the division of labor and differential learning; ad hoc relationship partners quickly develop unique knowledge sets, despite having access to the same information. We argue that, when repeated over time, differential attention and learning produces increasingly diverging financial literacy between CFOs and non-CFOs, as found in studies 1 and 2. In study 5, we explore the consequences of these role-induced differences in financial literacy for the quality of financial decisions. Does it matter that non-CFOs do not increase in financial literacy over time?

Household Financial Decision Quality When Non-CFOs Can Rely on CFOs

First, consider the link between financial literacy and financial welfare for members of collaborating couples. We have suggested that role specialization within relationships increases cognitive efficiency by allowing both partners to benefit from just one individual's expertise. As an empirical test of this theoretical argument, we analyzed data on individual financial literacy and household financial outcomes from the [Health and Retirement Study \(2004\)](#). We regressed household-level financial outcomes (e.g., developing a retirement plan, providing financial assistance to children) on individual financial literacy (0–3 scale), individual financial responsibility (household CFO, non-CFO), and the interaction of these terms, plus a set of covariates mirroring those used in studies 1 and 2. The results of this analysis (reported in detail in table 16 of the [web appendix](#)) indicate that household financial outcomes are predicted

FIGURE 2

COMPARATIVE ADVANTAGE CREATES SPECIALIZATION IN AD HOC PARTNERSHIPS (STUDIES 4 AND 4A)



by the individual financial literacy of household CFOs, but not the individual financial literacy of non-CFOs. These data suggest that non-CFOs may be correct in believing that they don't *need* to know about money, provided they are able to rely on a partner's financial expertise.

Individual Decision Quality and Information Search

However, consumers may be forced to make independent financial decisions when separated from their partners for a weekend—or for a lifetime. We expect that the interaction of financial responsibility and relationship length will predict not just individual financial literacy, but also the quality of independent financial decisions. We further expect that this pattern will be mediated by two mechanisms tested in study 5. First, those who have higher financial literacy can rely on stored financial expertise to make better financial decisions (cf. Alba and Hutchinson 1987). Second, those with higher financial literacy will be better able to mitigate gaps in their stored internal knowledge by engaging in external search (Brucks 1985; Johnson and Russo 1984; Punj and Staelin 1983; Urbany, Dickson, and Wilkie 1989).

Method

Overview. Over 90% of US households own or lease at least one vehicle (US Bureau of the Census 2013) and a

majority of these vehicles are financed through loans. However, consumers tend to be underinformed about how vehicle purchasing and financing actually work (Hilgert et al. 2003) and lenders often deliberately make the car loan decision opaque, as in the “four square” tradeoff of purchase price, down payment, monthly payment, and trade-in value (Sutton 1982). Auto loan decisions are difficult and infrequent, feedback about unchosen alternatives is absent or ambiguous, and consumers exhibit high variance in the ability to make optimal decisions in this domain (Davis 1970; Furse, Punj, and Stewart 1984; Goldberg 1996).

In study 5, we allow participants to engage in information search prior to completing an incentive-compatible financial decision-making task related to auto financing, leasing, purchasing, and ownership. We expect that relationship partners who have taken on more financial responsibility for more time will be more likely to engage in search and will make better decisions. Conversely, partners who have offloaded more responsibility for more time—those who likely need additional information the most—will be less likely to engage in information search and will make inferior decisions.

Participants. The final sample for study 5 consisted of 214 dating, cohabitating, or married US citizens who reported sharing financial resources and/or responsibilities with their current relationship partners (129 female, 85 male; $M_{\text{age}} = 34.5$; $M_{\text{relationship length}} = 9.3$ years); 17

participants were excluded from the original sample ($n = 231$) for providing incomplete data.

Procedure. As in studies 1 and 2, participants first indicated their current relationship status, relationship length, and degree of financial responsibility. They then completed the 13-item financial literacy assessment used in studies 1–3. Next, they were informed of an upcoming financial decision-making task related to vehicle financing and purchasing. They were told that they would receive additional bonus pay for each correctly answered question, and that they would have the opportunity to view real “expert information” prior to beginning the task.

This expert information included excerpts from the US Federal Trade Commission’s “Understanding Vehicle Financing” brochure, an explanation of Annual Percentage Rate (APR) provided by the Federal Deposit Insurance Corporation, and a *Consumer Reports* guide to the true cost of vehicle ownership. We emphasized that “this information . . . will help you earn the highest bonus possible on the following task.” Each topic was reduced to a manageable length ($M_{\text{length}} = 259$ words) and presented on a separate page; please see the [web appendix](#) for a sample information page. At the bottom of each page, participants could either continue to the next page of information or skip ahead to the decision-making task. The number of pages read by each participant (out of seven) served as our measure of information search.

After either accessing all available information or choosing to skip ahead, participants completed the financial decision-making task. This task consisted of both knowledge questions and scenario-based decision-making problems related to the provided information; all questions are provided in the [web appendix](#). In each decision problem, respondents were faced with a financial decision about auto financing for which there was a correct answer. The problems required integrating one’s understanding of (1) APR, (2) lease agreements, (3) four-square worksheets, (4) depreciation costs associated with vehicle ownership, and (5) healthy budgeting practices. Our measure of decision quality was the percent of questions answered correctly. (Preliminary analyses showed identical patterns of results for answers to knowledge questions and decision-making problems; we therefore pooled these question types for all subsequent analyses.) Finally, respondents reported the demographic variables shown in [table 1](#).

Results

Financial Literacy. We regressed financial literacy ($M = 8.45$, $SD = 2.73$) on the same set of factors as in studies 1 and 2 ([table 1](#)), including relationship length ($M = 9.27$, $SD = 9.32$), financial responsibility ($M = 6.91$, $SD = 23.04$), and their interaction. As shown in [table 3](#), the overall model was again significant ($F(20, 193) = 6.89$,

$p < .0001$; $R^2 = .416$) and replicated all key findings from studies 1 and 2.

Information Search. We regressed our measure of information search (M pages viewed = 4.26, $SD = 2.94$) on the same variables. As was the case for financial literacy, the OLS model was significant ($F(20, 193) = 2.10$, $p = .005$; $R^2 = .179$), and the financial responsibility \times relationship length interaction predicted information search ($b = .003$, $t(193) = 2.32$, $p = .021$). There were no simple effects of either financial responsibility at 0 years of relationship length ($b = -.013$, $p = .29$) or relationship length at an equal distribution of financial responsibility ($b = -.007$, $p = .82$). Floodlight tests (Spiller et al. 2013) revealed that specializing in financial matters is associated with increased information search for all relationship lengths past the Johnson-Neyman point of 13.88 years. Being in a longer relationship is associated with increased information search for partners who are at least 93.88% responsible for financial matters, and decreased information search for those who are .61% responsible or less.

Decision Quality. We regressed our measure of auto loan decision quality ($M = 41.51$, $SD = 20.54$) on the same variables used in our analyses of financial literacy and information search. The overall OLS regression was again significant ($F(20, 193) = 2.88$, $p < .001$; $R^2 = .230$) and revealed that the financial responsibility \times relationship length interaction significantly predicted financial decision quality ($b = .019$, $t(193) = 2.64$, $p = .009$). There was a marginally significant simple effect of relationship length at an equal distribution of financial responsibility ($b = -.391$, $p = .068$), and no simple effect of financial responsibility at a relationship length of 0 years ($b = -.086$, $p = .311$). Floodlight analyses revealed Johnson-Neyman points at 10.98 years of relationship length and 48.23% of financial responsibility. For those with lower levels of financial responsibility, longer relationships predict worse financial decisions.

Mediation Models. We assessed the relationship between the key financial responsibility \times relationship length interaction, financial literacy, information search, and decision quality using a series of mediation analyses. Please see the [web appendix](#) for full results. First, we tested our hypothesis that financial literacy would mediate the total effect of the financial responsibility \times relationship length interaction on information search (.0025, 95% CI: .0002 to .0049). Using Hayes (2013) PROCESS model 8, we found evidence of “complementary mediation” (Zhao, Lynch, and Chen 2010) with a significant indirect effect of the financial responsibility \times relationship length interaction on information search through financial literacy (.0005, 95% CI: .0001 to .0012) and a marginally significant direct effect of the same sign (.002, 95% CI: $-.0002$ to .0043) after controlling for financial literacy. Over time, taking on or

TABLE 3

KEY UNSTANDARDIZED REGRESSION COEFFICIENTS AND R^2 VALUES FOR PREDICTING FINANCIAL LITERACY IN STUDIES 1, 1A, 2, 5, AND 5A

Variable	Study 1 <i>b</i> (<i>SE_b</i>)	Study 1a <i>b</i> (<i>SE_b</i>)	Study 2 <i>b</i> (<i>SE_b</i>)	Study 5 <i>b</i> (<i>SE_b</i>)	Study 5a <i>b</i> (<i>SE_b</i>)
Interaction: Financial Responsibility × Relationship Length	.003 (.001)**	.002 (.001)*	.002 (.001)*	.002 (.001)*	.002 (.001)*
Relationship Length (At 50/50 distribution of financial responsibility)	.051 (.021)*	.005 (.028)	.044 (.021)*	.052 (.025)*	.046 (.024) [†]
Financial Responsibility (At zero years of relationship length)	−.005 (.009)	.004 (.010)	−.018 (.011)	−<.001 (.010)	.007 (.010)
Age	.007 (.019)	.040 (.023) [†]	.027 (.016) [†]	.032 (.021)	.052 (.022)*
Female	−1.671 (.315)**	−1.104 (.356)**	−1.285 (.298)**	−1.674 (.345)**	−1.777 (.360)**
R^2	.446	.488	.338	.416	.523
Johnson-Neyman point (% financial responsibility)	47.3%	62.9%	53.1%	48.8%	50.6%
% of sample below JN point	22.8%	53.5%	48.4%	27.57%	46.3%

All models also include variables for salary, ethnicity, education, partner's employment status, and partner's contributions to shared finances. Gender ("Female") is dummy coded with "Male" as the reference group.

Johnson-Neyman point = level of responsibility at which increases in relationship length are associated with increases in financial literacy.

[†] = $p < .10$ * = $p < .05$ ** = $p < .01$

offloading financial responsibility may affect not just what one knows (financial literacy), but also (and in turn) what one is willing and/or able to learn (financial information search).

Next, we assessed the contributions of these factors to decision quality using a dual (serial) mediation model (Hayes 2013, PROCESS model 6). We expected that the total effect of the financial responsibility × relationship length interaction on auto loan decision quality (.019, 95% CI: .005 to .034) would be mediated by financial literacy, information search, and the serial effect of financial literacy on information search. Our analyses confirmed this prediction. We found a significant serial indirect effect of the financial responsibility × relationship length interaction on decision quality through financial literacy and information search (.001, 95% CI: .000 to .003), as well as specific indirect effects through only financial literacy (.002, 95% CI: .000 to .007) and only information search (.004, 95% CI: .000 to .010). After we accounted for these indirect effects, the direct (partial) effect of financial responsibility × relationship length on decision quality was no longer significant (.013, 95% CI: −.002 to .027). Patterns of financial specialization over the course of relationships are associated with two factors that contribute to the ability to make optimal decisions: financial literacy, which may improve task performance via prior financial knowledge, and the propensity to engage in financial information search to compensate for deficits in prior financial literacy.

Figure 3 presents a comprehensive view of the relationships between financial responsibility × relationship length, financial literacy, information search, and decision quality in study 5. Consistent with the well-known

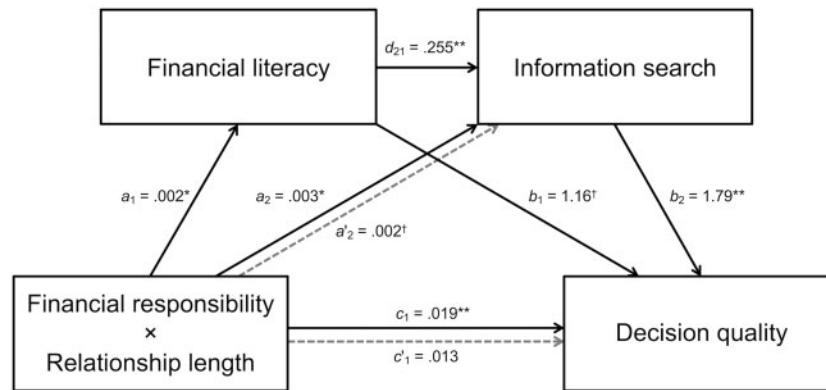
"enrichment" effect that prior knowledge facilitates search, the financial responsibility × relationship length interaction predicts financial literacy ($a_1 = .002$, $p = .018$), which predicts information search ($d_{21} = .255$, $p = .005$). Search, in turn, improves decision quality ($b_2 = 1.79$, $p < .001$). When search is held constant, financial literacy also directly affects decision quality ($b_1 = 1.16$, $p = .057$)—a result that we will further test in study 5a. Presumably this reflects an advantage of stored knowledge that lessens the need to rely on external search. Finally, the financial responsibility × relationship length interaction marginally predicts a parallel pattern of information search that is not mediated by financial literacy ($a'_2 = .002$, $p = .066$), which in turn affects decision quality (b_2). The longer a couple has been together, the more it is true that those with more responsibility search more and therefore are better able to make good financial decisions.

Discussion

Study 5 illustrates the downstream consequences of the distribution of financial responsibility for the quality of independent financial decisions. The results of this study suggest that those who habitually offload responsibility for financial decision-making (i.e., non-CFOs) face double trouble if and when they are required to independently navigate the financial domain. Their lack of experience leaves them both incapable of relying on accumulated expertise and inhibited from using information search to overcome this deficit. These results are consistent with the nature of expertise development. Prior expertise in a domain

FIGURE 3

DOWNSTREAM CONSEQUENCES OF FINANCIAL RESPONSIBILITY \times RELATIONSHIP LENGTH FOR FINANCIAL LITERACY AND BEHAVIOR (STUDY 5)



NOTE.—Values shown are unstandardized regression coefficients. financial responsibility and relationship length are included as covariates. thus, coefficients originating in the interaction of financial responsibility and relationship length represent the effects of financial responsibility, moderated by relationship length, after we control for the simple main effects of each factor. all other factors listed in TABLE 1 are also included as covariates. in study 5a, the Unstandardized coefficient for path $A_1 = .002^*$; path $B_1 = 2.20^{**}$; path $C_1 = .013^{**}$; and path $C'_1 = .009^{\dagger}$. $\dagger = p < .07$ $^* = p < .05$ $^{**} = p < .01$.

increases the efficiency with which individuals can acquire new expertise in that domain (Alba and Hutchinson 1987; Chi, Glaser, and Rees 1981). These results also reflect how prior knowledge affects information search. As has been shown in nonfinancial domains, prior financial literacy decreases the costs, increases the benefits, and maximizes the efficiency of information search (Brucks 1985; Johnson and Russo 1984; Punj and Staelin 1983; Urbany, Dickson, and Wilkie 1989). The new wrinkle here is that the rise or fall of financial expertise can be traced back to dyadic—and often nonfinancial—factors.

Study 5a: Conceptual Replication of Study 5 in Investment Decision-Making Task Without External Search. In study 5, we found that the effect of financial responsibility \times relationship length on decision quality was mediated by financial literacy both indirectly via information search and directly (when search is held constant). In study 5a, we conduct a conceptual replication of study 5 in the new domain of investment decisions. Rather than statistically holding search constant, we do not give participants in this study the opportunity to engage in external information search. We operationalize decision quality as the percentage of funds invested optimally in an incentive-compatible investment choice task (modeled after Chater et al. 2010). Full methodological details and results are provided in the web appendix.

Participants ($n = 190$; $M_{\text{age}} = 33.7$, $M_{\text{relationship length}} = 9.0$ years) made 10 separate investment allocation decisions. For each decision, participants were endowed with a hypothetical \$10,000 and asked to allocate this money

between two five-year fixed-term investment funds. The description of each fund included enough information to calculate the fund's expected return on investment for the specified time period, and one fund in each set was always the dominant alternative. Our key dependent variable was the percentage of money allocated to the dominant alternative within each choice set ($M = 61.16$, $SD = 12.67$).

Replicating study 5, the results of study 5a revealed a pattern of mediated moderation: financial responsibility interacted with relationship length to predict financial literacy (path a_1 ; $b = .002$, $t(168) = 2.31$, $p = .02$), which in turn predicted decision quality (path b_1 ; $b = 2.20$, $t(168) = 5.39$, $p < .001$). After accounting for this significant indirect path (.0044, 95% CI: .0012 to .0092), the direct effect of financial responsibility \times relationship length on decision quality was marginally significant (.0090, 95% CI: -.0001 to .0182). These results indicate that distributions of financial responsibility within relationships influence each partner's financial literacy and ability to make independent financial decisions, even when there is no opportunity to improve decision quality through information search.

Implications of Studies 5 and 5a. Studies 5 and 5a replicate and extend the finding in studies 1 and 2 that the longer individuals remain in a relationship, the greater the difference in financial literacy between household CFOs and non-CFOs. Early on, those with high versus low financial responsibility do not differ in financial literacy. But as relationships lengthen, individuals with more financial responsibility display increasing levels of financial literacy; individuals with less financial responsibility do not.

Studies 5 and 5a further show that these patterns of financial literacy predict parallel patterns in the quality of financial decisions when consumers are required to make independent financial decisions. At the beginning of relationships, there is no association between financial responsibility and the quality of financial decisions. However, with increases in relationship length, those with more responsibility come to dominate those with less responsibility in the quality of their financial decisions. This pattern of financial decision quality is mediated by the diverging pattern of financial literacy established in study 1. In study 5, consumers could rely on the combination of their stored knowledge and external search; in study 5a, they could rely only on their own stored knowledge. As shown in figure 3, we found that financial literacy improved financial decisions both directly and indirectly (through external information search).

GENERAL DISCUSSION

Most research on consumer decision-making treats expertise, information search, and the quality of decisions as individual-level phenomena. We provide evidence that all of these are better understood in the context of dyadic relationships and transactive memory systems. We believe that our theoretical perspective has important implications for consumer decision research in general. However, we specifically show that this perspective offers unique insights on the large literature documenting low levels of financial literacy and the ineffectiveness of financial education. We contend that role divisions explain in part why financial literacy is low and why financial education has small effects on financial behavior.

In studies 1, 1a, 2, 3, 4, 4a, 5, and 5a, we use both experimental and cross-sectional data to provide evidence that financial expertise evolves on a need-to-know basis—and that the need to know is at least partly determined by one's social relationships. By considering social factors (relative financial responsibility, relationship length, and their interaction), we are able to predict financial literacy significantly better than traditional demographics-based approaches (studies 1, 1a, 2, 5, and 5a). We find that at the beginning of relationships, partners who adopt the role of household CFO have no greater financial literacy than those who do not (studies 1, 1a, 2, 3, 5, and 5a). However, the longer couples have been together, the more CFOs come to dominate non-CFOs in financial literacy (figure 1; studies 1, 1a, 2, 5, and 5a). This pattern is not explained by changes in financial responsibility or sample composition over time (study 2). Instead, it appears to reflect transactive memory processes in action: relationship partners who take on financial responsibility develop financial literacy over the course of their relationships; partners who offload this responsibility do not.

Why would couples not assign the CFO role to the more financially literate partner at the beginning of a relationship? In studies 3 and 4, considerations of comparative

advantage influence distributions of financial responsibility. A partner who is doing less in nonfinancial domains is more likely to be assigned the CFO role, holding constant his or her financial literacy (study 3). Similarly, a partner who believes that he or she is bad in both financial and health-related matters tacitly assumes responsibility for new financial information when the other partner is equally bad at money but good at health (study 4).

The pattern of diverging expertise between household CFOs and non-CFOs, shown in figure 1, evolves over years. We argue that expertise diverges with relationship length because role assignments affect attention to and learning of new information over time. We show process evidence for these attention and learning mechanisms by zooming in on specific opportunities for learning and choice. Study 4 shows that beliefs about comparative advantage affect how dyad members allocate attention and learn new information, holding constant both actual financial skills and what they believe about their own prior knowledge and skills. In study 5, we observe a microcosm of financial search and decision-making. We find that the financial responsibility \times relationship length interaction predicts financial information search. The longer the relationship, the greater the tendency for partners with low financial responsibility to be unwilling or unable to correct knowledge deficits via external search, even in an incentive-compatible setting when such search would support making better financial decisions.

In studies 5 and 5a, we examine how financial responsibility and relationship length affect the quality of financial decisions when consumers are separated from their partners and forced to make consequential financial decisions alone. We find that the increasing divergence of financial literacy between household CFOs and non-CFOs creates parallel patterns in the quality of financial decisions about auto loans (study 5) and investments (study 5a). Study 5a shows this effect on decision-making when consumers rely entirely on their own prior knowledge. Study 5 shows that this effect persists even when consumers have the opportunity to remedy knowledge deficits through external information search. Financial literacy mediates the effect of the relationship length \times financial responsibility interaction on both search and decision quality. Thus, the overall effect on decision quality is due to how financial literacy affects both ability to rely on prior knowledge and propensity to build on prior knowledge via external search.

Consumers are unaware of this relationship between financial responsibility and financial expertise. Study 1a shows that individuals who share financial responsibility with a relationship partner do not have any intuition for how financial literacy evolves as a function of relationship length, despite the fact that patterns of actual financial literacy in this sample replicate the tendency for CFOs and non-CFOs to have increasingly divergent levels of financial literacy as relationships lengthen. Study 4a shows that

people do not anticipate the power of comparative advantage to determine role specialization in relationships, despite the fact that comparative advantage predicts financial responsibility in both cross-sectional (study 3) and experimental (study 4) contexts. With no intuition for the causes or consequences of role divisions, consumers are unlikely to fully realize the vulnerabilities created by offloading financial responsibility to their partners.

Welfare Implications

Role Division in Ongoing Relationships. The longer one is in a relationship, the greater the tendency for the household CFO to have higher financial literacy and make better financial decisions than the non-CFO. Though this puts the non-CFO in a position of some vulnerability, we do not contend that the financial role divisions documented in this research are dysfunctional. Relationships between married or otherwise committed couples allow each partner to benefit from the other's expertise. Thus, as long as the non-CFO in the couple can rely on the CFO, things may be just fine. Our analysis of data from the 2004 Health and Retirement Study supports this position; the individual financial literacy of household CFOs predicts several markers of household financial well-being, but the individual financial literacy of non-CFOs does not. These results suggest that many financially illiterate consumers may be correct in their beliefs that they don't need to know about money—as long as they can rely on their partners.

Consequences of Role Division After Divorce or Widowhood. However, the benefits of role division may be mitigated by vulnerability when non-CFOs are left to cope on their own. Nearly half of all first marriages in the US end in divorce (Copen et al. 2012). Seventy-five percent of marriages disrupted by the death of one partner leave the female partner behind (Schoen and Standish 2001), with the average length of widowhood being nine years (Hsu 2011). When one loses a partner, one also loses that partner's expertise. We do not suggest that couples would be better off if they did not divide financial roles. However, we believe it is important to be aware that the division of cognitive responsibility—even if functional overall—may create unappreciated and increasing dependence over time, and vulnerability in the event of losing one's partner.

The incentive-compatible auto loan and investment tasks used in studies 5 and 5a map onto the sorts of financial decisions that newly separated individuals may need to make. These studies suggest that when non-CFOs are thrust into the financial driver's seat after years of riding shotgun, they may be unable to successfully navigate this domain alone. They lack the expertise to make optimal financial decisions and are less likely to gain this expertise through compensatory information search.

Negative effects on the non-CFO in widowhood or divorce may not be inevitable when relationship change is predictable and the non-CFO is proactive (Hsu 2011). However, many partners are unwilling to consider losing their better halves (Baker and Emery 1993), relationships often dissolve unexpectedly (Copen et al. 2012), and developing personal financial literacy takes time (Hsu 2011). Those who have long relied on a partner may fail to consider the status of their own financial expertise until separation is imminent, leaving a period of vulnerability.

One particularly salient strategy non-CFOs faced with divorce or widowhood can use to cope with their shortcomings is finding a new financial specialist—for example, a friend or professional financial advisor. This strategy may create new vulnerability. Consumers with low levels of financial literacy may be unable to evaluate the quality of financial advice offered by these new partners. This inability to evaluate advice may be particularly destructive when such consumers turn to professional financial advisors. Advisors' misaligned incentives may lead consumers to accept destructive financial recommendations (Agnew et al. 2016) and engage in suboptimal financial practices (Gennaioli et al. 2015; Hacketh et al. 2012).

Implications for Research on Financial Literacy and Financial Behavior

We believe that our research offers clues to two puzzles presented by the literature on financial literacy and financial education: Why is financial literacy so low? And why does financial education seem to have such limited effectiveness in improving financial behavior?

Why Is Financial Literacy So Low? No wonder financial literacy is low for non-CFOs. They believe (perhaps correctly) that they don't need to know more than they do, and this leads to low levels of engagement with financial information, as shown in studies 4 and 5. Financial literacy seems to develop as consumers learn by doing. Those who are in the non-CFO role do not “do;” consequently, they do not learn or improve over time.

We focused on dating, cohabitating, and married partners in the current research. However, we note that consumers may also distribute responsibility for financial matters with other relationship partners. Younger adults may rely on their parents as CFOs. Adults may turn to professional financial advisors or relatively new interactive financial decision aids such as Mint, Betterment, or Personal Capital. Offloading financial responsibility to any of these partners may have similar implications for the development of personal financial literacy and the ability to fend for oneself when necessary (cf. Ariely 2000).

Why Is Financial Education So Ineffective? Fernandes et al. (2014) found that the average financial education intervention explained only about .1% of the variation in the

downstream financial behaviors of those receiving the intervention. They found larger effects of interventions delivered close in time to the behaviors they were intended to influence, leading them to call for “just in time” financial education.

The research reported here suggests that timing is not everything when it comes to financial education. The *target* matters just as much as the *time*. Current practices in financial education may improve by delivering targeted educational interventions—that is, interventions that deliver financial information to the right person (i.e., the financial CFO) at the right time (i.e., when a particular financial decision is salient). We conjecture that these two conditions are rarely met, perhaps partly explaining why financial education has weak effects.

Though we have focused our research on role specialization of adults in long-term relationships, we believe our findings have important implications for why financial education of young adults may be so ineffective. Consumers of all ages may be resistant to developing financial literacy when it seems unnecessary; for example, K–12 students may be unlikely to experience any positive effects of school-based financial literacy programs when they can simply rely on their parents as transactive memory partners (cf. Fernandes et al. 2014).

Conclusion

Consumers intuitively distribute cognitive labor, adopting specialized domains of responsibility that guide attention, learning, and doing. This fundamental point has not been appreciated in prior consumer decision research, which focuses overwhelmingly on individuals; nor has it been appreciated in prior work on consumer financial decision-making. Although initial financial role assignments in couples may be unrelated to ability, fulfilling these assignments contributes to the development of financial expertise. When it comes to financial matters, specialization may lead relationship partners to develop significantly different levels of financial literacy over time, which may in turn create noticeably different outcomes for “household CFOs” versus “non-CFOs” when partners are forced to independently process financial information and make financial decisions. This model of distributed responsibility and differentiated expertise has implications for the causes and consequences of financial literacy, the delivery of financial education, and consumer welfare more generally.

DATA COLLECTION INFORMATION

Data for all studies were collected and analyzed by the first author in consultation with the second author. Studies 1, 1a, 2, 4a, 5, and 5a were conducted via Amazon Mechanical Turk in Qualtrics surveys designed by the first

author in consultation with the second author. Study 1 was conducted in August 2013. Study 1a was conducted in January 2015. Study 2 was conducted in June 2016. Study 3 was conducted in March 2016 in collaboration with the Marketing Science Institute and *Brides* magazine. The authors designed the survey, which was subsequently implemented and distributed using the *Brides* magazine survey platform. Additional respondents for this study were solicited with Mechanical Turk and a Qualtrics version of the same survey. Data for study 3 were not analyzed until data from both sources had been collected. Study 4 was conducted by the first author at the University of Colorado, Boulder, in April 2014; one undergraduate research assistant assisted with data collection for this study, under the supervision of the first author. Study 4a was conducted in January 2015. Studies 5 and 5a were conducted simultaneously in June 2014.

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