When Commitment Matters: 
Essays on Social Evaluation and Its Market Outcomes

by

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By

Jae-Kyung Ha

Submitted to the Sloan School of Management on April 28, 2016, in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Management

Abstract

In my doctoral dissertation, I attempt to understand why and how an individual or organization’s perceptions of commitment affect different market outcomes. This dissertation consists of three essays.

In the first essay, I study the effect of organizational form on market performance in the diamond retail industry. Building on the notion that profit-oriented motives create the risk that sellers may not be committed to customers, I develop the argument that the chain form of organization generates beliefs about profit-oriented motives that give rise to the perception that small retailers have higher moral standing. I argue that when organizational actions are morally ambiguous but there is no explicit violation of a moral norm, consumers are less likely to penalize small organizations than large organizations, providing small stores with an advantage in the market. I use retailers’ responses to “conflict diamonds”—diamonds that fund rebels in war zones—in the diamond retail industry as an empirical case of moral ambiguity. This argument is tested in a series of online experiments. I also empirically validate the implications of my finding using observations from diamond retailers’ websites and field interviews.

My second essay (coauthored with Renée Gosline and Ezra Zuckerman) illustrates that social valuation plays a role in shaping consumers’ social acceptance of technological innovation. In this paper, we investigate a technological innovation in diamond production, namely, lab-made diamonds. While this provides a more efficient way of achieving a given level of quality, consumers have generally been resistant to lab-made diamonds. We argue that one mechanism that drives this resistance is the use of a product in the performance of a social ritual. The underlying logic is that a deviation from the traditional rules of a ritual carries the risk of signaling a lack of commitment or cultural competence. In a series of experiments, we show that consumers are more resistant to lab-made diamonds when they buy diamond jewelry for an engagement gift, compared to when they buy diamond jewelry for a more
routine gift. The perceived risk associated with the ritual is found to mediate consumers’ resistance to lab-made diamonds.

In the third essay (coauthored with Oliver Hahl), we argue that perceptions of commitment to the customer is an important demand-side factor that influence a firm’s ability to diversify to related business lines. We focus on an emerging activity in the US behavioral health industry: the private equity-backed clinics. We show, through experiments on therapists in the field of behavioral health, the industry’s key audience, that perceptions of commitment are influenced by a firm’s authenticity and influence the firm’s likelihood of selection after diversification from addiction recovery clinics into substance abuse and eating disorder clinics. This study makes important contributions through causal evidence of demand-side limits to the boundaries of a firm via perceptions of commitment.

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I am also fortunate to have Oliver Hahl on my thesis committee. He is perhaps the most friendly advisor one could ever get, while also being extremely supportive. His mentorship goes back to my early years at MIT when we were together in the PhD program. Having lived in Korea, he understood my difficulties with the process of settling into a totally new cultural environment. It meant a lot to have Oliver near me, who often gave me the most practical advice on immediate matters and was indeed a living example of how I should grow into an independent junior scholar. Just like his research, Oliver is such an authentic person. I appreciate his friendship and help.

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Jae-Kyung Ha
April 21, 2016
Cambridge, MA
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Chapter 1

When Mom-And-Pops Differ From Chains:
How Perceptions of Moral Standing Can Be a Competitive Advantage

ABSTRACT

While the ascendancy of chain stores has been one of the most important developments in the evolution of retail markets in the US, there has been a negative moral overtone pertaining to chain stores. However, it is not clear to what extent such negative evaluation exits and when it matters. Building on the notion that profit-oriented motives create the risk that sellers may not be committed to customers, I develop the argument that the chain form of organization generates beliefs about profit-oriented motives that give rise to the perception that small retailers have higher moral standing. I argue that when organizational actions are morally ambiguous but there is no explicit violation of a moral norm, consumers are less likely to penalize small organizations than large organizations, providing small stores with an advantage in the market. I use retailers’ responses to “conflict diamonds”—diamonds that fund rebels in war zones—in the diamond retail industry as an empirical case of moral ambiguity. A series of online experiments show that consumers hold a stereotype that the chain organizations are more profit seeking than non-chains and that based on this perception, consumers are more favorable to small stores than chain stores when retailers act in morally ambiguous ways. However, small retailers have no advantage when there is an explicit violation of a moral norm. I also empirically validate this finding using observations from diamond retailers’ websites and field interviews.
“Chain is a four-letter word”
- Roger Berkowitz, the president and CEO of Legal Sea Foods, a restaurant chain with 34 locations in the US (Boston Globe 2014).

“I think we care more. Independent booksellers, I mean by that description, we are independent. We are in this business for various reasons, and a lot of people are very dedicated to getting ideas and thoughts and words out there for people. And I think chains are concerned with making a certain amount of money”
- The author’s interview with a small bookseller (Miller 2008, 165).

INTRODUCTION
The ascendancy of the chain store has been one of the most important developments in the evolution of retail markets in many countries, including the US (Carden 2013; Chandler 1993, 1994; Ingram and Rao 2004; Jarmin, Klimek, and Miranda 2009). Whereas there were only 50 chains in the US retail industry at the beginning of the 20th century, the number had increased to 50,000 by the turn of the 21st century (Ingram and Rao 2004, 447). The market share of large retail stores with more than 100 establishments increased from 12.3 percent in 1948 to 36.9 percent in 1995. At the same time, a dramatic decrease in the share of retail activity by non-chains or small single location stores was evident (Jarmin, Klimek, and Miranda 2009).

Despite the success of chain stores, there has long been a negative moral overtone in the American public’s reaction to chain stores, with a particular emphasis on the claim that chains care only about profits. For instance, there have been large-scale protests against the establishment of new chain stores in locations across the US based on chain store’s reputation as rapacious and the perception that chains are intent on victimizing the helpless independent retailer (Ingram and Rao 2004; Ingram, Yue, and Rao 2010). In addition, the literature on anti-mass production suggests that some customers are “antagonistic” toward chain stores and argue that chain stores harm cultural diversity (Carroll and Swaminathan 2000; Carroll and...
Such beliefs regarding chain stores’ immorality are well dramatized in popular culture. For instance, in the movie *You’ve Got Mail*, chain stores are described as coldly and ruthlessly destroying “mom-and-pop” stores.

However, the extent to which such negative evaluations exist and when these evaluations become important remain unclear. To some extent, the claim that chains have profit-oriented motives and a negative moral standing is based on consumers’ assessment of actual morality—whether small independent stores indeed care more about moral values at the cost of less profit than chain stores (e.g., Bartley 2003; Bartley and Child 2011; Hainmueller, Hiscox, and Sequeira 2014). However, given that firms engage in identity management in sharing information about their decisions and motives (e.g., Elsbach and Kramer 1996), it is difficult to measure firms’ actual morality and to compare across organizations. Alternatively, this paper tests the presence of a stereotype. Specifically, it tests whether consumers perceive chain stores as having a lower moral standing even when they do not have any contextual knowledge about the organizations’ morality. It is important to determine whether social beliefs are influenced by stereotypes because once stereotypes are established, they take on a life of their own. Thus, I test whether organizational form *per se* (chain vs non-chain) is sufficient to generate perceptions of morality.

Second, I attempt to identify conditions under which such perceptions can provide a competitive advantage. While the salience of such an advantage may differ depending on the nature of the market or on the context, I suggest that the presence of moral ambiguity is a condition under which ex ante perceptions of higher morality can provide smaller organizations with a competitive advantage. When organizations are accompanied by ambiguity in the market, consumers may rely on a pre-existing signal to reduce uncertainty.
That is, when organizations are perceived to hold high moral standing, ex ante, they are less affected by the suspicions that arise under moral ambiguity, compared with organizations that are perceived to hold low moral standing. I show how consumers respond differently based on organizations’ form due to such perceptions of immorality.

I use the diamond retail industry as my empirical setting to develop and test these arguments. Large chain stores and small independent stores coexist in this industry: large chain stores comprise approximately 30% of the market, and the remaining 70% is held by more than 20,000 small independent stores (Bain & Company 2011). I argue that these non-chain stores more effectively address situations in which consumers harbor suspicions about the organizations’ moral standing. Specifically, this paper aims to show that consumers are less likely to penalize small organizations under morally ambiguous conditions with respect to policies regarding conflict diamonds.

The remainder of the paper is organized as follows. In the next section, I theorize about why an organizational form may influence perceptions of moral standing and why small independent stores may benefit from such perceptions under conditions of moral ambiguity. Next, I introduce the case of “conflict diamonds”—diamonds that fund rebels in war zones—as an example in which consumers may harbor suspicions regarding organizations’ moral integrity. A series of online experiments provide support for the proposed argument that consumers penalize large chain stores more than small stores when they suspect that the organizations violated a moral norm, but there is no advantage when organizations commit an explicit moral violation. Additionally, as an external validity check, I test the implication of the findings of the experiments, using observations of retailers’ websites and show that large
jewelry stores are more likely to advertise conflict-free diamonds. I conclude by discussing the implications of this study.

**THEORY**

As discussed in the introduction, prior research has alluded to the possibility that audiences’ perception about chain stores’ immorality is closely tied to the belief that chains care only about profits (e.g. Ingram and Rao 2004; Carroll and Torfason 2011; Jarmin et al 2009, Carden 2013). To understand the basis of this evaluation, I first clarify why consumers would believe that profit-oriented sellers are morally problematic, even in market settings where firms are all expected to pursue profit. One general explanation for this belief is that profit maximization may be in tension with a commitment to values that benefit consumers and the community. This tension is especially salient in areas that consumers cannot observe or control because profit-oriented motives signal the risk that a seller may forsake moral values once these values are at odds with realizing maximum profits (cf., Hahl and Zuckerman 2014). Insofar as the possibility of decoupling or cheating is present, sellers’ profit-oriented motives may be perceived as a signal that the sellers have a stronger inclination to engage in such behaviors.

However, even when customers think that profit-oriented motives are morally problematic, this does not explain why the chain organizations are viewed as more profit seeking than non-chain organizations. To some extent, this perception concerns actual morality—whether small independent stores *indeed* care more about moral values at the cost of less profit than chain stores (e.g. Bartley 2003; Bartley and Child 2011; Hainmueller, Hiscox, and Sequeira 2014; Casadesus-Masanell et al. 2009)—or a statistical inference based on organizations’ *past* actual morality. However, comparisons of actual morality are
empirically and theoretically difficult to perform. Thus, in this paper, I suggest a structural basis that may generate such a stereotype about organizational form and organizations’ profit-oriented motives, independent of the actual morality of specific organizations.

From the perspective of structural features, there are at least three reasons why this stereotype might maintain a hold on the public’s perception. First, while chains necessarily employ standardized processes, the pursuit of efficiency is closely related to capitalistic interests and profit maximization (e.g., Swedberg 2005; Weber 1920). Second, the market positioning of the chain store model necessitates the realization of economies of scale by expanding the chain’s boundaries in ways that eventually drive out smaller stores, which consumers closely associate with a moral ideal (Beverland 2009; Kovács, Carroll, and Lehman 2013; Ody-Brasier and Vermeulen 2014). Third, the sheer fact that chains consistently outcompete their smaller rivals provokes the suspicion that they are more concerned about the capitalist rules of the game at the expense of moral considerations (Aaker, Vohs, and Mogilner 2010; Hahl and Zuckerman 2014a; c.f., Fiske et al. 2002). While these studies show an association between competence and the perceptions of morality, there has been no empirical test whether such stereotype persists in the “chain” (or non-chain) labels per se. To the extent that such a stereotype exists, the belief that chain organizations hold profit-oriented motives takes on a life of its own (c.f. Meyer and Rowan 1977) such that contemporary consumers attribute lower moral standing to chain stores simply due to the organizational form.

I test whether these operational features inherent in the organizational form of chains are sufficient to create the perception that chain stores have profit-oriented motives. This consideration leads to the following hypothesis.
Hypothesis 1: Consumers perceive chain organizations as having lower moral standing than non-chain organizations.

To this point, I have provided a theoretical foundation for expecting consumers to perceive chain stores as having lower moral standing but have not explained the conditions under which such a perception can be translated into market value. In fact, there is a theoretical reason to doubt the idea that small retailers benefit from consumers’ perceptions of moral standing. In particular, this view is in tension with Haran’s (2013) argument and evidence that corporations may, ironically, enjoy an advantage because they are regarded as amoral. He shows that when a corporation breaches a contract, this breach is understood as a reasonable business decision, whereas identical behavior committed by individuals is regarded as a moral violation. This finding implies that the perceived amorality of chain stores might (ironically) provide them with an advantage because such stores are less bound by moral norms. Similarly, Turco (2012) provides a case in which a firm’s prosocial identity acts as a constraint that limits its ability to motivate employees to perform activities that are clearly profit seeking in nature.

While the salience of such an advantage may differ depending on the nature of the market or on the context, I suggest that the presence of moral ambiguity is a condition under which ex ante perceptions of higher morality can provide smaller organizations with a competitive advantage. By “moral ambiguity”, I refer to a situation in which organizations’ moral integrity can be interpreted in multiple ways. Similarly, Anteby (2008, 2) uses the term moral gray zone to represent the situation in which morally questionable organizational behaviors are leniently endorsed and therefore confuse “our need to judge.” In particular, this
study focuses on a situation in which organizations do not explicitly violate any moral norm but also do not expend any effort above and beyond the line of moral transgression. Such behavior could be interpreted as problematic because the organizations did not give their maximal effort or it could be interpreted as not problematic because there is no explicit moral violation.

When moral ambiguity enables audiences to have varying interpretations of a certain action, consumers may rely on a pre-existing signal to make sense of ambiguity (Lehman, Kovács, and Carroll 2014; Sgourev and Althuizen 2014; Phillips, Turco, and Zuckerman 2013). As such, pre-existing moral standing looms large in shaping consumers’ evaluations. That is, when organizations are perceived to hold high moral standing, ex ante, they are less affected by the suspicions that arise under the condition of moral ambiguity, compared with organizations that are perceived to hold low moral standing. Therefore, perceptions of high moral standing become an advantage in such contexts because such organizations can cope with these situations while exerting less effort than larger, morally suspect organizations. This logic leads to the following testable hypothesis:

_Hypothesis 2: When organizations engage in activities that are morally ambiguous, consumers are less willing to purchase from large chain stores than from non-chain stores._

**SETTING: CONFLICT DIAMONDS AS A CASE OF MORAL AMBIGUITY**

I introduce the issue of conflict diamonds in the diamond retail industry as an example involving moral ambiguity about retailers when consumers purchase products. The diamond retail market is a good setting to test the effect of the perceptions of morality, because, due to De Beer’s successful marketing efforts, the market is heavily based on the symbolic value that diamonds are an expression of love (Bowers 2015; Epstein 1982b). While there may be
various ways that the symbolic value of diamonds is tainted or stigmatized (for instance, see Bowers 2015), the association of diamonds with conflicts also provides one such example. The term “conflict diamonds” (also called “blood diamonds”) refer to diamonds that were mined in a war zone and used by rebel movements or their allies to finance armed conflicts aimed at undermining legitimate governments (The Kimberley Process 2015; United Nations 2011). Conflict diamonds first drew international attention when Global Witness, a London-based NGO, published a report entitled A Rough Trade in 1999. The report documented the connection between the Angolan rebel movement UNITA and its illegal diamond trades to finance the civil war. Global Witness criticized the diamond industry for its “lack of transparency and corporate responsibility” and claimed that the “industry has been central to the continued financing of UNITA, and hence the fueling of civil war in Angola” (Global Witness 1998, 7). De Beers, the world’s largest buyer of rough diamonds, was one organization that was accused of purchasing Angolan diamonds.

In the 2000s, conflict diamonds were established as a social problem on the global agenda, generating consumer fear that diamond purchases might support unethical causes. During 1990, between 3.7% and 20% of the total diamonds traded were estimated to be conflict diamonds (Bieri 2010, 1; Le Billon 2006, 6; Levy 2003, 104). As issues related to conflict diamonds continuously surfaced, they rapidly attracted international attention. For example, diamonds were also found to have funded rebels in countries such as Sierra Leone and D.R. Congo (Bieri 2010), and the UN commenced a deeper investigation into conflict diamonds. A documentary film about conflict diamonds was aired on mainstream media, and NGOs continued to voice concerns about conflict diamonds, initiating several public awareness campaigns. One of the major public campaigns, Fatal Transaction, targeted the
of conflict diamonds skyrocketed when the Hollywood movie Blood Diamond was released in 2006. Figure 1 shows the relative media exposure of the terms “conflict (blood) diamond” and “Kimberley Process” in four major US newspapers (The New York Times, Washington Post, Wall Street Journal, and USA Today) included in the Factiva database. While there were 708 articles that ever mentioned the term conflict diamond(s) or blood diamond from(s) 2000 to 2014, Kimberley Process was mentioned in only 157 articles within the same time span.

---Insert Figure 1 about here---

Given this background, I define moral ambiguity as the lack of a forthcoming announcement on retailers’ website. Given that “conflict diamonds” are a salient issue among consumers, retailers can address such concern by providing information on KP or conflict-free diamonds before they are asked about the issue. Because managing a website has become a widely adopted business practice (Heinze and Hu 2006; Vazire and Gosling 2004; Winter, Saunders, and Hart 2003), retailers’ websites could be a good location for such advertising; a retailer may choose to explain the industry-level policy and regulation on its website. Retailers are not required to provide this information, and the absence of such information does not violate any moral norm. Yet, an advertisement of the policy is an additional step that retailers can take.

Of note, the issue of conflict diamonds is not only an example of moral ambiguity; it also serves as a strategic research area for two main reasons. First, considering the structure of the diamond production process, this setting helps to isolate the effect of stereotype based on organizational form without referring to the each retailer’s actual involvement in conflict diamonds. Because all retailers purchase “polished” diamonds that were collected from various sources and underwent multiple stages of processing, it is nearly impossible for
The heightened public awareness during this period created fear within the industry that the value of diamonds, which was largely based on promotional efforts (Brinig 1990; Epstein 1982b), could decline due to the connection between diamonds and African civil wars.

The diamond industry quickly responded to the increasing suspicion concerning its moral integrity. Most notably, the industry coordinated an encompassing industry-wide effort with the UN, NGOs and all the major producing and consuming countries and established the Kimberley Processes Certification Scheme (henceforth, KP). KP is an international agreement that requires participating countries to ensure that any diamond originating from the country does not finance a rebel group and to issue a government-validated Kimberley Process Certificate accordingly. KP entered into force in 2003 with over 40 member countries (including the European Union as one member), representing all major rough diamond producing, exporting, and importing countries (Bieri 2010; Haufler 2009). KP requires that every rough diamond export is accompanied by a Kimberley Process Certificate and that no diamond is imported from, or exported to, a non-member country of the scheme. Failure to comply with these procedures may lead to the removal of the non-complying member country from the list of participating countries. In short, each participating government is responsible for controlling all diamonds in its country, and the countries agree to trade only between participating countries. The idea is simple: the certification scheme ensures that even if there is a conflict diamond, KP curbs the trade by preventing the diamond from entering the mainstream distribution channel.

Even after KP, several issues have held public attention on conflict diamonds, while KP has remained relatively unknown to lay consumers. In particular, consumers’ awareness
retailers (chain stores or non-chain stores) to identify the origin of each of their diamonds.

Second, regardless of organizational form, retailers have the same ability to claim that their diamonds are conflict-free based on KP. Because KP prohibits conflict diamonds from entering the US market (even if they exist in the market), it provides all retailers a prima facie reason to claim that their diamonds are conflict-free. These two aspects help to remove organizational idiosyncrasy and rule out each organization’s actual moral violation, unlike cases in which the moral issues are directly tied to the focal organization’s action.

EMPIRICAL EVIDENCE
Two interrelated studies test and explore the proposed hypotheses in a way that they increase both the internal and external validity of this paper’s argument. This paper primarily employs an experimental approach to test Hypotheses 1 and 2. The Mechanical Turk tool (henceforth, “Mturk”) from the Amazon.com website provides an efficient platform for subject recruitment. Studies have shown that Mturk is a reliable source for social science experiments (Berinsky, Huber, and Lenz 2012; Paolacci, Chandler, and Ipeirotis 2010). Subjects who lived in the US were eligible to participate in the survey.

In Study 1, participants were primed with the organizational form, either a small store or a chain store, through a short advertisement. Then, they were asked to rate their perceptions of stores. The purpose of Study 1 is twofold. The first goal is to assess whether the advertisement successfully primed the organizational form of the focal retail store. The second goal is to test Hypothesis 1. The experiment for Study 2 was constructed as a two-part survey. In the first part, participants viewed the store advertisement same as Study 1. Next, they were provided a hypothetical situation in which a customer is purchasing a diamond at
the store that was introduced in the first part. To test Hypothesis 2, participants were introduced to a situation in which the focal organization is not forthcoming about issues surrounding conflict diamonds (compared with other jewelry stores) and were asked to rate their willingness to penalize the store. Finally, to test the effect of the proposed scope condition, the experiment was repeated with a “clear moral violation” condition in which the focal organization commits clear and explicit moral misbehavior. While the experiments were conducted sequentially, subjects were not allowed to participate in more than one experiment. Statistical significance is indicated using two-tailed tests.

As a next step, I check the external validity of the results with empirical data. Building on the interviews with retailers, I show that making additional efforts can be costly to retailers and that under such circumstances, retailers may have an adverse selection in choosing to exerting additional efforts to complement their (relatively low) moral standing. I test this notion with observational data from retailers’ website.

**Experiment**

**Study 1: Procedure**

For Study 1, three hundred and seventy-six subjects were recruited through Mturk and completed a survey. Upon entering the online study, participants were randomly assigned to either an advertisement of the “small store” condition or that of the “chain” condition. They were told that the purpose of the study is to obtain feedback on a retailer’s advertisement and were given a brief introduction to the store through three pages of slides. On the first page, participants were told that an Armenian immigrant established the store in 1935 in downtown Chicago. The city and ethnic background were chosen to portray a realistic retail business without eliciting a strong stereotype. The next page showed that the store specializes in diamond engagement rings and offers a large selection of other precious gems such as
sapphires, rubies and emeralds. The last page included an advertisement stating that the store has a long history and is confident in helping customers.

Organizational form, the key independent variable, was manipulated in several ways throughout this advertisement. In the small store condition, subjects were told that the store is a family-owned store that has one location in Chicago on the first page of the advertisement and were shown a map with one red marker. By contrast, in the chain store condition, subjects were told that the store is a jewelry store chain that has more than one hundred locations in 25 states in the US and were shown a map with approximately one hundred red markers indicating store locations. While the name of the store was identical in the two conditions, it was noted as a corporation in the chain store condition. The pictures included in the advertisement—pictures of the founder, a picture of the store (interior), and a picture of people who work for the store—were identical across conditions, except the pictures were described differently. In the chain store condition, each individual in the picture was introduced with a formal title (e.g., marketing director), whereas in the small store condition, the people were introduced with the same family name but without titles. To assess respondents’ attention, each slide included a simple attention-checking question.

After the survey participants had viewed the advertisement corresponding to the organizational form, they were asked a series of questions about their perceptions of the retail store based on the advertisement. The question pertaining to the size of the store—"some retail stores are small and locally based while other stores are more like a large corporation. What is your impression of Mouradian Jewelers?"—assesses the effectiveness of the manipulation. In addition, participants were asked about their perceptions of profit-oriented motives through three questions. These questions explain that a pure profit-maximizing
orientation may replace values that customers care about. The first question explains, “in some stores, the goal is just to maximize profits. In other stores, they care more about upholding moral business practices than profitability.” In the second and third questions, pure profit maximization is contrasted with “care for customers” and “fine craftsmanship”, respectively. Participants were asked to rate their perceptions of the focal store on the dimensions of pure profit-oriented motives versus the pursuit of each of these values. Finally, participants were also asked about their perceptions of the price range of products sold in the jewelry store, from “low-end products (for customers who are budget conscious)” to “high-end products (for customers who are willing to pay a premium)”. All the questions were answered using seven-point Likert scales.

**Study 1: Results**

Survey participants rated the store in the advertisement to be significantly larger in the “chain” condition than in the “small store” condition ($M_{\text{small}}=2.57$ vs $M_{\text{large}}=4.87$, $t(374)=15.86$, $p<0.001$, where 1 equals a small local business and 7 equals a large corporation), indicating that the organizational form priming in the advertisement was effective.

When profits are in tension with the values that customers care about, chains are considered to maximize profits more than small stores in terms of all three dimensions: when profits are in tension with care about ethical standards ($M_{\text{small}}=4.83$ vs $M_{\text{chain}}=4.24$, $t(374)=-4.30$, $p<0.001$, where a lower value indicates stronger perceptions of profit maximization), with the care for customers ($M_{\text{small}}=4.77$ vs $M_{\text{chain}}=4.22$, $t(374)=-4.02$, $p<0.001$), and with the pursuit of fine craftsmanship ($M_{\text{small}}=4.98$ vs $M_{\text{chain}}=4.52$, $t(374)=-3.38$, $p<0.001$). These results strongly support Hypothesis 1, i.e., chain organizations are perceived to have lower moral standing than small stores. One may think that perceptions of moral standing are also
related to perceptions of status inferred from the organizational form (c.f. Aaker, Vohs, and Mogilner 2010; Hahl and Zuckerman 2014). As shown in Table 1, the effect of organizational form on the perceptions of profit orientation measured by three dependent variables was robust after the perception of the prestige of products was controlled, lending further support to Hypothesis 1.

----Insert Table 1 about here----

**Study 2: Procedure**

Four hundred and two subjects were recruited through Mturk. In addition to viewing the brief store advertisements (identical to that used in Study 1), participants were given a hypothetical situation in which a customer, named Alex, is purchasing a diamond at the jewelry store that was introduced in the advertisement.

Respondents were first informed of the following situation: Alex visited Mouradian Jewelers and had a good experience while consulting with the staff at the store. When he was close to a decision regarding his purchase, Alex discovered that there are diamonds called “conflict diamonds.” He then asked if Mouradian’s diamonds are conflict-free. The staff at the store assured Alex that there are no conflict diamonds in the US market thanks to government-level rules and regulations. However, Alex happened to notice that while Mouradian Jewelers does not have any explicit notice on conflict diamonds or Kimberley Process on their website, other retailers are more forthcoming about the issue in that they provide such information on their websites. After further consideration, he decided to buy a diamond from another store that is more forthcoming about conflict diamonds. Given this situation, respondents were asked whether they thought that “Alex’s decision to buy from another store was reasonable” and whether they would “act the same way.” These questions
were adopted from Haran (2013) and were all answered on a nine-point Likert scale, with 1="no, not at all" and 9="yes, very much so."

After respondents provided their answers about Alex’s decision, they were asked to provide reasons for the absence of a forthcoming announcement on the store’s website. The purpose of these questions is to determine whether consumers’ penalty is based on their moral judgment of the focal organization. Participants were given four statements and were asked to rate the likelihood that each factor is responsible on a nine-point Likert scale (1="very unlikely", 9="very likely"). Two of the statements are relevant to the organization’s morality—“Mouradian Jewelers cares less about upholding ethical standards than other jewelers” and “compared with other jewelers, Mouradian Jewelers is not honest” —and two statements pertain to resource and knowledge—“Mouradian Jewelers lacks resources to keep up with the highest level of industry standards regarding conflict diamonds” and “Mouradian Jewelers lacks knowledge to keep up with the highest level of industry standards regarding conflict diamonds”.

Finally, Study 2 was repeated with a “clear violation” case in which the focal organization’s moral violation is clear and explicit. The structure of this experiment is largely similar to the ambiguous violation. However, in this condition, instead of making queries about the absence of an announcement regarding conflict diamonds on the website, Alex overheard Mouradian staff members discussing the store's approach to acquiring diamonds and that they once purchased diamonds on the black market. The description explains that such trade is illegal and is related to funding conflicts. The remainder of the survey is the same as that in the “ambiguous violation” condition: Alex decided to buy from another store, and respondents were asked how “reasonable” this decision was and whether they would “act
the same way.” They also rated the four statements that may account for this jeweler’s involvement with the black market.

**Study 2: Results**

As shown in Figure 2, subjects agree more with the statement that changing to another store is a reasonable decision when they are primed with the advertisement of a large store than with that of a small store ($N_{chain}=97$, $N_{small}=90$, $M_{chain}=7.18$ vs $M_{small}=6.49$, $t(185)=-2.25$, $p=0.03$, with 1=“not at all” and 9=“very much so”). In addition, customers are significantly more likely to act in the same way in the chain condition than in the small store condition ($N_{chain}=97$, $N_{small}=90$, $M_{chain}=6.25$ vs $M_{small}=5.54$, $t(185)=-1.92$, $p=0.06$, with 1=“not at all” and 9=“very much so”). This result supports Hypothesis 2, which predicted that under the condition of moral ambiguity, consumers are less willing to purchase from chain stores. In the following mediation analysis, *market penalty* combines these two variables (Cronbach’s alpha 0.89).

---Insert Figure 2 about here---

To confirm that consumers’ penalty is rooted in their moral criticism, I performed a mediation test. The respondents were asked to rate the likelihood that four potential reasons account for the store’s lack of announcement. Two statements—“Mouradian Jewelers cares less about upholding ethical standards than other jewelers (statement 1)” and “compared with other jewelers, Mouradian Jewelers is not honest (statement 2)”—are relevant to consumers’ evaluation of the organization’s morality. The variable *moral criticism* combines the responses regarding these two variables (Cronbach’s alpha=0.82). Respondents in the chain store condition generally attribute stronger moral criticism than those in the small store condition ($N_{chain}=97$, $N_{small}=90$, $M_{chain}=4.15$ $M_{small}=3.61$, $t(185)=-1.89$, $p=0.06$).

---Insert Table 2 about here---
Following Baron and Kenny (1986), I tested the mediation effect using four steps. The results are summarized in Table 2 and graphically summarized in Figure 3. Model 1 shows the positive main effect discussed above. Model 2 establishes the second step in which customers evaluate the ambiguity as more morally problematic when the store is a chain. For the third and fourth steps, Model 3 shows that this moral criticism significantly affects the dependent variable \( b=0.47, p<0.001 \), while the effect of organizational form on the dependent variable significantly decreases \( b=0.45, p=0.14 \). This result shows a mediation effect, and this effect is significant according to the Sobel test. Finally, Models 4 through 6 add two capability-related statements as control variables—"lack knowledge" and "lack resources"—and replicate the four-step analysis. The significant effect of moral criticism remains strong and significant, while the effect of chain store status is reduced in Model 6 \( b=0.56, p<0.1 \). The control variables do not show significant relationships with consumers’ decision to leave. In sum, this mediation analysis lends further support to the argument that when faced with moral ambiguity, consumers more strongly criticize large organizations, leading to a market penalty and consumers’ discontinuation of ongoing transactions.

Finally, the effect of scope condition was tested. If moral ambiguity serves as an important scope condition, small stores’ morality-based competitive advantage will be weakened or disappear in explicit moral violation scenarios. As predicted, the difference in respondents’ willingness to penalize the focal organization between the small store condition and the chain condition largely disappears in the case of black market involvement—i.e., the clear violation condition. Regarding the question of whether respondents would act in the same way, there is essentially no difference between the small store condition and the chain
condition (N<sub>chain</sub>=89, N<sub>small</sub>=86, M<sub>chain</sub>=6.70 M<sub>small</sub>=6.69, t(173)=-0.03, p=0.97, with 1=“not at all” and 9=“very much so”). In addition, when participants were asked whether Alex’s decision to leave was reasonable, non-chain stores’ benefit is reduced to a statistically nonsignificant level, although the direction is consistent in that chain stores are subject to a larger market penalty (N<sub>chain</sub>=89, N<sub>small</sub>=86, M<sub>chain</sub>=7.69 vs M<sub>small</sub>=7.27, t(173)=-1.43, p=0.15).

**External Validity Check: Retailers’ Advertisement of Conflict-Free Diamonds**

To test the empirical validity of the findings, I begin by showing that exerting maximal effort to resolve moral ambiguity—in the current setting, providing information on conflict diamonds on the company’s website—can often be costly. At first blush, given that retailers all have a common claim (namely, KP) and the cost of adding conflict-free advertisement to an existing website is nominal, there seems to be no reason to avoid including an advertisement on conflict diamonds on their website. Yet, my field interviews with retailers, conducted in the downtown Boston area between September 2013 and December 2013, revealed that retailers had reasons not to make the claim. In particular, some retailers expressed distaste for advertising the conflict-free nature of diamonds, mainly due to the fear that mentioning conflict diamonds would prompt consumers to have negative images. For instance, in response to the question of whether the company would like to consider having a written notice on its website, one of the retailers replied,

“no, we’d rather not talk about it.... we don’t have to bring it up ...Even if we say conflict “free”, people might start to think diamonds are associated with “conflict”...it will result in a bad image about diamonds, not only for our store but for all the diamonds. We just don’t want to get into the mess. As Shakespeare wrote, ‘it doth protest too much.’...”

Another jeweler provided a similar response to this question: “why open a can of worms?...we can talk to customers whenever they come and ask.” These responses suggest that some
retailers recognize that such advertisements are accompanied by the potential risk of provoking a bad image of diamonds.

It may be reasonable to assume that the risk of provoking a bad image is not associated with organizational form and, therefore, that this concern would equally apply to all retailers. Then, we may presume that the degree of anticipatory benefit from resolving consumers’ suspicion could be an important factor in retailers’ minds. That is, if a retailer thinks that exerting maximal effort to resolve moral ambiguity is more important than the risk of provoking a negative association, he should opt for an advertisement. If he thinks that the risk of provoking a negative image outweighs the anticipatory benefit, then he should not include such information.

This logic is congruent with the view that when there is a common solution to a moral problem, adverse selection may arise (King and Lenox 2000; Yue and Ingram 2012) in that such solutions may be most demanded by those who need them most. Along this line, previous studies show that the demands for impression management increase when individuals or organizations are more in need of such an identity: high-status actors who are suspected of being morally inauthentic demand low-status cultural products as a means of improving their moral identity (Hahl, Zuckerman, and Kim 2016), and firms that are boycotted subsequently increase their prosocial activity (McDonnell and King 2013). The common logic is that when a market actor’s morality is questioned, the actor exerts effort to reduce this suspicion. In the current context, chains are more likely to pay the cost of advertising conflict-free diamonds on their websites than non-chain stores. Below, I investigate retailers’ websites to assess their willingness to advertise conflict-free diamonds,
which may indicate the extent to which the focal organization is in need of moral compensation.

**Data and Measures**

Websites of diamond retailers that have at least one physical location in one of three major cities—Boston, Chicago, and New York City—were investigated for this study. To collect the list of establishments, I used Yelp (www.yelp.com), a widely known review website. All listed establishments were sampled based on the following criteria: (1) it should be listed in the “jewelry” category on Yelp; (2) the store should sell diamonds; (3) there should be at least one customer review; and (4) the business should be operating and have a working website. Antique stores, pawn shops, and diamond wholesalers were excluded from the sample. Based on this list, I visited and coded various features of each retailer’s website, including the existence of conflict-free advertisement. This sampling process yielded cross-sectional observations of 289 jewelers’ websites in 2015.

**Dependent variable.** Conflict-free advertisement is a dichotomous variable that equals 1 if the website advertises conflict-free diamonds. I checked whether jewelers provide information related to conflict diamonds on their website by searching for “conflict(-free)” or “Kimberley” as search parameters.

**Independent variables.** To capture differences in organizational form, the chain variable focuses on the number of physical location(s) that a retail organization has according to its website. While there is no industry-wide consensus on the definition of a chain, following Ingram (1996), I defined a chain as any store operating three or more locations. From the 289 websites, I identified 36 large chain stores. As a further robustness check, I also grouped the number of locations into quantiles for stores with more than 1 location and performed a test with dummies. While approximately 18% (N=52) of the sample have more
than one location, the first quarter of them (N=16) have two locations, the second quarter (N=12) range from three to four locations, the third quarter (N=11) range from five to fifteen locations, and the fourth quarter (N=13) have more than sixteen locations.

**Control variables.** Several variables were included to control for baseline differences in website attributes. Because controlling for the depth of information is an important yet complicated task, I used multiple approaches. First, *number of pages (logged)* measures how many web pages are linked to the main index page of each website. Alternatively, the variable *word count (logged)* measures the quantity of text-based information available on the web pages that are linked to the main index page. These measures are calculated using website analysis software InSite 5. In addition, I used two proxies—*4Cs* and *return policy*—as indicators of information richness. Representing four criteria—namely, carat, color, clarity and cut—for evaluating diamonds, the 4Cs represent basic information that is widely used in diamond retail markets. Furthermore, having information on *return policy* denotes the extent to which each retailer is willing to provide information on the store’s policy through the website. These are dichotomous measures that equal 1 if a store’s website has information on the 4Cs or its return policy.

Second, the *custom design* variable identifies specialists that focus on market demands for custom-designed jewelry. To serve this demand, jewelers need a set of skills and capabilities. For example, a retailer should be able to use tools such as CAD (Computer-Aided Design) and be willing to be flexible to meet idiosyncratic demands. The purpose of including this control variable is to respond to the alternative explanation that the perception of moral standing is a complete by-product of product differentiation. Capturing this specialist
segment of the custom-designed jewelry market, *custom design* equals 1 if a website introduces the store as a custom design specialist.

Third, the *price range* variable controls for a retail store’s relative status in the diamond retail market. I used the price range categories that Yelp uses to rate each store. Yelp uses four categories, from “inexpensive ($)” to “ultra high-end ($$$$)”, to classify the price level of each retailer, and users who have reviewed a business vote on the categories. In the sample, approximately 3% of the stores fall in the lowest price range (“inexpensive ($)”), approximately 51% of the jewelers fall in the “moderate ($$)” range, 33% fall in the “pricey ($$$)” range, and the remaining 13% of jewelers fall in the highest price range (“ultra high-end ($$$$)”).

Other controls were also included. I controlled for a store’s presence on Yelp by using *the number of reviews* and *review ratings*. Because consumer value ratings on a well-known review site are highly influence organizational performance and survival (e.g. Kovács and Sharkey 2014; Luca 2011), retailers’ standing on Yelp may be associated with their impression management strategies via their websites. Finally, city dummies controlled for the geographic location(s) of the store. I used logistic regression to test the hypotheses.

**Results**

In a simple comparison of the probability that a retailer’s website includes an advertisement on conflict-free diamonds, as expected, chain stores’ websites are highly more likely to include conflict-free advertisements. While 51 out of 253 websites (20.2%) of small stores have an advertisement on conflict-free diamonds, 21 out of 36 websites (58.3%) of chain stores have a similar advertisement (t=-4.95, p<0.001). This differences may be due to heterogeneity in the features of the companies’ websites (e.g., chains’ websites are more comprehensive) rather than a response to their organizational moral standing. I employed a
regression approach to control for the baseline differences in website attributes between small stores and chains. Table 3 presents the descriptive statistics and correlations.

---Insert Table 3 about here---

---Insert Table 4 about here---

Table 4 presents estimates of logistic regression models of advertising conflict diamonds on store websites. Model 1 is the baseline model that introduces the control variables. Among the control variables, the number of pages is positively associated with the odds of having a conflict-free advertisement \((b=0.35, p<0.01)\). Model 2 adds the main independent variable—\textit{chain}. Being a chain has a positive and significant impact on having a conflict-free advertisement on the website \((b=1.78, p<0.001)\) after various features in Model 1 are controlled. The odds of having an advertisement about conflict-free diamonds increase by 5.92 ((exp)1.78) times when the store is a chain, providing indirect and preliminary support for Hypothesis 2. The inclusion of the chain variable significantly improves the fit compared with the previous model. As shown in Model 3 and Model 4, the significant effect of the chain variable remains when alternative variables—\textit{word count (logged)} or 4Cs and \textit{return policy}—are used to control for the depth of information on the website. As a robustness check, in Model 5, I tested the number of locations using quantile dummies. The reference category is websites that identify only one location. Model 5 shows that the effect is especially strong among larger chain stores. While the odds of having a conflict-free advertisement is not statistically different in the first two quantiles, the effect is significant in the third quantile \((b=1.42, p<0.05)\) and the fourth quantile \((b=3.89, p<0.001)\).
GENERAL DISCUSSION

Implication for the Market Structure

Why do small stores continue to exist given that chains are so successful? The success of chains is unsurprising from an economic perspective: (a) they enjoy economies of scale in production (Chandler 1994; Stigler 1958), (b) they have greater bargaining power with suppliers (Pfeffer and Salancik 1978; Porter 1980), (c) they benefit from transferring proprietary knowledge and information between units (Argote and Ingram 2000; Darr, Argote, and Epple 1995; Sorenson and Sørensen 2001; Teece 2000), and (d) they have an advantage in reducing marketing costs because they can use their brands to signal their commitment to a consistent level of quality and price (Carden 2013; Ingram 1996; Kim 1999).

Yet, chains do not account for the entire market. While the share of chain stores in the US retail sector increased from 30% in the 1950s to approximately 70% in 2007 (Basker, Klimek, and Van 2012), small “independent” stores still control 30% of the market. Despite the various economic advantages of being large, why has the small store form persisted and what might be its competitive advantage over large chains?

This study suggests that one potential competitive advantage that non-chain stores have is that consumers grant them higher moral standing, while chain stores are viewed as profit seeking and, thus, morally problematic. As one specific example of this case, the current study shows that small stores are given the benefit of the doubt under moral ambiguity; therefore, they can cope with a critical situation while exerting less effort. This provides one way to understand the market structure—in other words, the continuing existence of small non-chain stores.

Yet, it does not mean that the perception of morality is the sole, or major, reason for these stores’ survival in the real world. A more clear advantage of small non-chain stores is,
as resource partitioning theory suggests (e.g. Swaminathan 2001; Dobrev, Kim, and Hannan 2001; Carroll 1985), their ability to offer non-standard products for niche markets. This study is in line with the view that organizational identity—including but not limited to moral identity—is coupled with product characteristics (Carroll and Swaminathan 2000; Greve, Pozner, and Rao 2006; Greve, Pozner, and Rao 2006; Negro, Hannan, and Rao 2010; Rao, Monin, and Durand 2003). Consider the microbrewery example in Carroll and Swaminathan’s (2000) study. The study reveals that not only their organizational structure, which better fits mass production, but also their identity stemming from their organizational form dissuades large corporations from participating in the craft beer market. In diamond retail markets, while many of the small independent stores offer customized products that chain stores cannot provide, the very structural features that enable such customization—non-standardized process, family-based operation—may generate perceptions of high moral standing. Therefore, in actuality, product characteristics and organizational (moral) identity are closely entangled, and consumers may be sorted according to the combination of those two aspects.

Nonetheless, this study advances understanding within the resource partitioning literature by showing that morality-based competitive advantage exists above and beyond market differentiation based on product characteristics. The experimental survey employed in this study did not mention the specific profile of the product that the fictitious customer was purchasing; thus, respondents did not consider differential products as a basis for their evaluation. Yet, consumers accorded differential moral standing to the stores and imposed different penalties, reacting simply to the organizational form. A similar implication is found in the study conducted by Phillips et al. (2013), which shows that clients care about whether law firms are structured in line with their commitment to customers rather than the quality of
the service per se. This line of studies suggests that moral identity is a primary defining feature of market differentiation, which is not entirely reduced to different product or service characteristics.

**Generalization and the Scope of Morality-based Advantage**

Concerns about commitment are general phenomena, as examples abound in diverse social settings (e.g. Azoulay, Repenning, and Zuckerman 2010; Centola, Willer, and Macy 2005; Hahl 2016; Phillips, Turco, and Zuckerman 2013; Turco 2010). Thus, the logic of moral ambiguity—the benefit from the perception of having high moral standing—is generalizable to broader market settings as long as (a) there is some potential conflict between sellers’ interests and their commitment to values that consumers care about and (b) there is some uncertainty in understanding sellers’ commitment to such values. In these situations, ex ante moral identity becomes a competitive advantage.

This logic is in parallel with the status literature, which finds that high-status actors are given the benefit of the doubt as long as their true characteristics are ambiguous or uncertain (Graffin et al. 2013; Adut 2005; c.f. Podolny 2005). Yet, outside the scope of “ambiguity”, studies also show that high status can be a liability (Jonsson, Greve, and Fujiwara-Greve 2009; Rhee and Haunschild 2006; Graffin et al. 2013; Mishina et al. 2010). This may be a specific instance of the “expectancy-violation effect” (Burgoon and Hale 1988; Burgoon and Poire 1993; Jussim, Coleman, and Lerch 1987), which predicts that when a given action violates stereotype-based expectations, evaluations become more extreme in the direction of the expectancy violation. That is, actions or characteristics that are more unfavorable than expected should be evaluated even more negatively than those with similar characteristics that consumers had expected to rate negatively. Haran’s (2013) study can also be understood in this framework. Because individuals, relative to organizations, were subject to a higher
expectation to abide by a contract, they were given a higher penalty when they broke the contract. In the current study, I showed evidence suggesting that the advantage from the perceptions of morality is less relevant in the explicit violation condition.

Nonetheless, one may question why the results didn’t show the “reverse” effect in the case of an explicit violation such that small independent stores are “more” strongly penalized. In other words, why did the perceptions of high morality not become a constraint and generate a stronger penalty when there was a clear moral violation? While I leave this question open for future research, one potential explanation is that involvement with a black market is a strong moral violation that is not expected to occur in either form of organization. Previous studies that hinge on this theory are based on settings in which the audience may expect a reasonable likelihood of a certain outcome. For instance, this line of logic has been used to understand why consumers more highly penalize highly reputed firms for a given decrease in the level of quality in the automobile industry (Rhee and Haunschild 2006), why firms’ long-run performance declines when their CEO receives an honorary mention (Wade et al. 2006, 656) and why Blacks with high socioeconomic status (SES) are rated more favorably than Whites with the same SES level (Jussim, Coleman, and Lerch 1987, 537). In these cases, the violation is that the actual outcome is not quite in line with audiences’ expectations. By contrast, in the real world, diamond retail stores’ involvement with a black market is extremely rare; thus, consumers strongly expect that these stores do not engage in such behavior regardless of organizational form. Thus, chain stores and small independent stores might have (nearly) equally violated the audience’s expectation in the current case.

**Implication for Firm Growth**

This study contributes to the literature on organizational form by showing the existence of a stereotype that leads consumers to grant a higher moral standing to small stores
than large chains even when they do not have any contextual knowledge about the organizations. This means that in certain situations, such stereotypes may override organizations' actual morality in shaping consumers' evaluation. Then what happens when an organization’s form changes from small to large? The current finding suggests important strategic implications for firm growth.

While the organization may enjoy various advantages from the economies of scale, one potential downside is the decrease in the perceptions of morality. In particular, when firms grow and become large, the suspicion of profit-oriented motives is likely to be intensified (Hahl and Ha 2016), reinforcing the stereotype on organizational form. Whether the economic advantage from firm growth outweighs the loss of moral identity is an empirical question. Insofar as maintaining their moral identity is important, firms that have grown from a small scale to a large scale often make additional efforts by advertising that they are still committed to the "spirit of their founders" or by intentionally keeping their original appearance to emphasize their continuing commitment to customers. For instance, as shown in the epigraph to this paper, Roger Berkowitz is the owner of Legal Seafood restaurant, which operates more than 30 locations. However, when he appeared in a TV commercial, he denigrated the “chain” label as a four-letter word and emphasized that Legal Seafood is not a chain restaurant. This suggests that there may be advantages to continuing to be viewed as small. Therefore, when small firms begin to expand, they might want to strategically engage in identity management to grow and remain successful. However, this does not mean that those large firms’ identity management is always successful. In particular, if consumers realize that such adverse selection is at play, large firms’ identity management effort to be viewed as moral might be ineffective and might even backfire. Thus, the empirical research
on the effect and implementation strategy of such identity management leaves unanswered questions to be addressed in future studies.
### Table 1. [Experiment] OLS regression on the perceptions of profit-oriented motives

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Mean coefficients; standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001 (two-tailed tests)

**Note:** Models 1, 3, and 5 show the effect of organizational form on the perceptions of profit orientation when profit seeking is in tension with upholding ethical standards (Model 1), care for customers (Model 3) or fine craftsmanship (Model 5), controlling for the perception of prestige. In addition, as shown in Models 2, 4, and 6, the result is robust when the perceived size variable (ranging from 1 to 7) is used instead of the experimental manipulation of chain store (0=small store condition, 1=chain store condition).
Table 2. [Experiment] Mediation Analysis

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Mean coefficients; standard errors in parentheses
+ p<0.1, * p<0.05, ** p<0.01, ***p<0.001 (two-tailed tests)
Table 3. Correlations

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Table 4 [External Validity Check] Logistic Regression

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Mean coefficients; standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001 (two-tailed tests)

Note: The reference category for quantile dummies in Model 5 is single location stores. The reference category for the location is New York City. City dummies capture the geographic effect of websites for non-chain stores (while there are some websites (n=10) listed in two or more cities, they are fully captured by the "chain" variable).
Figure 1 Media exposure of the term “conflict diamonds” (or blood diamonds) and the term “Kimberley Process”
Figure 2 [Study 2] Willingness to quit shopping with the focal store under moral ambiguity.
Figure 3 [Study 2] Mediation analysis

Note: This figure illustrates that the stronger penalties on chains were mediated by consumers' moral criticism of these stores. The mediation is based on the following three equations (see also Table 4). Model 1: Market Penalty=B1O+B11*Chain; Model 2: Moral Criticism=B20+B21*Chain; Model 3: Market Penalty=B30+ B31*Chain + B32*Moral Criticism.
Chapter 2

"Can a Girl’s Best Friend Be Born in a Lab?"

The Role of Ritual in Production Process Conservatism¹

ABSTRACT

Why do consumers often prefer products made using traditional practices even when products made using new practices are not of lower quality? We argue that this resistance, which we call “production process conservatism,” is heightened when the product is used in the performance of a social ritual; the issue is that when individuals deviate from (even unstated) traditional aspects of rituals, they risk signaling a lack of commitment or cultural competence. We develop and test this argument in the context of diamond jewelry, as consumers have generally been resistant to diamonds that are produced in laboratories. In Experiment 1 (conducted with an online sample), we find that married female respondents are significantly more resistant to lab-created diamonds when they are used as part of an engagement gift as opposed to a more routine gift. In Experiment 2 (conducted with an MBA student sample), we find the same effect among women; in addition, the perceived risk associated with the ritual is found to mediate this production process conservatism.

¹ This paper is coauthored with Renée Gosline and Ezra Zuckerman.
INTRODUCTION

Why do consumers sometimes care about production processes—namely, where, how, and by whom a product has been made—but do not care at other times? One obvious consideration is that different production processes potentially lead to different products, as in the cases of nouvelle cuisine (Rao, Monin, and Durand 2003) and grass-fed meat (Weber, Heinze, and DeSoucey 2008). Thus, in some instances, consumers may regard production processes as proxies for product quality. Moreover, even when the difference in product quality is difficult to verify, consumers may perceive a difference and act accordingly; that is, consumers may be willing to pay a premium for certain production processes under the assumption that such processes indicate differential quality, even when they do not (e.g., Carroll and Swaminathan 2000).

However, consumers have shown preferences for certain production processes, even when the quality of the product is indistinguishable or physically identical (Frake 2016; Kim 2015; Newman and Bloom 2012). In particular, production processes are often favored when they are “traditional,” even when alternative processes are more efficient or produce higher-quality products (Negro, Hannan, and Rao 2011; Rao, Monin, and Durand 2003; Simons and Roberts 2008; c.f., Hahl 2016). However, the reasons for such preferences are unclear. Under what conditions will consumers be conservative with regard to their evaluation of production processes, i.e., be reluctant to accept the very same product when it is produced by a new production process—a phenomenon we call “production process conservatism”? The existing literature does not provide a clear answer to this question. Several studies acknowledge that “domains” (Podolny and Hill-Popper 2004), “tastes for popularity” (Lieberson 2000; Lieberson and Lynn 2003) or “audience type” (Goldberg, Hannan, and Kovács 2016; Pontikes 2012) vary in terms of the extent to which certain dimensions of value—including the
production process—are salient. However, the question remains: why does such salience vary, and why are production processes sometimes regarded as defining features of an item?

In this paper, we argue that the salience of the production process varies depending on the social context, and we specifically suggest that consumers will be concerned about deviation from traditional production processes when the products in question are used in socially consequential rituals. Rituals are “conventions that set up visible public definitions” (Douglas and Isherwood 1979, 65). Rituals use symbols to create public knowledge and to coordinate people’s expectations (Chwe 2003; Douglas and Isherwood 1979; Durkheim 1976). When people perform rituals, they intend to express appropriate messages to one another about their social relationships (Caplow 1984; Swidler 2003). If performers deviate from the rules, they risk inadvertently signaling that they are either incapable or unmotivated to do what is necessary to maintain or strengthen said relationships (Chwe 2003; Schelling 1980). Thus, especially when the ritual has high stakes (i.e., the outcome a ritual is intended to be highly consequential to the parties involved), the parties will tend to signal competence and commitment by conforming to the rules and practicing general conservatism (c.f., Zuckerman 1999).

This paper presents a test of this mechanism by focusing on a case in which the production process is not explicitly prescribed as a rule; however, the high-stakes nature of the ritual will make consumers quite conservative with regard to buying products that are made using a new process. The specific case is diamond jewelry. While diamonds have long been used in various forms of jewelry, a special segment of diamond jewelry—engagement rings—is associated with the widespread ritual of engagement and marriage (Brinig 1990; Epstein 1982b; Kunz 1973; Rothman 1987). In the United States (and many other Western
countries), clear conventional social expectations surround engagement rings—for example, the ring’s appearance, the finger on which it should be worn, and the amount of money men should spend on it (Bowers 2015; Spar 2006). However, the production process has not been explicitly regarded as a feature of the ritual rules. Because diamonds used to be produced exclusively through mining, an explicit rule regarding the production process was seemingly unnecessary. However, diamonds can now be produced synthetically in laboratories (called “lab-created diamonds”). These diamonds have exactly the same chemical, physical and optical characteristics as mined diamonds, and they are available at lower prices (Markoff 2015). The advent of an alternative production process thus poses a question to ritual performers: should the production process be regarded as part of the ritual rules? Is it problematic if the diamond was born in a lab? We aim to show that the answer is yes for people who are knowledgeable about the ritual and who are motivated to perform it well.

The rest of the paper proceeds as follows. We first develop a theoretical framework that clarifies the logic of rituals and suggest why traditional practices associated with rituals might be maintained even when no codified rules proscribe change. We then focus on the case of mined vs. lab-created diamonds. We briefly review the ritual of giving and receiving diamond engagement rings in the United States and summarize the production processes for mined diamonds and lab-created diamonds. We then test our hypotheses in a series of experiments. We conclude by discussing general implications.

THEORY
   Why do people follow ritual rules?

Rituals are found in various settings, ranging from interpersonal social interactions such as shaking hands (Goffman 1955) to rites of passage (Turner 1995) and communal
religious events (Durkheim 1976). Rituals generally enable performers to either create or reinforce an institutionalized role relationship. The successful accomplishment of a ritual affirms that the performer is capable of and committed to a particular role and the relationships associated with it.

To communicate a clear message to relevant audiences, rituals play by a set of symbolic rules. A performer’s observance of ritual rules serves as the primary basis of an audience’s evaluation of said performer. Thus, people follow ritual rules to avoid being evaluated negatively by an audience. For instance, by participating in rituals, performers show their economic competence (Barnett 1938) and publicize their social status and mutual obligations (Malinowski 1920). If a performer does not follow ritual rules, his or her message risks being misunderstood and perhaps being cast in a negative light.

In many cases, ritual rules include specifications regarding artifacts or commodities (Douglas and Isherwood 1979). For example, in Western Christian culture, people often wear black suits to funerals to express their condolences, and Americans present each other with wrapped gifts at Christmas. In these examples, “black suits” and “Christmas gifts” are ritual products that are prescribed by each ritual’s rules (Caplow 1984). If an individual performs a ritual without following these rules, he risks not properly publicizing his capability and commitment to a social role. For example, if a person wears a colorful dress to an American funeral, she risks being considered rude, regardless of her true intentions. Disobeying the rules of funeral rituals may then impair her relationship with others, particularly the family of the deceased, and weaken her social status relative to others who dress appropriately. Similarly, consider a case in which an American man wants to marry a woman but does not follow the conventional rules of giving her an engagement ring. The risk is that his audience,
including his would-be fiancée, will downgrade its evaluation of his cultural competence or commitment compared with that of other men. It could even cause his proposal to be rejected.

The upshot is that, when the stakes are high, any given ritual performer will tend to not deviate from ritual rules, thereby reinforcing the supremacy of ritual rules for subsequent performers. That is, once established and widely observed, a ritual rule can acquire great social weight, even when there is no functional reason for it (Centola, Willer, and Macy 2005; Chwe 2003; Correll et al. 2016; Swidler 2003). Accordingly, such rules can be very different across social contexts. While mourners tend to wear black in Christian culture, white is worn at traditional Korean funerals. Obviously, color itself has no functional purpose at a funeral, but following what is known to be the rule in each culture is important. Color thus works as a focal point (Schelling 1980) or conventional equilibrium (Elster 1989), where no individual can benefit by unilaterally deviating. The more important the ritual is in establishing or reinforcing relationships, the riskier a potential failed outcome is, and the more we can expect a ritual performer to abide by ritual rules.

Sensitivity to the stakes: When are ritual rules important to follow?

Ritual rules do not have same importance in all cases. This variance may stem from two main sources: (a) situational factors in which the level of stakes vary and (b) differences in individuals’ capabilities to recognize ritual rules and their sensitivity to them. In this section, we elaborate on these points by noting variation in ritual types and in individual role assignment.

As noted, rituals may facilitate the creation of a new role relationship or reinforce an existing one. In general, the stakes are higher in the former case because entering a new phase typically entails greater effort than maintaining the status quo. According to Turner (1995), in
the former case, rituals are intervening *liminal* periods between one stable stage, in which an individual’s status (reflected by her relationships to others) is stable, and another stable stage. During these periods, the characteristics of ritual performers are subject to close scrutiny. Assessments tend to be more relaxed when relationships are already established.

To illustrate this difference, consider the ritual of handshaking when individuals greet one another in American business culture. Proper observance of this ritual is clearly more important when two executives meet for the first time than when they meet the second time (and, as they continue their relationship, they will be more likely to dispense with the ritual altogether). Similarly, compare giving a gift as part of a high-stakes ritual, such as an engagement proposal, versus a (relatively) low-stakes ritual, such as a birthday gift. The former case carries much higher risk because this ritual is designed to break the status quo and to enter into a new role relationship. A relationship may be damaged by a poor performance of the gift-giving ritual on someone’s birthday, but a relationship is much less likely to survive if the ritual relates to graduating from boyfriend-girlfriend status to marriage.

Consider the different types of roles and the ways in which one role may be more critical to a ritual than others. Consider the custom of wearing black suits to funerals. We expect that this ritual rule applies to close family members. By contrast, because much less is at stake for other participants, they can observe the rule at a lower level of compliance (e.g., wearing a grey skirt). Relatedly, the stakes may vary depending on the pre-existing social roles among ritual performers. For example, suppose an employee invites his boss over for Thanksgiving dinner. The employee would be expected to ensure that all the elements of a traditional Thanksgiving dinner were present more than his boss would if the roles were reversed.

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Why do people care about implicit ritual rules?

Let us now return to the case at hand and clarify why ritual performers might prefer conservative practices, even when they do not constitute an explicit dimension of ritual rules. In particular, we focus on consumers’ acceptance (or lack thereof) of new production processes in rituals, even when (a) no explicit rule dictates the use of a particular production process and (b) the new production process offers clear benefits (in the form of either a lower price for a given quality or higher quality for a given price). These conditions provide a conservative context in which to examine the presence of ritual rules and thus help us calibrate the extent of “production process conservatism” that is driven by rituals.

We argue that consumers should be conservative, even with regard to dimensions that are not explicitly prescribed as ritual rules, as long as they have good reason to assume other people might regard these dimensions as ritual rules (c.f. Chwe 2003; Correll et al., 2016). Insofar as other people might regard a certain dimension as a ritual rule, a person risks triggering a negative reaction when he or she deviates from such “rules.” That is, when the stakes are sufficiently high, the performer’s personal belief—whether he thinks a certain thing is (or should be) a ritual—is overridden by his interpretation of the public belief—what others think is (or should be) a ritual rule. Thus, the presumption that potential audiences might regard a particular practice as a ritual rule is a sufficient condition for a ritual performer’s preference for a conservative practice.

Consider production processes as a dimension of ritual rules, which are the focus of this paper. When production processes are part of the ritual rules (such as Halal or Kosher food), alternative production processes, regardless of how technologically advanced or
efficient they are, cannot be accepted as long as the ritual rule proscribes any alternative to the traditional production process. When production processes are not explicitly part of ritual rules, the production process can be ignored.

However, the implications are unclear when the product has only been produced in one way, such that the product is defined in terms of the production process. In this case, the advent of a new production process raises the unprecedented question of whether it is or is not included in the ritual rules. Moreover, if the alternative production process provides clear advantages, a dilemma arises. On the one hand, if the production process is not included in the ritual rules, choosing a new production process will not harm the performance of rituals and promises benefits. On the other hand, if the production process is an important part of the ritual, choosing the new production process risks a negative outcome: the failure of the ritual.

We argue that the latter consideration should weigh heavily in a high-stakes ritual context. In this paper, we hold constant the coupling of the production process with the product, and we vary the extent to which the product is used in a high-stakes ritual context or a low-stakes ritual context. We expect that, when the stakes are high, consumers will be conservative about the production process and abide by traditional practices, even when the process may not pertain to a ritual rule and when consumers have to forgo a clear advantage. Support for our prediction would serve as strong evidence to show that consumers abide by ritual rules. Our theory leads to the following set of hypotheses.

\[ H1 \text{ (on the ritual effect on production process conservatism): When products are associated with a high-stakes ritual, people are less accepting of new alternative production processes, even when the production process is not an explicit ritual rule and new production processes provide clear advantages.} \]

\[ H2 \text{ (on the perceived risk mediating the ritual effect): The perceived level of risk mediates the ritual effect in generating production process conservatism.} \]
SETTING: PRODUCTION PROCESS OF DIAMONDS

Diamonds and engagement rituals
Diamond rings were considered a prerequisite for betrothal by most American brides and grooms until the early 20th century (Brinig 1990; Epstein 1982b). The practice of giving and receiving diamond rings in the process of engagement is believed to be traceable to the successful efforts of De Beers and its marketing agency. Along with the famous slogan of “A Diamond is Forever”, De Beers successfully invented an image of the diamond ring as an expression of everlasting love (Epstein 1982a). As a result, diamond rings became virtually synonymous with engagement among Americans; by 1965, over 80 percent of all brides in the United States received a diamond engagement ring, and the diamond rings is still widely regarded as an inseparable part of courtship and engagement (Bowers 2015; Brinig 1990; Kunz 1973; O’Rourke 2007; Rothman 1987).

As the giving and receiving of an engagement ring has become a widespread ritual associated with marriage, conventional social expectations—or “ritual rules”—have emerged about how to perform this practice. For instance, general expectations have developed about the ring’s appearance, the finger on which it should be worn, and the amount of money men should spend on it (Bowers 2015; Spar 2006). The performance of this ritual practice was partly evaluated by the features of diamonds, commonly known as the “4Cs”—color, cut, clarity and carats. Developed and standardized by the Gemological Institute of America (GIA) in the 1950s, the 4Cs are a widely adopted measure of quality in the diamond industry; diamonds are highly valued when they are bigger, are nearly or absolutely colorless, have fewer inclusions (i.e., imperfections), and have a balanced cut that allows maximum reflection of light (Scott and Yelowitz 2010).
**Mined diamonds and the diamond pipeline.** Diamonds have a particular processing and distribution structure, often called the diamond pipeline, which can distinguish them from other materials and natural resources. Because such specific features in the production process have made a significant contribution to the historical image of the end product, we will briefly explain the full process.

Historically, gem-quality diamonds have been sourced from nature, mostly from underground mines. Diamonds are formed deep in the earth when carbon is subjected to high pressure and high temperature. *Kimberlite*, a type of volcanic rock, is known to be the major source of diamonds. In the exploration stage, producers try to find these kimberlite pipes and perform a geological analysis of minerals to find a diamond-bearing kimberlite and to assess whether the kimberlite is a commercially viable source of diamonds. The production of rough diamonds is a highly concentrated industry both in terms of country of origin and the number of firms involved (Even-Zohar 2007, 166–68).

A long history of cartel behavior, led by De Beers, has characterized the distribution of rough diamonds. Rough diamond stones are purchased by small traders or by the Diamond Trading Company (DTC), which is the distribution arm of De Beers. Rough diamonds are sorted based on various characteristics that determine their value when they are processed, and they are sold either through the *sightholder* system, tenders, or spot sales. In the processing stage, diamonds are cut and polished from rough stones into finished gems. This stage of the process is highly labor intensive and competitive, and thousands of small players populate this segment of the diamond industry. In preparation for jewelry manufacturing, finished stones may be graded by organizations such as the GIA. Finally, these polished diamonds are then made into diamond jewelry. Diamond jewelry manufacturers tend to be
located close to the end market. The United States is the single largest diamond consumer market, consuming roughly half of the polished diamonds worldwide (Even-Zohar 2007).

**Technological innovation in the production process of diamonds.**
While synthetically producing diamonds has been possible since the 1950s, technology has only been able to cost-effectively produce gem-quality diamonds in the past decade (Markoff 2015). The production process of lab-created diamonds stands in stark contrast to that of mined diamonds, which are created by geological processes. While mined diamonds rely on natural resources and specialized labor around the globe, lab-created diamonds are based on technology. Lab-made diamonds for use as gemstones are mostly created using one of two methods. The high pressure-high temperature (HPHT) method replicates the natural geological process. General Electric used this method when it first introduced gem-quality lab-created diamonds in 1970 (Olson 2000). In the first stage of this process, small seed diamonds are placed into a machine and are covered with a mixture of catalyst metal and graphite powders. The machine replicates the natural geological process, raising temperatures up to 2,500 degrees Celsius and pressure up to 60,000 atmospheres. With the second method, i.e., chemical vapor deposition (CVD), manufacturers create diamond crystals in a low-pressure environment using carbon-bearing gases. This process involves depositing a carbon vapor onto a substrate to grow the stones (Isberg et al. 2002; Spear and Dismukes 1994).

These lab-created diamonds are different from inexpensive diamond alternatives such as cubic zirconium or moissanite. These stones bear some visual resemblance to diamonds, but they have a completely different molecular structures. By contrast, lab-created diamonds are chemically, physically and optically equivalent to mined diamonds. That is, colorless lab-created diamond gemstones can be made identical to naturally occurring mined diamonds of
high quality. However, the market share of lab-created diamonds is very small in the
gemstone market. While lab-created diamonds accounted for more than 90% of the industrial
diamond consumption (Olson 2000), lab-created diamonds were estimated to represent only
0.01% of the volume of U.S. diamond gemstones sales in 2010 (Bain & Company 2011, 75).

EMPIRICAL EVIDENCE
We designed a series of experiments to test our hypotheses. For Pretests 1 and 2 and
Study 1, we recruited participants through Amazon Mechanical Turk (AMT henceforth).
AMT is an online website where researchers can recruit subjects by offering a monetary
reward upon their completion. AMT has been found to provide a reliable pool of subjects and
to serve as a useful resource for experimental research (Mason and Suri 2012; Paolacci,
Chandler, and Ipeirotis 2010). For Study 2, we conducted an experiment as a course credit for
Master of Business Administration (MBA) students at a private university in the northeastern
United States.

Pretests 1 & 2: Expected market value for products made using a non-traditional production
process
Pretests 1 and 2 sought to confirm a few assumptions that underlie the test of our
theory in the main study. First, we wished to confirm that diamonds are associated with
rituals. Second, we aimed to establish that people care about the production process of
diamonds when the objective measure of quality is identical and the ways in which their
evaluations are translated into price discounts.
Method
Two hundred thirty-two subjects were recruited through AMT, and they completed a survey for $0.25. Subjects who had graduated from high school and who lived in the United States were eligible for our survey. At the beginning of the survey, subjects were told a cover story, i.e., that the survey aimed to determine how to display and value items to develop an online game and that participants would be given questions on various items. Pretest 1 was conducted as a between-subject design, whereby participants were randomly assigned to a survey for either a mined diamond condition or a lab-created diamond condition.

The survey consists of our main questions, questions that supply relevant information, and filler questions to disguise the survey’s true purpose. To provide relevant information to the subjects, the survey asked a series of questions that subjects had to read and understand. For example, they were told that “Color, cut, carat and clarity, widely known as the 4Cs, are the standard ways of evaluating a diamond” and were asked, “If you were buying a diamond, which would you think is the most important?” Subjects were also given information about alternative production processes—lab-created diamonds—through these questions. While the answers to these questions were not necessarily important for our research purpose, the goal was to provide respondents with relevant knowledge. The survey also included a few filler questions that were unrelated to our research question to make the survey flow more naturally and to make the cover story more credible.

The pretest also had two more conditions—“wine” and “Wagyu beef”—as other examples of items that have objective measure of quality and different production processes, with 402 additional respondents. While the results are consistent with the diamond condition, as the participants expect to pay less for the alternative production process, we omit the detailed procedure and the results for brevity.
In the focus questions, we first asked how much a diamond was associated with special occasions on the five-point scale. Later, subjects were given descriptions of two diamonds, where objective quality was (almost) same but different in dimensions unrelated to quality, such as shape and the date polished; while the basic idea was to provide two items that were identical except for their production processes, to avoid a demand effect, we made slight adjustments in the diamonds’ properties, such that the production process differences not explicit (see Figure 1). Subjects were then asked how much they would expect a lab-created diamond to sell for if a mined diamond was sold for ten thousand dollars. To check the effect of our adjustments of diamond properties, we counterbalanced the effect of those differences.

---Insert Figure 1 about here---

While we intended a subtle manipulation to avoid a demand effect, one unavoidable downside was that we could not determine how many of the subjects were actually paying attention to the production process and how their level of attention would influence the result. To clarify subjects’ thinking when they revealed their price expectations for lab-created diamonds, Pretest 2 replicated and extended Pretest 1. An additional 319 subjects were recruited from AMT. In addition to the questions asked in Pretest 1, these participants were also asked the main reason for their price expectations after they submitted their expected prices for lab-created diamonds.

**Results and discussion**

Pretest 1 and Pretest 2 present two findings. First, regarding the first question of how much diamonds are associated with special occasions, the mean response was 1.52 (1=very strong association and 5=no association at all; N=232; 95% confidence interval [1.42, 1.62]). This result shows that diamonds are a good example of a ritual product. Second, we find that
the subjects cared about the production process independent of quality and that they expected significantly lower prices for a lab-created diamond. Compared with $10,000 for a mined diamond, subjects expected $8,399 for a lab-created diamond of the same quality (N=213), showing a significant difference, as the 95% confidence interval ranged from $7,973 to $8,825. Additionally, because no significant difference existed in price expectations with the counterbalance, we can conclude that the pairs of quality measure in our product descriptions were successfully manipulated to represent diamonds of the same quality with slight differences.

However, surprisingly, a significant percentage of subjects (25.4%) expected even higher prices for lab-created diamonds. Because we planted a subtle manipulation to avoid a demand effect, a considerable number of subjects might have focused on properties other than the production process and formed their price expectations based on their assessment of such properties.

---Insert Table 1 about here---

Pretest 2 confirmed that subjects who focused on the production process expected significantly lower prices for lab-created diamonds. After the expected price question, subjects were asked a follow-up question: “What was your main reason for thinking that Diamond B would sell for a lower [a higher, an equal] price?” Approximately 51% of the subjects answered that they focused on production process. As summarized in Table 1, these subjects expected a significant price discount for the alternative production process

3 Because the survey asked participants to reveal their expected prices in an open question, the answers varied considerably, including some insincere outliers. While we must exclude values in the analysis that are more than 2 standard deviations from the mean to produce a more reliable result, the inclusion of outliers does not change the overall interpretation of the data.
(Mean=$7075.21, N=152, S.E.=168.28), while other subjects said the production process was not the main reason for their price expectations (Mean=$9791.81, N=167, S.E=128.45; t(317)=12.97, p<0.001).

**Experiment 1: Ritual and production process conservatism**

Experiment 1 is designed to test H1. This experiment include three important features. First, we test the effect of high-stakes rituals by comparing the same gift-giving behavior in two different social contexts. In particular, we compare two scenarios: (a) a man giving diamond jewelry to his girlfriend purely as a gift and (b) a man giving diamond jewelry to his girlfriend as a part of engagement ritual. While gift-giving often involves both attention to rules and the performer’s identity statements (Camerer 1988; Mauss 2006), a much higher risk is involved when gift-giving is performed as part of a ritual than when it has no explicit ritual implications. We believe this comparison serves as a strong case in demonstrating the effect of rituals. Second, instead of asking the expected price, we asked about subjects’ behavioral choices in the form of advice for a friend, which we hoped would be more effective in tapping into consumers’ lived experience, as subjects were primed for actual involvement. Third, when choosing between the two diamonds, subjects were told that they could trade production processes for a bigger diamond, providing an incentive to choose the non-traditional production process. Our main dependent variable investigates the extent to which the subjects were willing to move to the non-conventional production process across social settings.

**Method**

Six hundred and forty-two subjects were recruited through AMT, and they completed a survey for $0.25 each (63% females, average age=30.8). The survey was constructed as a between-subjects experiment, where each subject was randomly assigned to either a ritual
setting or a non-ritual setting. To avoid a demand effect, subjects were told a cover story at the beginning of the survey: the purpose of the survey was to develop an online shopping game, and they would be asked questions about one of the items. In practice, all the subjects were given questions about diamonds.

In the ritual setting, subjects were told to imagine an engagement context in which they ultimately had to give an advice to an imaginary friend who was buying diamond jewelry for an engagement gift. In the non-ritual setting, subjects were told to imagine that they were giving advice about a diamond jewelry purchase to a friend who was buying a gift. The description of this imaginary friend was identical in both settings, i.e., “a 32-year-old male friend who lives in Chicago and who has been in a serious relationship with his girlfriend for 2 years.”

Similar to our previous experiments, we used questions that the subjects had to read and understand to provide relevant background knowledge for the experiment. For example, in a series of questions, the subjects read that it is now technically possible to grow diamonds in laboratories and that these lab-created diamonds have the exact same chemical, physical and optical characteristics as mined diamonds; they also read that, even though a mined diamond and a lab-created diamond are identical in 4C measures and indistinguishable to the naked eye, lab-created diamonds are laser inscribed with an identity name and number that are declared in their certifications.

After the subjects were given information on lab diamonds through this series of questions, they were asked whether a lab-created diamond should sell for the same price, a higher price or a lower price than a mined diamond. In the next section, the subjects were given a description of the specific design and profile of the “mined” diamond that the friend
chose to buy. This description was identical in both conditions. Finally, in our key question, subjects were told that the jeweler told the friend that the exact jewelry could also be made with a lab-created diamond and that if he chose to make it with a lab-created diamond, he could obtain a larger diamond for the same price. The subjects were then asked if they “would recommend that he buy a mined diamond” (coded 1); they “would recommend that he buy a lab-created diamond” (coded 3); or their “recommendation would depend on how big the lab-created diamond is” (coded 2). The order of these choices was counterbalanced.

Results
Our key question for the dependent variable, “Which one would you recommend that your friend buy?”, is measured with a multiple-choice question with three possible answers. We approached testing Hypothesis 1 in two ways. First, we compared respondents’ willingness to recommend a mined diamond across conditions using the Mann-Whitney U test, a non-parametric test that is suitable for ordinal but not normally distributed dependent variables (Mann and Whitney 1947). However, we did not find a significantly higher preference for a mined diamond in the engagement condition than in the gift-giving condition (U/mn=0.48, z=0.91, p=0.36). The respondents in the engagement condition (N=319, mean=1.96) did not show a higher preference for a mined diamond than the respondents randomly assigned to the gift-giving condition (N=323, mean=1.90). We then ran a series of t-test of proportions between the choices of the same diamond across conditions. When the percentage is compared across conditions, neither the proportions recommending a mined diamond (43.57% vs. 38.70%, p=0.22 (two-tailed)) nor the proportions recommending a lab-created diamond (33.23% vs. 34.37%, p=0.8 (two-tailed)) are statistically significant, although the directions are consistent with our predictions.

---Insert Figure 2 about here---
Second, in the supplementary approach, we ran a chi-square goodness-of-fit test to show the distributions of diamond choices in each social context. In the engagement condition, we find that the frequencies of “mined diamonds” and “lab-created diamond” are significantly different from a random chance (Pearson chi2(1)=4.44, p<0.05), with a higher frequency in the former category, whereas in the gift-giving condition, the two categories do not show such significant differences (Pearson chi2(1)=0.83, p=0.36). Overall, while our results are not sufficient to support H1, the contrast of within-condition analyses suggests that some evidence is aligned with our prediction.

Post-hoc analysis
We further ran a series of post-hoc analyses to pursue specific objectives. First, because the ritual effect in production process conservatism was suggestive but not strong (as discussed above), we aimed to explore demographic groups that may show more salient ritual effects than others. As discussed in the theory section, depending on each respondent’s social role in the real world, one might be differently attuned to the importance, or even the existence, of a potential ritual rule. Given that conventional gender roles exist and that people may be more knowledgeable about ritual rules when they experience them, we suspect that gender and marital status might affect the respondents’ sensitivity to the production process of diamonds in engagement rituals.

Second, we aimed to address the potential argument that stronger preferences for mined diamonds in a ritual setting stem from the giver’s increased willingness to buy whatever is more expensive rather than his attention to the production process. To address this possibility, we included price expectations as a control variable and investigated the extent to which this “price signal” works in parallel with the ritual effect.
To run logistic regressions, we combined “I would recommend that he buy a lab-created diamond” and “The recommendation would depend on how big the lab-created diamond is” (coded 0), as opposed to “I would recommend that he buy a mined diamond” (coded 1). That is, the dependent variable represents whether the respondent displays a strict preference for a mined diamond.\(^4\) Tables 2 summarizes the regression results. Model 1 is the baseline model that introduces the control variables. The results show that price expectations are a strong predictor of one’s preference for a mined diamond. Compared with when respondents expected a mined diamond to be more expensive (reference category), the odds of recommending a mined diamond decreased when they expected a lab-created diamond to be more expensive (\(b=-2.41, p<0.05\)) or when they expected the price to be equal (\(b=-2.35, p<0.001\)). Additionally, older respondents—the fourth age quantile—were more likely to recommend a mined diamond.

Model 2 adds the main independent variable—the ritual context. However, while the coefficient is in the expected direction, there was no significant evidence of a ritual effect (\(b=0.24, p=0.16\)). In Model 3, we added interaction terms—marital status and the engagement condition. The results suggest that the ritual effect was present among the respondents who were married (reference category; \(b=0.67, p<0.05\)); the odds of recommending a mined diamond increased by 95\% [\(\exp(0.67)-1\)], suggesting a significant ritual effect in this group. To further rule out the “price signal” explanation, in Model 4, we limited the sample to respondents who expected a mined diamond to be more expensive (87\% of the respondents).

\(^4\) Admittedly, the nature of the dependent variable is a limit in the current regression approach. One may consider ordinal logit, but it is not appropriate in this case because we had asked respondents’ recommendations in three ways, with no assumptions about the distance between the choices. To avoid this issue, we collected the dependent measure in the form of a discrete variable in Experiment 2.
The results show that a preference for mined diamonds among currently married respondents holds. Finally, in Model 5 and Model 6, we explored whether gender moderates the observed ritual effect. To avoid the difficulty of interpreting three-way interaction effects, we conducted separate analyses for female respondents (Model 5) and male respondents (Model 6). Models 5 and 6 show that the ritual effect is driven by female respondents who are currently married (Model 5: \( b = 0.82, p < 0.05 \)).

To confirm our findings, we used a t-test of proportions with married female respondents. Figure 3 shows that strong production process conservatism exists among married women in this sample (N=161). Two sample tests of proportions show that choosing a mined diamond is significantly higher in the engagement condition (59.2% vs. 40.0%, \( p < 0.05 \) (two-tailed)), providing support for our theory.

---Insert Figure 3 about here---

In sum, Experiment 1 offers partial support for H1 in the overall sample and strong support in the subsample of married women. As discussed earlier, marital status and gender likely produce significant variance in respondents’ knowledge and sensitivity to the risks associated with the engagement ritual, and our post-hoc analysis finds them to be important preconditions for the ritual effect. However, the question remains: why are married women the most sensitive to rituals in choosing production processes? Therefore, these results invite additional testing of the mechanism, as suggested in H2.

**Experiment 2: Perceived risk as a mechanism of the ritual effect**

This study seeks to test whether the perceived risks associated with a ritual are the mediating factor that generates production process conservatism, as suggested in H2. We conducted this experiment as course credit for MBA students at a private university in the northeastern United States. Because we changed the sample pool from AMT participants to
MBA students, it is important to start by establishing the presence of a ritual effect. While we found marital status and gender to be important preconditions for strong support for H1 in Experiment 1, the same demographic scope will not necessarily apply to this sample. Because MBA students are a relatively homogeneous group in terms of age distribution and life stage (with regard to marital experience), such dimensions are potentially less salient factors compared with those of AMT participants. After we establish the existence of a ritual effect in this sample, our goal is to explain the mechanism behind it—i.e., the mediating effect of the perceived risk.

Method
Eighty-two respondents completed the experiment (50% females, average age=28.5). The procedure was largely similar to that used for Experiment 1, with three differences. First, when respondents reached the question about their recommendation, they were asked to answer on a five-point scale, ranging from 1=“strongly recommend a mined diamond” to 5=“strongly recommend a lab-created diamond.” By deriving the answer in the form of a discrete variable, we aimed to obtain more accuracy in our analysis. Second, if they recommended a lab-created diamond, they were given a follow-up question that asked for the main reason for their recommendation; if their recommendation was not based on obtaining a bigger diamond, they were asked to fill in an open-ended blank. This open-ended option allowed respondents to list other reasons for choosing to recommend a lab-created diamond beside the bigger size (e.g., environmental consciousness or a preference for advanced technology) and revealed whether the salience of such reasons varied by the social context. Third, and most importantly, after they reported their recommendations, the respondents were given a battery of questions regarding their perceptions of a diamond purchase on a five-point scale (a higher value indicating stronger agreement). “If she is not satisfied with this
[ring/necklace], it will lead to problems in their relationship” directly measured the perceived level of risk, and this statement was used to test the mediating effect proposed in H2. We also included a multiple filler questions.

Results
The first step involved identifying the existence of a ritual effect in this sample of MBA students. Overall, we could not find a ritual effect in production process conservatism in the overall sample. While the mean was higher in the gift-giving condition (M_{gift-giving}(N=36) =2.86 vs. M_{ritual}(N=46)=2.52), the difference was not statistically significant (t(80)=1.35, p=0.18, two-tailed test). Among the 21 respondents who leaned more toward recommending lab-created diamonds (11 in the gift-giving condition and 10 in the engagement condition), 18 reported that the bigger diamond was the main reason for their recommendation, and 3 said that another reason informed their recommendation, though they did not specify their reason in the text. The mean difference between the two conditions remained statistically non-significant when those three respondents were excluded.

Building on the post-hoc analysis in Experiment 1, we further examined subsample variations by employing a regression approach (OLS). In short, we found support for the existence of a ritual effect among female respondents. Table 3 summarizes the results when we added interaction terms to the baseline model (Model 1). Because respondents were either married or never married in this sample, marital status was measured with a dichotomous variable. Model 2 adds the interaction term with gender and the engagement condition, and Model 3 adds the interaction term with marital status and the engagement condition, each to the baseline model. While Model 2 shows that female respondents had a slight preference for mined diamonds in the engagement condition (b= -1.01, p<0.1), in Model 3, marital status did
not play a role in producing a ritual effect. The ritual effect among women found in Model 2 held in the full model (Model 4). In a t-test, women were significantly less accepting of a lab-created diamond in the engagement condition \((M_{\text{gift-giving}}(N=19) = 3.32 \text{ vs. } M_{\text{ritual}} (N=22) = 2.54, t(30)=2.06, P<0.05 \text{ (two-tailed test)})\).

These results bear some similarities and dissimilarities with those of Experiment 1. In both experiments, the ritual effect was observed only among a subgroup of samples—in particular, women. However, marital status was an important factor in Experiment 1, though not in Experiment 2. While such dissimilarities may be attributable to the different populations from which our samples were drawn, determining the reason for these differences is beyond the scope of this study. Our goal in Experiment 2 is to test the mediating effect of perceived risk as a direct mechanism.

Next, we tested H2 using subjects’ responses to the statement “If she is not satisfied with this [ring/necklace], it will lead to problems in their relationship” as a measure of the perceived risk associated with their recommendations, following Preacher and Hayes (2008). This approach is superior to the traditional Sobel’s (1982) test for mediation, which assumes a normal distribution of variables. Based on bootstrapping with 5,000 iterations, we estimated the indirect effects via perceived risk. Table 4 shows the moderated mediation (Muller, Judd, and Yzerbyt 2005). Model 1 shows the ritual effect among women, as discussed above \((b=-0.94, p<0.1)\), although females are generally more open to lab-created diamonds \((b=1.0, p<0.01)\). Model 2 establishes the second step, in which female respondents perceive a significantly higher level of risk in the engagement condition \((b=1.1, p<0.05)\). Notably, male respondents show no differences in perceived risks across conditions \((b=-0.38, p=0.25)\). Model 3 shows that this perceived risk significantly affects the dependent variable \((b=-0.29)\).
p<0.05), while the effect of the ritual context among women significantly decreases (b=-0.62, p=0.22). The 95 percent bias-corrected confidence interval for the size of the indirect effect excluded zero (-0.73, -0.02), supporting H2, i.e., production process conservatism among females in the sample can be explained in terms of the perceived risk attached to ritual contexts.

GENERAL DISCUSSION

Why the same objective conditions are often very differently perceived and evaluated has been a longstanding and important puzzle for social scientists (Salganik, Dodds, and Watts 2006; Zuckerman 2012). In most cases in which products made via different production processes are differently valued in the market, consumers have generally been assumed to use the production process as a proxy for quality, whether the quality difference is explicit or implicit. Nonetheless, we still see a few examples in which consumers care about the production process even when the process does not affect the quality of end product. As such, why do people sometimes care about production processes (independent of quality), though not at other times? In other words, when are traditional practices in demand and why?

In this study, we make a theoretical contribution by clarifying how such variations may derive from the social context. We theorize that rituals constitute one driver of “production process conservatism” when the ritual performer’s social role, socioeconomic status or social relationships are publicly demonstrated in front of an audience. To avoid negative outcomes from a failed ritual, ritual performers have to pay extra attention to ritual rules. We tested our argument in the case of diamonds; new and more efficient production processes have recently become available while diamonds have traditionally been formed underground and harvested from mines. The contrast between a mined diamond and a lab-
created diamond provides an excellent case for our research question, as the advent of a new production process brings uncertainty in terms of what precisely the ritual rules prescribe. Thus, we focus on whether consumers care about a traditional production process, even when the production process is only possibly part of the ritual rules.

However, our empirical evidence has some limits and leaves some questions unanswered. While we find support for our prediction in the subsample, the effect was not found in the entire sample. On the one hand, this may be partly due to the conservative nature of our own research question, as well as research design. As mentioned above, we used a case in which the production process is an implicit ritual rule rather than an explicit one. Therefore, production process conservatism might have only been relevant to respondents who were able to recognize it as an implicit ritual rule. In addition, in our experimental design, the ritual effect was tested against a control group—the gift-giving condition—that also risked showing a lack of capability and commitment, though to a lesser degree. Thus, the effect that we found is based on the strength of ritual implications across contexts, not on the existence (or lack) of ritual implications altogether. We expect that if a certain practice is more explicitly understood as a ritual rule and the contrast between a ritual condition and a non-ritual condition is stronger, the effect will be stronger and more pervasive.

On the other hand, our finding—the ritual effect among (married) women—raises another question. While we show the mechanism behind perceived risk, why should (married) women be more knowledgeable and sensitive to such risks than males? While we did not have a priori predictions, our findings suggest possible interpretations on the gendered nature of roles and risks in performing engagement rituals. Conventionally, men are responsible for choosing the ring, and women wear the ring. At first glance, men seem to have more at risk in
the engagement ritual because they present the ring as part of a marriage proposal. However, women face another type of risk; because they are the ones who wear the ring, they take on the role of representing the couple’s capability and commitment to any audience that they encounter. In other words, while men’s high stakes are temporary and bilateral, the ring has a lasting impact on women. Our evidence suggests that, for general respondents (i.e., those who are not likely purchasing or receiving a diamond ring at the time of the survey), women are more sensitive than men to their personal stakes.

Our research makes theoretical and empirical contributions to a number of important areas of existing research. First, our theory of “production process conservatism” joins a broader institutional approach that investigates the question of “why certain practices persist” (e.g., DiMaggio and Powell 1983; Zucker 1977). Our study applies the logic of an “institutionalizing” process at the individual level and thus explains the persistence of a particular cultural practice. Just as organizations seek legitimacy for their own survival, individuals pay attention to “what is considered right” by others in order to successfully gain social approval. This view is in line with a broader literature in economic sociology that claims that individuals conform to other people’s opinions (Centola, Willer, and Macy 2005) or a public signal of status (Benjamin and Podolny 1999; Clark, Clark, and Polborn 2006; for a review, see Correll et al. 2016). We contribute to this literature by demonstrating the minimally sufficient conditions for an institutionalizing process related to a ritual. In particular, a production process for diamonds can be institutionalized in a ritual context, even when (i) it is not an explicit part of the rules; (ii) it is not immediately distinguishable ex post (unless the violator confesses); and (iii) it does not generate different quality. Moreover, our study highlights that such institutionalizing power can even trump economic benefits—i.e., in
ritual contexts, individuals even forgo a “bigger size” for the sake of conformity to institutionalizing pressures.

Additionally, our analysis joins the literature on technological innovation with a body of research that shows cultural norms as constraints on economic activities (Turco 2012; Zelizer 1979). Our study shows why technological innovations are not always accepted in the market, even when they provide a clear benefit (in the form of economic efficiency or higher quality). While existing innovation research largely answers this question by focusing on the trajectory of technology itself (e.g., Arthur 1994; Cusumano, Mylonadis, and Rosenbloom 1992; David 1985; Liebowitz and Margolis 1995) or organizational resistance (Strang and Macy 2001; Tripsas 2009; Westphal, Gulati, and Shortell 1997), our findings highlight the importance of cultural norms in limiting the demand of a technological innovation (c.f., Hahl 2016). A shared cultural understanding often sorts items into two dichotomous categories—what is “accepted” and what is “not accepted” (Douglas 2002). When such norms are in play, people deem that their commitments to certain cultural values to be absolute and inviolable, and they are unwilling to trade off sacred values—i.e., the observance of rules of engagement—with secular ones—e.g., “larger size” (Fiske and Tetlock 1997; Tetlock 2003). However, an innovation that does not fit the cultural norms today will not necessarily be rejected permanently (e.g., Murray 2010). Providing new logics may appeal to market participants and make innovations more attractive. In our case, the sellers and innovators of lab-created diamonds have attempted to introduce the norms of labor ethics, environmental sustainability and transparency to advocate for lab-created diamonds rather than traditionally mined diamonds (Markoff 2015). These logics may gain more popularity among market participants.
participants, and, if so, the traditional boundaries of “what is acceptable” will become blurred and the ritual rules for the engagement ritual will find a new equilibrium.
Table 1. Pretest 2: T-test of expected price by attention to production process (without outliers)

<table>
<thead>
<tr>
<th>The production process is...</th>
<th>N</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>[95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>... the main reason for the price expectation</td>
<td>167</td>
<td>9791.81</td>
<td>128.45</td>
<td>9538.20</td>
</tr>
<tr>
<td>... not the main reason for the price expectation</td>
<td>152</td>
<td>7075.21</td>
<td>168.28</td>
<td>6742.72</td>
</tr>
</tbody>
</table>

$t(317)=12.97, p<0.001$
Table 2. Experiment 1: Logistic regression analysis (DV: recommend mined diamond)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
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<td><strong>Ritual</strong></td>
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<td>0.673*</td>
<td>0.679*</td>
<td>0.819*</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
<td>(0.28)</td>
<td>(0.28)</td>
<td>(0.34)</td>
<td>(0.52)</td>
<td></td>
</tr>
<tr>
<td><strong>Price Expectation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference: Mined, Expensive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab-Created, Expensive</td>
<td>-2.41*</td>
<td>-2.42*</td>
<td>-2.42*</td>
<td>-2.38*</td>
<td>omitted</td>
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</tr>
<tr>
<td></td>
<td>(1.05)</td>
<td>(1.05)</td>
<td>(1.05)</td>
<td>(1.05)</td>
<td>.</td>
<td></td>
</tr>
<tr>
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<td>-2.35***</td>
<td>-2.35***</td>
<td>-1.97***</td>
<td>-3.16**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.48)</td>
<td>(0.48)</td>
<td>(0.48)</td>
<td>(0.55)</td>
<td>(1.03)</td>
<td></td>
</tr>
<tr>
<td><strong>Female</strong></td>
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<td>0.04</td>
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<td>0.01</td>
<td></td>
<td></td>
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<td>(0.18)</td>
<td>(0.18)</td>
<td>(0.18)</td>
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<tr>
<td><strong>Marital Status</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Reference: Married)</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Widowed</td>
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<td>(1.43)</td>
<td>(1.44)</td>
<td>(1.44)</td>
<td>(1.44)</td>
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<td>-0.19</td>
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<tr>
<td></td>
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<td>(0.36)</td>
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<td>(0.97)</td>
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<tr>
<td>Separated</td>
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<td>-2.08+</td>
<td>-14.26</td>
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<td>-14.30</td>
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<tr>
<td></td>
<td>(1.08)</td>
<td>(1.08)</td>
<td>(662.76)</td>
<td>(560.82)</td>
<td>(784.98)</td>
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</tr>
<tr>
<td>Never married</td>
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<td>-0.18</td>
<td>0.18</td>
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<td>(0.27)</td>
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<tr>
<td><strong>Marital Status x Ritual</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Widowed x Ritual</td>
<td>omitted</td>
<td>omitted</td>
<td>omitted</td>
<td>omitted</td>
<td>omitted</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divorced x Ritual</td>
<td>-0.62</td>
<td>-0.60</td>
<td>-0.23</td>
<td>-1.95</td>
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<td>(0.72)</td>
<td>(0.72)</td>
<td>(0.84)</td>
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<tr>
<td>Separated x Ritual</td>
<td>12.75</td>
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<td>(560.82)</td>
<td>(784.98)</td>
<td>.</td>
<td></td>
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</tr>
<tr>
<td>Never married x Ritual</td>
<td>-0.74*</td>
<td>-0.69+</td>
<td>-0.96*</td>
<td>-0.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.36)</td>
<td>(0.37)</td>
<td>(0.45)</td>
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<td></td>
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</tr>
<tr>
<td><strong>Age</strong></td>
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<td></td>
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<tr>
<td>(Reference: 2nd Quantile)</td>
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<td></td>
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<td></td>
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<tr>
<td>1st Quantile</td>
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<td>0.05</td>
<td>0.05</td>
<td>0.03</td>
<td>-0.26</td>
<td>0.52</td>
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<tr>
<td></td>
<td>(0.24)</td>
<td>(0.24)</td>
<td>(0.24)</td>
<td>(0.24)</td>
<td>(0.31)</td>
<td>(0.38)</td>
</tr>
<tr>
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<td>4th Quantile</td>
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<td>0.64*</td>
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<td>0.54*</td>
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<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.31)</td>
<td>(0.49)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.20</td>
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<td>-0.51+</td>
<td>-0.47+</td>
<td>-0.41</td>
<td>-0.46</td>
</tr>
<tr>
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<td>(0.27)</td>
<td>(0.29)</td>
<td>(0.47)</td>
</tr>
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<td>Log Likelihood</td>
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<td>-398.67</td>
<td>-395.82</td>
<td>-375.67</td>
<td>-255.64</td>
<td>-136.17</td>
</tr>
<tr>
<td>Pseudo R-square</td>
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<td>0.08</td>
<td>0.09</td>
<td>0.03</td>
<td>0.08</td>
<td>0.12</td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>N</td>
<td>642</td>
<td>642</td>
<td>642</td>
<td>560</td>
<td>409</td>
<td>229</td>
</tr>
</tbody>
</table>

* p<0.05, **p< 0.01, *** p<0.001 (two-tailed test)

Coefficients are omitted when there is no variance in the dependent variable for the category.
Table 3. Experiment 2: OLS regression analysis

<table>
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<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ritual</td>
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<td>0.24</td>
<td>-0.04</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>(0.26)</td>
<td>(0.38)</td>
<td>(0.44)</td>
<td>(0.47)</td>
</tr>
<tr>
<td>Female</td>
<td>0.49+</td>
<td>1.04**</td>
<td>0.52+</td>
<td>1.03*</td>
</tr>
<tr>
<td></td>
<td>(0.27)</td>
<td>(0.39)</td>
<td>(0.28)</td>
<td>(0.39)</td>
</tr>
<tr>
<td>Female X Ritual</td>
<td>-1.01+</td>
<td></td>
<td>-0.98+</td>
<td></td>
</tr>
<tr>
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<td>(0.55)</td>
<td></td>
</tr>
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<td>(0.28)</td>
<td>(0.42)</td>
<td>(0.42)</td>
</tr>
<tr>
<td>Never Married X</td>
<td></td>
<td></td>
<td>-0.43</td>
<td>-0.12</td>
</tr>
<tr>
<td>Ritual</td>
<td></td>
<td></td>
<td>(0.55)</td>
<td>(0.57)</td>
</tr>
<tr>
<td>Constant</td>
<td>2.58***</td>
<td>2.29***</td>
<td>2.4***</td>
<td>2.17***</td>
</tr>
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<td>(0.28)</td>
<td>(0.33)</td>
<td>(0.37)</td>
<td>(0.38)</td>
</tr>
<tr>
<td>R-square</td>
<td>0.07</td>
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<td>0.07</td>
<td>0.11</td>
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<td>N</td>
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<td>79</td>
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<td>79</td>
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</tbody>
</table>

+ p<0.1, * p<0.05, **p< 0.01, *** p<0.001 (two-tailed test)
Table 4. Experiment 2: Moderated mediation

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DV: Recommendation</td>
<td>DV: Perceived risk</td>
<td>DV: Recommendation</td>
</tr>
<tr>
<td>Ritual</td>
<td>0.17</td>
<td>-0.38</td>
<td>0.054</td>
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<tr>
<td></td>
<td>(0.36)</td>
<td>(0.33)</td>
<td>(0.35)</td>
</tr>
<tr>
<td>Female</td>
<td>1.00**</td>
<td>-0.58+</td>
<td>0.83*</td>
</tr>
<tr>
<td></td>
<td>(0.37)</td>
<td>(0.35)</td>
<td>(0.37)</td>
</tr>
<tr>
<td>Female x Ritual</td>
<td>-0.94+</td>
<td>1.10*</td>
<td>-0.62</td>
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<td>(0.50)</td>
<td>(0.46)</td>
<td>(0.50)</td>
</tr>
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<td>Perceived Risk</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td>(0.12)</td>
</tr>
<tr>
<td>Constant</td>
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<td>2.69***</td>
<td>3.10***</td>
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<td>(0.26)</td>
<td>(0.42)</td>
</tr>
<tr>
<td>R-square</td>
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<td>0.08</td>
<td>0.17</td>
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<tr>
<td>N</td>
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</table>

+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001 (two-tailed test)
FIGURES

Figure 1. Product description for the diamond module in Pretest 1 and 2

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diamond A</strong></td>
</tr>
<tr>
<td>Shape: Cushion</td>
</tr>
<tr>
<td>Material: mined diamond</td>
</tr>
<tr>
<td>Date polished: Nov 2010</td>
</tr>
<tr>
<td>Cut: Ideal</td>
</tr>
<tr>
<td>Color: G</td>
</tr>
<tr>
<td>Clarity: V11</td>
</tr>
<tr>
<td>Carat: 1.03</td>
</tr>
<tr>
<td><strong>Diamond B</strong></td>
</tr>
<tr>
<td>Shape: Asscher</td>
</tr>
<tr>
<td>Material: lab-created diamond</td>
</tr>
<tr>
<td>Date polished: Feb 2011</td>
</tr>
<tr>
<td>Cut: Ideal</td>
</tr>
<tr>
<td>Color: G</td>
</tr>
<tr>
<td>Clarity: V11</td>
</tr>
<tr>
<td>Carat: 1.05</td>
</tr>
</tbody>
</table>
Figure 2.
Experiment 1: The effect of the ritual context (all respondents)

% of choice by social context (all respondents)

Gift-giving      Engagement

-●- Mined diamond  -△- Depends on size difference  -■- Lab-created diamond
Figure 3. Experiment 1: The effect of the ritual context (married women)
Chapter 3

Impressions of Customer Commitment in Related Diversification:

Why Perceived Authenticity Can Benefit Diversifying Firms

ABSTRACT

What demand-side forces determine the boundaries of a firm? While the act of straddling distant categories has been shown to influence a firm’s ability to maintain unrelated diversification strategies (aka multi-category penalty), it has not been articulated why a diversification into related areas might face a demand-side penalty. We argue that perceptions of commitment to the customer, made believable by audience perceptions of a firm’s authenticity, can influence a firm’s ability to diversify to even related business lines. We show, through experiments on therapists in the field of behavioral health, the industry’s key audience, that perceptions of commitment are influenced by a firm’s authenticity and influence the firm’s likelihood of selection after diversification from addiction recovery clinics into substance abuse and eating disorder clinics – two related, but previously unpaired business lines. We make contributions to research on strategy and organization theory through causal evidence of demand-side limits to the boundaries of a firm via perceptions of commitment. In making this argument, we also extend organizational authenticity research beyond the realm of cultural industries and discuss practical implications on how outside investors (e.g., private equity) can influence audience perceptions of a firm.

---

5 This paper is coauthored with Oliver Hahl.
INTRODUCTION: Limits to Firm Diversification

“What determines the boundaries of the firm?” is a foundational question for organization theory (Coase 1937; Williamson 1983; Williamson 1991; Cyert and March 1963). A firm’s decision to diversify, or expand its boundaries by engaging in new business lines, carries with it the promise of increased profits through economies of scale and scope (Chandler 1994). On the other hand, there are both supply-side (e.g., Nickerson and Zenger 2004; Tripsas 2009; Felin and Foss 2009; Zhou 2010) and demand-side (e.g., Zuckerman 2000; Hsu, Hannan, and Kocak 2009; Negro and Leung 2012; Leung and Sharkey 2014) mechanisms that govern a firm’s boundaries and can limit a firm’s ability to realize these benefits.

Consider an intriguing case of diversification in the quickly expanding industry of behavioral health. Within the broad industry of behavioral health, addiction recovery is a growing segment that provides inpatient therapeutic services to those suffering with addictions (e.g., see Harris Williams, & Co. 2014). Historically in the business of addiction recovery, treatment centers, or clinics, specialized in one patient area (e.g., substance abuse). Recent success in treating substance abuse patients has led to the realization that the same treatment modalities used for substance abuse can be used for many other types of behavioral health issues such as sex addiction, eating disorders, PTSD, or attachment disorders in adolescents (see e.g., Interlandi 2014). As an example of attempts to take advantage of this situation, 2012, two firms, Alpha and Beta,\(^6\) each sought to diversify by acquiring an eating disorder practice to go along with each firm’s substance abuse practice. These firms were nearly identical in their organizational capabilities, treatment styles, pre-diversification

\(^6\) Names are changed for sake of anonymity.
reputations, and even geographic location. Yet, it is notable that therapists, who serve as the primary source of client referrals (i.e., business) for this industry, welcomed Beta’s diversification efforts into this area of behavioral health, but stopped sending their clients to Alpha. Since there were no exclusive arrangements between therapists and clinics and therapists had previously sent clients to both clinics as they saw fit, it is puzzling why diversification efforts seemed to elicit a negative audience reaction towards Alpha and a neutral, if not positive, reaction towards Beta.

This case represents an interesting puzzle for the literature on boundaries of the firm, and diversification, in particular. A long line of work has argued and shown that the extent to which a firm’s supply-side activities, those internal to the firm, are complementary with the processes of the new business determines a firm’s ability to successfully diversify (David J. Teece et al. 1994; Rawley 2010; Zhou 2010; Natividad and Rawley 2015). These complementarities allow the firm’s various business lines to more easily benefit from shared knowledge, strategic assets, and capabilities across the diversified firm (Darr, Argote, and Epple 1995; Markides and Williamson 1996; Argote and Ingram 2000; Argyres et al. 2012). Without these complementarities, negative interdependencies can spell failure or extensive costs to firms (e.g., Felin and Foss 2009; Rawley 2010; Zhou 2010). Accordingly, this research suggests that diversification into businesses or products related to the focal business, or related diversification, is more likely to succeed because the more similar the diversified businesses the more easily the firm can utilize similar processes and capabilities in incorporating the new business (Markides and Williamson 1994; Kovács and Hannan 2015). The above case of Alpha and Beta clearly fits the related diversification mold, but the
difference in audience reaction, and not these supply-side factors, seems to be the governing force limiting Alpha’s, but not Beta’s, attempt to diversify.

Research on audience reaction to category spanning, or diversification across business category or industry boundaries, has highlighted that even firms that can overcome these supply-side challenges face demand-side mechanisms that can similarly limit a firm’s ability to diversify. Foundational to this view is Zuckerman’s (1999; 2000) work showing that broadly diversified firms performed worse in the stock market because the industry-specialized stock market analysts could not understand these complex corporate entities as well as they could a firm focused within a set of industries known to them (cf., Hsu, Hannan, and Kocak 2009; Negro and Leung 2012; Leung and Sharkey 2014). Similar to the supply-side logic, this work suggests that firms are more likely to succeed with related diversification than unrelated diversification because the more similar the diversified businesses, the less likely the audience will be confused by the organizational arrangement (Kovacs and Hannan 2015). While this logic may explain the failures of unrelated diversification, it does not explain demand-side penalties for related diversification (as was the case for Alpha, but not Beta). In this paper, we seek to articulate and validate one such demand-side mechanism that can a) limit the success of even related diversification and b) explain why two firms that engage in the exact same activity might elicit different reactions from the same audience.

We argue that one important reason for demand-side penalties for related diversification is audience interpretation of the firm’s underlying intentions for diversification—in particular, whether the audience perceives that the firm is still committed to serving them. In general, audiences will value and select as exchange partners, those firms they expect to be most capable (at a given price), as long as that capability is committed to
serving the audience’s needs and not a competing audience or similar alternative end
(Phillips, Turco, and Zuckerman 2013; Carroll and Swaminathan 2000; Zuckerman and Kim
2003). While all firms would claim to be committed to serving their customers, certain firm
activities and characteristics undermine or enhance those claims. Engaging in related
diversification might be seen as a positive (or benign) activity by the firm’s current customers
if they recognize the firm’s potentially increased capacity to serve them (e.g., Argote and
Ingram 2000). However, the same activity, because it involves engaging a new audience and
potentially brings extrinsic rewards, might be seen as a desire to serve a competing audience
or its own bottom line over current customers (Phillips, Turco, and Zuckerman 2013; c.f. Hahl
and Zuckerman 2014; Ha 2015). We contend that to resolve this ambiguity, audiences will
rely on other firm characteristic through which they can interpret this activity. A firm’s
perceived authenticity can enhance these claims because authenticity signals commitment to a
particular niche or customer (Carroll and Swaminathan 2000; Kovács, Carroll, and Lehman
2013) and, fundamentally, authenticity communicates that a social actor is who/what they
claim to be (Trilling 1972; Baugh 1988; Grazian 2005). Thus, our argument is that a firm’s
perceived lack of authenticity will lead to negative inferences about commitment and lower
the likelihood of market selection, all else equal.

Empirically, we test these ideas in the context of the above-described attempts at
related diversification within the behavioral health industry. In particular, we build testable
hypotheses from a key difference in firm characteristics found in the case previewed above:
Alpha was known to be backed by outside investors, while Beta was not. Through this
variable we not only consider the main argument—authenticity’s affect on perceived
commitment and selection—we also articulate how outside investors might negatively affect
perceived authenticity and commitment (c.f., Kovács, Carroll, and Lehman 2013; Ha 2015).

We test the causal relationship between these perceptions and selection through an experiment administered to practicing addiction recovery therapists, the primary consumer audience for this industry. These unique data allow us to isolate the key variables and understand the cognitive underpinnings of these demand-side penalties for diversification that previous studies utilizing macro-level data could not.

In the next section, we develop our argument into three general propositions. We then describe the addiction recovery industry in more detail and the Alpha and Beta case previewed above. Based on this context and the propositions, we build hypotheses and test these as described above. Finally, we discuss the implications of our findings on demand-side mechanisms that limit (related) diversification, the role of perceived authenticity beyond cultural markets, the impact of outside investor involvement in health care and related markets, and the literature on the multi-category penalty.

THEORY

Demand-Side Limits to Diversification and the Multi-Category Penalty

As discussed above, the foundational logic for those who have studied demand-side penalties for diversification comes from work by Zuckerman (1999; 2000). The pressure and incentives to get a favorable stock market return for shareholders causes firms that had previously been diversified to de-diversify and present a more “focused product” to the market. While this logic is compelling and has been used fruitfully in research on penalties for category spanning in markets, it is built upon a specific context that is different from product and service markets. The stock market analyst, and those taking their advice, are viewing the entire firm as an asset and thinking about how all business lines fit together and might fit into
a portfolio of investments. For those audience members evaluating the firm as an asset or investment opportunity, diversification can lead to concerns about inefficient distribution of resources for the risk-averse investor (Zuckerman 2000) or it might signal attempts to innovate valued by risk-seeking investment vehicles (Pontikes 2012).

By contrast, a consumer engaging with a firm has to consider whether the product or service they are looking to purchase will be valuable to them and, in the first instance, not whether the other businesses also produce valuable products for them. Nonetheless, a large amount of research on category spanning in consumer markets also builds from the idea that firms straddling distant categories will lead to confusion (Hannan, Pólos, and Carroll 2007; Leung and Sharkey 2014). With a slightly different take, Hsu, Hannan, and Kocak (2009) discuss how an audience might penalize a firm for unrelated diversification because of the concern that such straddling will lead to inefficient use of resources. In particular, the argument is that the audience will perceive that the product or service under consideration will have lower quality because of the increased risk that the firm’s resources will be stretched too thin or allocated to another product or service with which the consumer is not interested.

Both the confusion logic and the allocation of resources logic are based on concerns about quality and, as such, should be resolved if the consumer is able to experience the quality of the good in an objective way. However, in markets where goods or services are rare or costly to experience or where quality is subjective in nature, perceptions often drive the selection decisions (Lynn, Podolny, and Tao 2009; Kuwabara 2015; cf., Phillips and Zuckerman 2001; Podolny 2005). Thus when this concern is present, perceptions alone can limit a firm’s ability to diversify (Negro and Leung 2012).
Commitment Concern and Penalties for Related Diversification

The above-cited work on the multi-category penalty is focused primarily on unrelated diversification. The confusion logic would not be present for analysts or consumers if the categories being spanned were within the same industry or at least related enough for possible synergies to be obvious to the firm's audience. Similarly, the allocation of resources logic is a concern that would be more likely should the firm straddle distant or unnested categories, as discussed in the literature on supply-side limits to diversification (e.g., Markides and Williamson 1994). In fact, both of these mechanisms have been shown to be less prominent the less the socio-metric distance between the categories being straddled, i.e., the more related the businesses of a diversified firm, the less likely we are to see penalties for category spanning (Kovacs and Hannan 2015).

Yet deeply related work on perceptions and resource partitioning shows that activities similar to diversification can create concerns even in cases where the businesses are more related. Consumers can be wary that a "generalist" firm will not be able to serve their particular needs because the firm stretches resources across various lines of business or is considering a more general audience (Freeman and Hannan 1983; Dobrev, Kim, and Hannan 2001; Zuckerman and Kim 2003). Much of this work does build from a supply-side logic that the broader the firm, the less ability (or willingness) it will have to fulfill the particular needs of an audience niche. However, consider work on the micro-brewery movement by Carroll and Swaminathan (2000). In this study, the authors highlight that larger industrialized beer distributors are seen as so broad and mechanized that the audience believes that they cannot (or are not willing to) serve the particular needs of the growing segment of their consumer market that is interested in specialized production and taste. This work discusses how the
audience for microbrews might even accept that the quality of the industrialized beer is better, but that the microbrew’s focus on both symbolic (craft production) and taste (specific flavors) factors lead to perceptions that they are serving the niche better than their industrialized counterparts.

While this work is not about diversification, it articulates the logic behind commitment concerns that might arise because of diversification. Even the most capable firm will turn off consumers seeking for the highest quality at a given price if these consumers feel that the firm is not committed to using that capability to serve them. Phillips, Turco, and Zuckerman (2013) show this qualitatively in their study of high-status law firms. They show firms, who focus on Corporate Law, diversifying in two ways: Family Law and Personal Injury Law. Family Law, as a low-status activity normally associated with “divorce court”, can threaten the perceived capability of a firm—if a firm does divorce law, how can it handle complicated Corporate Law? By contrast, serving plaintiffs in Personal Injury cases can be seen as a form of betrayal to their Corporate Law clients because corporations are often the defendants in such cases. The authors show that engaging in Family Law practices for elite firms is not problematic because status can insulate against capability concerns. However, they show that status does not insulate against commitment concerns because audiences penalize these firms if they engage in Personal Injury Law, which is taken as a signal of betraying their Corporate Law clients. Thus, this work opens the door for the possibility that perceived commitment could be an issue even in related diversification.

Because related diversification involves engaging with a new audience, even in cases where there is no evidence of betrayal, consumers can become concerned about the diversifying firm’s lack of commitment. Because perceived commitment can negatively
influence a firm’s perceived ability or willingness to serve its clients, we contend that firm penalties for related diversification can be based on whether the audience infers that the firm is less committed to them.

Proposition 1: All else equal, firms engaged in related diversification that are perceived to have lower commitment to their focal audience are less likely to be selected as exchange partners in product and service markets than firms perceived to have higher commitment.

How Perceptions of Authenticity Influence Perceived Commitment

A key question we need to answer at this point, and one that does not yet have clear articulation in the literature, is what causes a firm’s commitment to their audience to be questioned or not. It would be contrary to any known incentives for a firm hoping to serve a particular audience to claim that it is not committed to serving that audience. Such a claim would undermine their role as producer to those consumers as would evidence that the firm actually betrayed the audience for other ends (see e.g., Adut 2008; Graffin et al. 2013 on scandals related to evidence for lack of commitment). As such, understanding whether a firm’s claims to commitment are valid or not will be based on whether the audience believes that the producer, and/or its products or services, are what it claims to be. This question is inherent to the concept of authenticity.

While authenticity is a concept that has been used and defined in various ways (compare e.g., Trilling 1972; Turner 1976; Peterson 1997; Carroll and Wheaton 2009), what is at stake when the term “authenticity” is invoked is whether the product or producer being evaluated is or is not what they (or their owner) claim(s) to be (Trilling 1972; Baugh 1988; Grazian 2005). Understanding when a social actor is not who they say they are can be difficult because it involves understanding the social actor’s intentions, which are often unobservable,
hidden in the actor’s backstage presentation of self (Goffman 1959; Zajac and Westphal 2004; Kim and Zuckerman 2016). Because of this, authenticity attributions are be based on the likelihood that a social actor’s frontstage image is representative of their backstage or “true self” (Turner 1976; Lizardo 2015; cf., Meyer and Rowan 1977). Short of direct evidence about a “gap” between the front and backstage, audiences tend to use contextual cues that provide information about whether the social actor is likely to fake his identity or not as the basis for such attributions of authenticity.

Recent research in this vein has argued and shown that the more clearly individuals in an audience can see that a social actor is receiving extrinsic rewards for his performance, the more the audience is concerned that the performance is faked merely to receive those rewards (Hahl 2016). This idea comes out of work by Hahl and Zuckerman (2014; see also Sagiv 2014), who propose that high-status actors are considered less authentic than lower-status counterparts because status often provides benefits to the higher-status actor. They show that even though it is often unclear whether an actor’s performance is motivated simply by the pursuit of excellence or by the pursuit of these extrinsic rewards, when the context provides an obvious link between a social actor’s performance and the extrinsic rewards to be gained, audience suspicion about the inauthenticity of the social actor arises out of the inferred motivation to achieve these extrinsic rewards. In this way, the pursuit of extrinsic rewards has been shown to increase concerns about authenticity because it increases the likelihood that the social actor is willing to present a different image than his backstage persona in pursuit of these rewards (Hahl, Zuckerman, and Kim 2016).7

7 Earlier work considered this idea as well. Bourdieu (1993, 40) cites Weber’s (1952) discussion of ancient Judaic prophets, who were considered more genuine when they prophesied things that did not benefit themselves.
Our argument rests on the premise that related diversification, in and of itself, is an ambiguous signal about the motives of a firm. Without any direct evidence as to the motives of the firm, audiences have two potential interpretations available to them when considering whether diversification will affect a firm’s commitment to serve their customers. One interpretation of related diversification is that the firm will betray the focal audience with increased commitment of resources to the new audience or through seeking extrinsic (e.g., money, fame) rewards at the expense of serving its customers. Another interpretation is that growth is the result of successfully serving the focal audience and expansion is a way the firm can extend these beneficial services to a new audience without impacting (or possibly enhancing) their level of capability in serving its original customers.

When an actor’s motives behind engaging in an activity can be interpreted in multiple ways, the producer’s perceived authenticity plays a role in shaping audience interpretation of the activity. Lehman, Kovacs and Carroll (2014) show that restaurants with established authentic identities can avoid demand-side penalties from health code violations because the activity that generates this violation (e.g., hanging meat in the store-front window) can be interpreted as being true to a particular ethnic style of food preparation. By being authentic to that style, the health code violation is interpreted as a sign of commitment to customers interested in that style as opposed to a signal that the restaurant is trying to take a short cut on quality at the potential expense of customer health. Audience perceptions of the restaurant’s authenticity filter the interpretation of an activity that would otherwise be penalized by its audience. In this case, the contextual cue about perceptions of authenticity is the consistency between the type of food, perhaps the staff, and the method of production employed by the restaurant.
Contextual cues that signal a lack of consistency with a particular type or that increase the prominence of ulterior motives for the actor’s performance will influence a firm’s perceived inauthenticity (Kovács, Carroll, and Lehman 2013; Hahl and Zuckerman 2014). These contextual cues will undermine the (at least implied) claims that the diversified firm is still committed to its focal audience. While perceptions of inauthenticity might lead to increased concerns about a firm’s commitment in general (c.f., Hahl and Zuckerman 2014), when a firm engages in related diversification, the audience concerns about inauthenticity will push them towards the interpretation that the firm is no longer committed to them. This is the main idea behind our second proposition:

**Proposition 2:** Contextual cues that trigger concerns of a firm’s inauthenticity will also reduce perceptions of the diversifying firm’s commitment to its focal audience.

*Impression Management and Perceptions of Commitment*

The key idea behind the above propositions is that commitment concerns are often generated by contextual cues about the social actor without any evidence or further information about the actor’s true motives. For instance, Hahl & Zuckerman (2014) discuss how the status of a social actor can generate concern about the individual’s authenticity and considerateness because audiences infer ulterior motives for performance based on the presence of extrinsic rewards. However, the authors argue that these attributions are in effect at the stereotype level (cf., Fiske et al. 2002) by showing that credible signals of pro-social behavior, which can serve as additional information about the motives or character of the high-status actor under question, can overcome these stereotypes and serve to increase audience attributions of authenticity. Similarly, to the extent that perceptions of commitment are based on inferences of a firm’s backstage motives, concerns about commitment caused by
contextual cues can be overcome with additional information about the true motives of the firm or its decision makers.

Stereotypes function as a first reaction under conditions with limited information (Fiske et al. 2002; Ridgeway 2009; Aaker, Vohs, and Mogilner 2010). Perceptions of commitment based on contextual cues that generate stereotype-level inferences about the motives of a firm can be overcome when audiences of the firm are provided with more information about the motives of the firm. Firms often engage in sharing information about their decisions and motives to manage audience impressions (Elsbach 1994; Elsbach 2003; Elsbach and Kramer 1996). This means that as long as the information about the firm’s motives is credible and shows deeper commitment to the audience, a firm can overcome stereotype-level commitment concerns with proper impression management strategies.

Consider the work by Lehman, Kovács, and Carroll (2014) on how perceptions of authenticity can overcome concerns created by health code violations. This work can be summarized through a stylized example in which a potential customer is presented with two restaurants and is told that the first restaurant recently received a health code violation. With no other information, the customer is likely to select the second restaurant for fear that the health code violator is less concerned about the customer’s health than taking shortcuts of some kind. However, if the customer is then also told that restaurant owners were only producing food the same way they had at home and were confused by this country’s health code rules, a customer can infer that the owners seem more committed to their ethnic style than one who eschews these traditional methods because of institutional pressure. Customers looking for an experience that matches the claims of these ethnic style restaurants would be
more likely to choose the former restaurant than the latter because of this genuine expression of commitment, even at the costly expense of institutional penalties.

Both the Hahl and Zuckerman (2014) and Lehman et al., (2014) examples highlight situations in which a stereotype that would otherwise lead to commitment concerns (through perceived authenticity) can be overcome by additional information about motives. These studies and the idea that authenticity, which we are claiming can influence perceptions of commitment, is an identity feature that can be managed by producers (Peterson 2005; Grazian 2010), leads us to our final proposition:

*Proposition 3: When commitment concerns are based on contextual cues that generate stereotype reactions, these concerns can be overcome with impression management strategies that provide more information about the commitment motives of the firm or its decision makers.*

**SETTING: BEHAVIORAL HEALTH’S ADDICTION RECOVERY BUSINESSES**

*Overview of Industry*

We explore these propositions in the recent expansion of the addiction recovery business. The behavioral health industry, a growing industry that provides products and services to those suffering the consequences of psychological or emotional disorders or diseases, is an interesting setting in which to study this phenomenon. Over the last quarter century, the behavioral health industry has increased dramatically in economic size and importance in the world of healthcare (Clay 2011; Kutscher 2013). Some reports estimate that it is worth over $50 billion with more than 15,000 facilities in the United States. Growth in this sector has been fueled in part by a decreasing stigma for individuals who admit to suffering from emotional or psychological challenges and increasing legitimacy (and insurance coverage) of treatments for such maladies. Among the various programs for
treatment in this industry, inpatient addiction recovery treatment programs have become increasingly important. Inpatient recovery programs vary in size and cost, but our study will focus on the largest growing portion, the so-called “high-end” treatment programs that require substantial private pay and inpatient stays of up to five weeks away from home. Over the last 20 to 25 years, this segment of behavioral health has moved from a fringe and unmeasured subsection to one that is currently estimated to be worth almost $10 billion (e.g., Harris Williams, & Co. 2014). The primary focus of these programs has historically been to treat patients with alcohol or drug-based dependence. As the types of behaviors that have become associated with addiction or other mental illnesses have increased, so have the types of facilities that treat patients wishing to eliminate or reduce these behaviors from their lives. This growth has not gone unnoticed, as investment, primarily through private equity firms, has changed the ownership structure of many firms away from the classical model of the small, therapist-owned business to one run by professional managers with equity stakeholders who often have little background in treating patients (e.g., Treatment Magazine: Addiction Industry News 2006).

High-end inpatient addiction recovery programs are housed on facilities with high security both for the patients and outsiders, not unlike a hospital. A patient enters an inpatient addiction recovery program, typically, after having exhausted less disruptive and cheaper treatment services such as meeting with clinical psychologists and/or undergoing medication plans. It is a serious departure from someone’s day-to-day life and is often described and viewed by these patients as a last resort. On top of this, the high-end inpatient clinics with the highest reputation and profile require payments of $50-75K for a five week stay, most of which is not covered by insurance and, consequently, is privately paid by the patient. Thus, it
is a very vulnerable time in a patient’s life and one that, if handled improperly, can result in disaster for the patient and his or her loved ones. One practitioner described the stakes in this way, “Success is hard to measure. Relapse is a normal thing (for patients) and part of the process for some people. But failure, sadly, is very easy to measure...people come to us on the brink and we’ve seen cases of death (in the industry).” A decision to enter such a program is not taken lightly and patients expect a dramatic change in life as a result.

The key audience is not the potential client pool, but a subset of therapists who serve to mediate the reputation and profile of these clinics. This is because patients, as likely one-time users of these clinics, are less knowledgeable and must rely on others with experience to refer them to a clinic. While clinics vary on the exact percentages of referral routes, based on our interviews of leading clinics, therapist referral, or referring a patient to a facility by a treating clinical psychologist, social worker, or therapist, accounts for roughly 70% of all business. Family or friend referral accounts for the next largest amount while self-referral, although growing with the higher amounts of online marketing and the general increase in the industry’s profile, still tends to be less than 5% of all referrals. This means that the population of clinical psychologists and therapists who treat these patients serves as a critical and primary “consumer” audience for inpatient clinics.

The clinics in this industry were historically specialized. For example, a patient with PTSD would go to the VA, eating disorder patients to the hospital, and patients with substance abuse issues would go to an addiction recovery clinic (rehab), etc. Recently, professionals in the area of addiction recovery have shown that the same treatment modalities, based as they are on revealing and dealing with trauma in a patient’s life, can be used effectively to treat other behavioral health issues not historically associated with addiction,
such as eating disorders, attachment disorders, and post-traumatic stress disorder (e.g., Mellody, Miller, and Miller 2003; Interlandi 2014). This provides a potential opportunity for firms that have a capability in treating addiction successfully to realize some economies of scope by utilizing their established practices to treat patients with addictions outside of their traditional specialty area. Thus some firms have attempted to diversify into these other areas of behavioral health.

Key to our study, this avenue of growth tends to be controversial among therapists and addiction recovery specialists. Attempts to expand across categories in this way has coincided with the increased control of facilities by outside investors, leading to some concern that the desire to expand to new specialties not traditionally treated by addiction recovery specialists is motivated by profit seeking instead of patient care. The following short case, informed by interviews among therapists and practitioners in the industry, will serve to a) illustrate these issues and b) motivate the experiments designed to test our argument’s key mechanisms.

The Case For (or Against) Expansion Across Categories

The recent incursion by private equity firms into the field of behavioral health has created some dynamics that need further testing to unpack. In this section we will briefly describe a case that expresses different outcomes for the same type of growth seemingly as a result of differences in private equity involvement in the industry. This case illustrates the tensions around perceptions of authenticity and commitment that are central to our argument. However, it should not be viewed as evidence, as will be discussed below, but as an illustration of the types of problems firms face in trying to diversify. Information about this case was acquired out of unstructured interviews performed between 2013 and 2015 among
practitioners and therapists in the addiction recovery industry about two firms’ attempts to expand their business into the field of eating disorders in 2012 and 2013. The selection of interviewees that inform the information from this case was not meant to be exhaustive of the industry.

The basic facts of the case illustration are as follows. Two firms, Alpha and Beta, which had primarily treated patients dealing with substance abuse, attempted to expand their lines of business to include services for patients suffering with eating disorders. Prior to this attempt to expand, Alpha and Beta had similar reputations and were both considered leaders in the field of high-end addiction recovery treatment. Different private equity firms had purchased each firm. While neither of the private equity firms’ had any direct contact with patients or any but the most senior therapists, Alpha’s private equity firm made its involvement very clear by placing its name on all of the marketing materials and even in the title of the new company (e.g., Alpha, a “PE Firm” Company). Beta’s private equity firm, by contrast, remained very private about their involvement. In fact, only 2 out of the 36 therapists interviewed after these events took place realized that outside investors had invested in Beta and neither of these knew the name of the firm. After purchasing a facility that had previously seen considerable business in treating patients with eating disorders, Alpha opened their doors to patients only to find that they could not fill enough of their rooms to make it a viable business. Referral rates dropped dramatically after the acquisition, to the point that Alpha was forced to shut down the newly acquired eating disorder business. Beta, by contrast acquired an eating disorder business and saw no issue with therapist referrals. In fact, patient referral rates increased allow Beta’s management team to deem the venture into eating disorders a success.
When asked whether there were any operational differences that led to Beta’s success where Alpha had failed, one manager said, “There really is no difference between our approaches to treatment...I’m sure they’ll tell you they are (the best), but we’ve treated (individual cases of) eating disorders in the past.” In fact, when therapists, serving the audience perspective, were asked the same question, only 6 of the 36 therapists cited concerns about differences in capability or treatment modalities as reasons why they would refer a patient to one and not another. Instead, the modal answer expressed a concern about commitment to the patients. Out of the 18 therapists asked about Alpha, specifically, 13 expressed concern about the sincerity of Alpha’s motives in treating patients. One therapist in particular thought Alpha’s motives were very clear, “Why did they do it? That was just a money grab. I’ll never send my clients to their treatment centers again ... You can’t be a treatment program if you’re only thinking about money.” Most others were less sure, as exemplified by this quote from a therapist from a city in the US west coast, “I’m fine with them (substance abuse specialists) moving into eating disorders... But I’m not sure that was what (Alpha) was about. They might have patients’ interest in mind, but I just couldn’t trust them.” Of the 36 therapists asked about the involvement of private equity in the industry, 32 expressed concern that these outside investors’ motives were not aligned with their expectations. Many therapists expressed a similar sentiment as one from a southwestern US city, “I know they (outside investors) let the therapists do their job, but all they care about is money, you know?” In sharp contrast, of the 18 therapists asked only about Beta, a dominant theme was their authenticity and resulting trustworthiness. The modal response was similar to one provided by a therapist from a Midwestern city, “I know (Beta). They are a real outfit, with real therapists running the place.”
The Role of Outside Investors on Perceived Authenticity, Commitment and Selection

This qualitatively acquired information is only used here to illustrate the ways in which outside investors possibly affect the identity of the firm and perception of commitment to their patients (consumers). There were other factors discussed in the interviews that would make it too difficult to isolate the presence of outside investors as explaining the negative outcomes for Alpha and positive outcomes for Beta. For instance, it is clearly possible that reputational factors above and beyond the signal provided by the ownership structure contributed to this difference in perceptions. It might even be the case that the management in Alpha decided to divest because they changed their strategy, making it hard to call the attempt to diversify a failure. Nonetheless, there is a clear theme in the interviews that the presence of outside investors reduced perceptions of commitment when Alpha diversified. In order to isolate this variable and see whether it will influence inferences made about commitment through perceptions of authenticity we will develop three hypotheses related to the propositions described above that will be directly tested in the experiments described below.

The presence of outside investors, with no other information, can increase commitment concerns through two related mechanisms. First, stereotypically, outside investors put pressure on firms to seek profits and gain these investors return on their investment. Diversification can trigger the fear that in the pursuit of profits or other extrinsic rewards (e.g., fame, recognition), the firm will put their clients second in order to fulfill the direct pressure put on them by the outside investors. Consistent with this idea, previous work
has already shown that corporate owned organizations are considered less authentic (Kovács, Carroll, and Lehman 2013) and more cold and inconsiderate (Aaker, Vohs, and Mogilner 2010; Ha 2015) than practitioner-owned establishments. Secondly, most private equity firms tend to invest in many different industries. There are some that are very focused, but even the focused firms are not as focused as an owner who is also a practitioner in this particular industry. As such, audiences will assume that outside investors are less committed to this particular industry than a practitioner-owner would be. We argue that the presence of outside investors can serve as a contextual cue that increases suspicion that the firm is less committed to its clients. When a firm with outside investors diversifies in the behavioral health industry, therapists will be more likely to infer that the motives are not one of commitment to its clients. Thus, our first hypothesis that mirrors the first proposition and is set specifically in this industrial context:

*Hypothesis 1 (H1): Therapists will be less likely to select diversifying firms with outside investors than a practitioner-owned firm because of differences in inferred commitment to treating its patients associated with diversification.*

In our second proposition we argued that the inferences about commitment related to diversification will be determined by audience perceptions of the diversifying firm’s perceived authenticity. The two forces of that lead to commitment concerns discussed above are also related to perceptions of authenticity. First, a practitioner owned firm is more consistent, both historically and type-wise, to the prototypically addiction recovery or behavioral health firm than one owned by outside investors. Consistency with the established characteristics of a particular type of firm will increase the likelihood that an audience (therapists) will trust that the firm is who they claim to be. Second, the increased concern about profit-oriented motives generated by the presence of outside investors increases the
likelihood of a perceived “gap” between the firm’s front and backstage or true intentions. This potential gap will increase concern that the firm is not who they claim to be. Thus, the presence of outside investors, even before diversification, will decrease perceptions of authenticity. This decreased perception that the firm is who it claims to be will also make therapists more wary that they are committed to their patients. Accordingly, our second hypothesis will test the idea that the presence of outside investors will increase concern about commitment through increased perceptions that the firm is inauthentic.

Hypothesis 2 (H2): Therapists will be less likely to infer that a diversifying firm with outside investors is still committed to its patients, relative to a practitioner owned firm, because of differences in perceived authenticity.

Finally, in our third proposition, we suggested that audiences can make inferences about commitment based on contextual cues that inspire a stereotype-style reaction. This suggests that firms can overcome the inferences made about contextual cues with effective impression management strategies. We do not explore the effectiveness of a strategy in this study, but seek to test the basic claim that additional information about motives can overcome the stereotype reaction created by the contextual cues. The presence of outside investors provides limited information about a firm’s true motives. While therapists, who are deep insiders to this business, might look to outside investors as outsiders, often the investors are drawn to a particular business because they have previous relationship with the business or are knowledgeable about the industry as a whole. If a therapist is told that the outside investors actually have previous experience with addiction recovery through family or friends, they are going to be more likely to respond positively to these outside investors. In such cases, the information communicates a deeper commitment to the business and the clients in particular. Conversely, the fact that a clinic is practitioner-owned is, itself, simply a contextual
cue that provides limited information about the motives of the owners. If therapists receive
some information to believe that the practitioner-owners have profit-oriented motives, this
should reverse the positive stereotype effect enjoyed by the practitioner owned facility. This
leads to our final two hypotheses, testable within each ownership type (practitioner and
investor). One key difference is that while the investor-owned firm would be willing to
engage in this process actively (i.e., impression management), because it could hurt the
practitioner-owned firm it is likely that this information would not be passed actively by the
practitioner-owned firm.

Hypothesis 3a (H3a): A firm with outside investors can overcome negative perceptions
of commitment among therapists with more information about commitment to the field
of addiction recovery.

Hypothesis 3b (H3b): When audiences are provided with more information about the
profit-oriented motives of the practitioner owners, positive stereotypes about
commitment will be reversed.

EMPIRICAL EVIDENCE
Overview

We ran a series of experiments administered to therapists in the field of behavioral
health. The purpose of Study 1 is two-fold. First, we test whether there is a difference in
audience penalties for diversification based on ownership type in order to establish a baseline
difference in effects of ownership type. As a second goal, we attempt to test H1 and H2—i.e.,
that ownership structure triggers a commitment concern upon diversification, based on the
perceptions of authenticity. In order to do this, we introduced three types of “firm growth” in
Study 1—(related) diversification, within-category growth and no growth. The latter two
conditions serve as a baseline with which we seek to establish differences in penalties for
diversification across the different ownership types. We will describe the details of the
The tests for H1 and H2 will compare only the diversification conditions (practitioner owned and investor owned). Study 2 is designed to test H3a and H3b. This experiment builds on Study 1, with the additional prime of information about motives in each ownership type condition and tests will compare each diversification condition from Study 1.

Recruitment: In order to increase the external validity of these tests we focused on recruiting active practitioners who have referred clients to inpatient addiction recovery programs in the past. Over a period of two years, email addresses of willing participants for “a study on the addiction recovery industry” were collected indirectly through referrals from industry contacts and directly through sign-up sheets posted at conferences. Only those certified as therapists were approached to participate in the survey. Potential subjects were informed that the investigator was a business school professor who is interested in learning more about the industry. The addiction recovery industry is filled with passionate practitioners who are often attracted to practicing because they, themselves, or a loved one was involved in recovery. This resulted in high levels of interest among those who were contacted. Through this process we obtained an extensive list of over 900 active therapists who work in the US and have referred a client to an addiction recovery clinic in the past. This list of potential study participants was then sorted to create a random order and split into groups.

A first group of 600 therapists was invited to participate in an “online survey about the important and growing business of inpatient recovery programs, especially ‘high-end’ treatment programs and facilities.” The online link provided served to send subjects to conditions in Study 1, which will be described in more detail below. The final 300 were sent an invitation to an online survey in the exact same way, which linked them to the conditions
in Study 2. In all of the invitations, the potential participants were told that participation was completely voluntary and that the purpose of the study was to “better understand the addiction recovery industry.” The invitation also specified that their responses would be kept anonymous and confidential, and that they would “not be asked anything specific about your clients, but instead only general information about your decisions to refer clients to inpatient addiction recovery programs.”

Of the invitations, 28% (251 out of the 900) were returned with incorrect email addresses. For those non-bounced invitations, the overall the response rate was 58% within the two-week period they were allotted. Of the 312 subjects that responded to demographic questions, 34% of the subjects were male, 19% received a PhD or MD, 28% received a Masters in Social Work, 53% received some other form of professional certification, 61% described their profession as “clinical therapist”, 19% as “clinical psychologist” or “psychiatrist”, 15% as “social worker”, and 5% as “Other” (almost all of these described themselves as clinical specialists of some sort). The distribution of these demographic characteristics did not vary significantly across studies or across conditions within each study.8

Study 1 Description

Procedure. In all, 298 therapists participated in Study 1 conditions. Upon entering the online survey, participants were randomly assigned to either the “Investor Owned” or “Practitioner Owned” conditions. The survey started with general questions about preferences for clinics as a filler; participants were given various features of a treatment program and were

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8 These numbers include 43 responses in Study 2’s unused “within category growth” conditions.
asked to rate the importance of each of those items in influencing the likelihood of referring a patient. The features asked about in this section were: campus aesthetics, quality chef, science-based treatment program, and presence of cutting edge practices. After this set of questions, participants were given one of two vignettes that described the characteristics of an “anonymous, high-end addiction recovery program.”

In order to avoid demand effects, our manipulation—ownership structure—was introduced as one of four program characteristics used to describe the hypothetical inpatient clinic. In the practitioner-owned condition, the clinic “was started by behavioral health practitioners who still own the facility.” In the investor-owned condition, the clinic “was started by behavioral health practitioners and recently purchased by a group of investors.” In both cases it was made clear that practitioners ran the programs to avoid the possible misconception that the investors ran the program in the investor-owned clinic condition. Each description also included identical information on the facilities and staff, range of issues, and treatment characteristics. These descriptions portray features of a typical high-end clinic in the real world and these features are not associated with either form of the ownership structure. It is also important to note that for both conditions, the description of the firm was that they treated patients suffering from substance abuse.

Next, subjects were randomly assigned to either the No Growth, Within-Category Growth and Diversification conditions. Therapists in the No Growth condition went right to the next step and did not receive any information about growth plans. Therapists in the other two conditions were provided with a second short vignette on the clinic’s “plans for growth.”

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9 Specifically, in both conditions, clinics are run by “high-end facilities and staff who perform treatments influenced by on-staff thought leaders with science-based programming (inclusive of 12 step).” The clinic treats “alcohol/drug addiction” and employs “45 day inpatient stay” which allows “communication with family and referent (psychologist or social worker)” and provides “individualized treatment experience.”
Each therapist was randomly assigned to either a Within-Category Growth or Diversification condition. In both conditions, the participants were told that the program owners have recently begun plans to expand the practice. The key difference is that in the Within-Category Growth condition, the treatment focus will remain the same: serving patients dealing with issues related to substance abuse. By contrast, in the Diversification condition, in addition to the existing program for substance abuse patients the growth plans include expanding into two new areas of treatment: process addictions and eating disorders.

After reading the growth description (or the clinic description in the No Growth condition), participants were asked to assume that they “have a patient who is dealing with substance abuse,” and were asked how likely they are “to refer the patient to the above described clinic.” The question was answered in a six-point scale, from 1 being “very unlikely” to 6 being “very likely.” In the two growth conditions, therapists were further asked how they interpreted the owners’ motives for expanding the treatment program (these questions were counterbalanced with the above listed questions). They were given two different types of interpretations, “helping more patients” and “making more money” (in counterbalanced order), and asked to rate the likelihood of each motivation, on a seven-point scale (1 “not at all their purpose” and 7 “completely their purpose”). These scores were combined (help patients was reverse coded) to construct a measure of “commitment concerns” (Cronbach’s alpha=0.75). While these two dimensions are not mutually exclusive, they commonly indicate to what extent the clinic causes commitment concerns upon diversification, when such firms’ commitment to customer is at odds with other motives.

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10 We used a 6 point scale because it eliminated the “undecided” middle condition and forces therapists to select a score that represented either a likely or unlikely decision.
Next, participants were asked a set of questions based on their perceptions of the clinic described to them. Specifically, they were asked about the following four aspects— "the extent to which the clinic is": "an authentic treatment program" ("authentic"), "run by program leaders with sincere motives" ("sincere") and "capable in treating patients" ("capable"). These questions were all answered using a seven-point scale where 1 indicates "low" and 7 indicates "high". In a final section, participants were asked about demographic information and work experience, as reported previously. The capability score was used as a control in some analyses and the authentic and sincere variables were combined to create a measure of perceived "authenticity" (Cronbach’s alpha: .93)

**Study 1 Results**

**Penalty by Ownership Type in Related Diversification?** As a main effect, we argue that ownership structure will generate a difference in penalties even in related diversification (as illustrated in the Alpha and Beta case). Instead of comparing the two Diversification conditions across ownership type directly, because that would only establish difference and not penalty, we first compare diversification conditions of each ownership type with their corresponding No Growth and Within Category Growth conditions. The results of a comparison between Diversification conditions and their corresponding No Growth conditions are summarized in Figure 1.

---Figure 1 about here---

In the Investor Owned conditions, therapists randomly assigned to the Diversification condition (N=54, mean=3.26) were less likely to refer patients (t(93.6)=-2.82, p=0.003, one-
tailed test)\(^{11}\) when compared to therapists randomly assigned to the baseline No Growth condition (n = 42, mean = 4.07). By contrast, in the Practitioner Owned conditions, therapists randomly assigned to the Diversification condition (N = 55, mean = 4.82) were not less likely to refer patients (t(93.7) = 1.33, p = .907, one-tailed test) when compared to therapists randomly assigned to the baseline No Growth condition (n = 41, mean = 4.51).

An important issue is that a comparison of Diversification condition with No Growth condition does not isolate the spanning effect because such comparison entails differences in two components—growth and category spanning—at the same time. To address this point, we compared therapists reported likelihood to refer patients by ownership structure and whether the firm was diversifying its services or simply expanding them within their current category of operations (Within-category Growth). Figure 2 summarizes these results.

---Figure 2 about here---

Similar to the previous comparison, the results reject the null hypothesis drawn from an admittedly naïve view of the multiple category penalty literature in two-ways: in the Investor Owned conditions, there was no significant penalty for diversification (Diversification: N = 54, mean = 3.25, Within-Category Growth N = 55 mean = 3.49, t(105.1) = -0.83, p = .205, one-tailed test), and in the Practitioner Owned condition, diversification received even higher market selection rates (Diversification: N = 55, mean = 4.82, Within-category Growth: N = 51, mean = 4.18, t(103.5) = 2.68, p = 0.99, one-tailed test). These results lend support to the idea that in the case of related diversification, as exemplified in our

\(^{11}\) In comparing Diversification conditions with No Growth conditions or with Within-category Growth conditions, we used one-tailed t-test to test because we aimed to apply the implications of multiple category penalty literature, which expects that diversifying firms receive higher penalties. The overall support of our interpretation does not differ when two-tailed tests are used. T-tests were corrected for unequal variances and unpaired observations. The reported degrees of freedom are, consequently, Satterthwaite adjusted.
setting, the penalties of category spanning do not generally pertain (Kovacs and Hannan 2015) and that ownership structure plays an important role in potential penalties. The goal of the rest of Study 1 is to validate our explanation for this difference.

**Test of H1:** Hypothesis 1 predicts that the relationship between ownership type and market selection is mediated (or explained) by the inferred concern about motives related to diversification. To test for this, we ran a mediation analysis to test if the main effect of ownership structure can be explained by the commitment concerns generated by diversification, following Preacher and Hayes (2004; Hayes 2013). This approach is superior to the traditional Baron and Kenny (1986) method and Sobel’s (1982) test for mediation, because it does not assume a normal distribution of variables (Zhao et al. 2010). The literature on the multi-category penalty discusses how perceived capability might also be a concern when firms straddle multiple categories. In order to more fully test for the mediation effect of commitment concern, while taking into account the effect of perceived capability, we follow Preacher and Hayes (2008) to test for two mediators: commitment concern and capability.

—Table 1 about here—

As suggested in previous tests and also directly tested in Model 1 of Table 1, therapists who were told that the diversifying clinic is owned by investors (Investor Owned/Diversification condition) were less likely to refer clients than those therapists who were told that the diversifying clinic is owned by practitioners (Practitioner Owned/Diversification condition) (b=-1.559, p<0.001). As shown in Model 2 of Table 1, therapists randomly assigned to the Investor Owned/Diversification condition expressed higher commitment concerns (b=1.161, p<0.001) than those randomly assigned to the
Practitioner Owned/Diversification condition. As shown in Model 3 of Table 1, therapists randomly assigned to the Investor Owned/Diversification condition rated the firm as having lower capability ($b=-0.929, p<0.001$) than those randomly assigned to the Practitioner Owned/Diversification condition. Finally, Model 4 of Table 1 shows that these commitment concerns ($b=-0.735, p<0.001$) and perceived capability ($b=0.406, p<0.001$) both have a significant effect on the likelihood to refer. When commitment concern and perceived capability are included in the model, the main effect of ownership structure is significantly reduced (Model 4: $b=-0.328, p=0.072$).

Based on bootstrapping with 5,000 iterations, we estimated the total and separate indirect effects of the ownership structure via commitment concerns and perceived capability on the likelihood to refer. This also allows us to test whether the mediation effect of each of the variables is significant and which variable explains more of the ownership type main effect. First, the total indirect effect, via both commitment concerns and perceived capability, is significant (bias-corrected $z=5.00, p<.001$) and explains 79% of the main effect. This is comprised of the significant indirect effects of commitment concerns (bias-corrected $z=-4.16, p<.001$) and perceived capability (bias-corrected $z=-3.18, p=.001$). Commitment concerns (55%) explain more of the total effect than does perceived capability (24%). These results validate our first hypothesis that diversifying firms with investor ownership are less likely to be selected in the market (than those without investor ownership) because of the commitment concerns generated by the combination of investor ownership and diversification.

—Table 2 about here—

**Test of H2:** We now test H2 that perceptions of authenticity explain why outside investor involvement generates commitment concerns when a firm diversifies. Model 1 of
Table 2 replicates results from Model 2 of Table 1. Model 2 of Table 2 shows that investor owned firms were attributed significantly less authenticity than practitioner owned firms (b=-1.161, p<0.001). Again using the Preacher and Hayes method, albeit this time with one mediator (Preacher and Hayes 2004), we find that the indirect effect of authenticity is significant (bias-corrected z=4.16, p<.001) and explains 58% of the negative effect of ownership structure on commitment concern upon a firm’s diversification. While the effect of investor owned form of ownership structure is still significant after including the mediating variable (Model 3: b=0.486, p=.006), the significance has been reduced compared with Model 1 (b=1.16, p<0.001).

Study 1 Discussion

We have shown that the penalties of category spanning, as suggested by the extant literature, do not pertain to related diversification. While the absence of such penalties can be partly attributable to the nature of diversification—i.e., the risks of audience confusion may be low when firms span related areas, the stark contrast by ownership type suggests that another important mechanism is at play. In Study 1, we showed evidence for our argument that insofar as firms’ diversification is an ambiguous signal, audiences may use the ownership structure in making inference about a possibility that firms may no longer be committed to them, which consequently leads to a lower rates of market selection.

We have also shown that perceptions of authenticity serve as a filter through which firms’ attempts to diversify is interpreted. Since practitioner owned clinics are perceived to be authentic, their attempt to diversify is interpreted as likely motivated to serve more patients as opposed to make money. By contrast, for firms with lower perceptions of authenticity—i.e.,
investor owned firms—expansion across categories reinforces the concern that the firm is seeking profits ahead of customer needs, resulting in larger penalties.

*Study 2 Description*

*Procedure.* 37 therapists participated in Study 2. They were randomly assigned to either the Practitioner Owned condition (N=19) or the Investor Owned condition (N=18). We follow the procedure set out in the diversification condition of Study 1 almost exactly. The one change to this study is that in describing the firm, we add one sentence about how each type of owners came to own clinics. For the Investor Owned conditions we add that “These investors became interested in inpatient programs of this type through the recovery process of one of the investor's own family members.” This should enhance perceived authenticity in two ways: a) by giving a more patient-focused spin on why they are involved in this process and a reason why they might be more committed than someone just looking for money, and b) by giving a reason as to why they should be considered a legitimate part of the addiction community. For the Owner Operated conditions participants were told, “Recently, two of the original owners bought out, or purchased the shares of, the third, resulting in the original owners own 58% and 42% of the firm, respectively.” This was designed to show that these owners may be more motivated by money than the stereotype might suggest. After this description, participants were told the diversification plan as described in Study 1. The rest of the study proceeded exactly as Study 1 had with the same questions allowing us to test Hypotheses 3a and 3b.

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12 43 others that participated in Study 2 were randomly assigned to Within Category conditions that were not used in these analyses.
Study 2 Results (Test of H3a and H3b)

We first test whether the information added to each ownership structure affected therapists’ commitment concerns upon diversification, and then tested if such information results in therapists’ likelihood to refer. Because of the small sample size in Study 2 and the comparison with a larger sample size from Study 1, we conducted Mann-Whitney U Test, a non-parametric test that is more reliable for comparison across smaller sample sizes (Fay and Proschan 2010; Mann and Whitney 1947). These results show that the added information on the underlying motives for growth significantly affected commitment concerns.

In the Investor Owned conditions, therapists had significantly lower commitment concerns with the additional information (N=18, mean=3.28), compared to the condition in Study 1 (N=54, mean=4.84, U/mn=0.11, z=-5.03, p<0.001). When the survey included the information about the investors’ motives, therapists reported a significantly higher likelihood to refer patients to the clinic (N=18, mean=4.77) than in Study 1 (N=54, mean=3.25, U/mn=0.77, z=3.48, p<0.001). These results support Hypothesis 3a, by showing that when firms with outside investors provide additional information about their commitment, they can overcome the negative stereotypes based on their ownership structure.

By contrast, therapists who were assigned to the Practitioner Owned condition for Study 2 (N=19, mean=4.61) had significantly higher commitment concerns with the additional information (U/mn=0.75, z=3.27, p<0.01) compared with therapists in the Practitioner Owned condition for Study 1 (N=55, mean=3.68). Similarly, therapists in the Practitioner Owned clinics reported significantly lower likelihood to refer patients to the clinic when the survey implied that the practitioners may have monetary incentives for their business (N=19, mean=3.58, U/mn=.22, z=-3.77, p<0.001), compared with Study 1 (N=55,
mean=4.82). Figure 3 summarizes the mean comparisons of commitment concern, and Figure 4 summarizes the mean comparisons of likelihood to refer across Study 1 and Study 2 for each ownership type. These results support Hypothesis 3b.

Study 2 Discussion

The key finding in Study 2 is that when additional information is available, the effect of ownership structure both on commitment concern and market selection was reversed (compared with Study 1). When the added information hinted at monetary incentives for the practitioners, concerns of commitment increased and likelihood to refer decreased beyond those found in the same condition in Study 1. When the investor owned condition included implications of authenticity with respect to addiction recovery, the commitment concerns decreased and likelihood to refer patients increased beyond those found in the same conditions from Study 1. This suggests that the stereotypes generated by ownership structure apply only to the extent that firms’ motives are unclear and ambiguous. While this indicates that investor owned firms can (and do) overcome these concerns with impression management strategies, clearly a useful objective for future research would be to establish the boundary conditions on the effectiveness of such communication. While firms can actively engage in impression management that is positive, it is likely that information that can deepen commitment concerns would not be made available unless accidentally revealed (see e.g., Barnes and Perlroth 2014 on backlash from leaked Sony executive emails).
DISCUSSION

We will now attempt to put our findings in context of four important areas of organizational research. First, we address how this work suggests additional demand-side mechanisms that limit the boundaries of the firm and the effectiveness of diversification strategies. Then we will consider the implications of this work in relation to recent work on the value of authentic market identities. Thirdly, we will consider practical implications for firms that have outside investor involvement in regards to impression management and commercializing the sacred. Finally, we will discuss implications of our theory and findings for the literature on the multi-category penalty.

Demand-Side Limits to Related Diversification

This paper seeks to better understand what demand-side forces might limit the boundaries of the firm even in attempts at related diversification. We argue that one key driver behind demand-side forces on firm boundaries is what customers infer about the firm’s commitment to them. To the extent that diversification is an ambiguous signal of firm commitment—it might mean firms are less committed to their original customer—contextual cues that raise suspicions about inauthenticity and commitment will lead audiences to interpret the desire to diversify as an expression of lack of customer commitment. In such cases, firms will be penalized in the form of lower market selection, limiting their ability to expand their boundaries by including the new business. We show that the presence of outside investors in the behavioral health industry, and possibly more broadly, serves as a contextual cue that triggers audiences to perceive the firm to be less authentic and interpret the motives for diversification as a signal that they are not committed to their patients (customers).
Our experimental studies allow us to validate this mechanism by isolating the key variable of interest (outside investors) and measuring cognitive reactions to changes in this variable. Furthermore, these studies are strong on external validity for two reasons. First, the scenarios and key variables of interest were based on an actual and recent case in the addiction recovery industry. Second, these studies were administered to actual practicing therapists, who are the industry’s key audience as the primary agents of patient referral to these clinics.

Using this method to isolate these variables allows us to control for all other factors that can and do contribute to failed attempts to grow. While this is beneficial for the purposes of this paper, it is by no means support for the idea that the presence of outside investors, or perceptions of authenticity and commitment for that matter, will overwhelm all other issues and serve as the key factor behind failed expansion attempts. Literature in organization theory and strategy has established that expansion failure is often the result of operational issues related to mismanagement of key organizational interdependencies (e.g., Markides and Williamson 1994; Rawley 2010; Zhou 2010). As discussed, even if a firm overcomes these supply side issues, they can face demand-side issues in the form of audience penalties for perception-based reasons (Negro and Leung 2012; Leung and Sharkey 2014). This study rules in a potential demand-side mechanism that can have effect even in cases of related diversification.

Valuing Authenticity

Beyond this implication for research on strategy, this research has important implications for research on perceptions of authenticity and its role in markets. By studying
this question in the context of the behavioral health industry, we have not only shed light on
an important and growing area of the broader health industry in the United States, we have
extended research on authenticity concerns and market reactions beyond organizational
researchers’ previous focus on cultural industries. As has been shown in the food (Carroll and
Swaminathan 2000; Carroll and Wheaton 2009; Kovács, Carroll, and Lehman 2013; Lehman,
Kovács, and Carroll 2014), sports (Hahl 2016), art (Fine 2003; Newman and Bloom 2012;
Hahl, Zuckerman, and Kim 2016), dance (Sagiv 2014), and music (Peterson 1997; Peterson
2005; Grazian 2005) industries, in the behavioral health industry attributions of authenticity
serve as an important identity feature that can influence market outcomes. In particular, across
both cultural industries and health industries, norms exist that idealize intrinsic motivation and
place extrinsic reward seeking at odds with performance (Arrow 1963; Bourdieu 1993; Caves
2000). As such, it is not surprising that authenticity plays such an important role in this
industry, to the extent that attributions of authenticity can be linked with perceived motives
and trust (Trilling 1972; Hahl and Zuckerman 2014). While it is the case that evidence that a
producer is willing to cheat his customers to gain an advantage will be penalized in any
market (Graffin et al. 2013), some markets can make customers more sensitive to these issues
than they would be in other markets. It is likely that heightened norms around having to seem
disinterested in economic returns only make consumers in the health and arts industries more
sensitive to identity features and activities that would indicate that a firm is profit-driven at
the expense of serving its customers (cf., Bourdieu 1993). So while we do not expect the
presence of outside investors to have as strong of an effect in many other markets, it is still the
case that inauthenticity should be penalized, insofar as it reduces trust that an exchange
partner is who s/he/it claim to be.
It is also worth noting that these findings on the value of authentic identities in the health industry are somewhat in contrast to the way authenticity seems to be valued in cultural industries. Recent work on the value of authenticity shows that those producers considered more authentic are selected because of “symbolic” value they provide rather than any actual or inferred increase in performance or quality (Frake 2016). This idea has purchase in the cultural industries where valuation is often subjective and one component of value is how one’s consumption reflects taste or social standing to others (Bourdieu 1993; Veblen 2008). Thus symbolic value is a key factor in selection decisions made in cultural markets because it shows one’s association with a valued identity. However, our findings indicate that even in markets where symbolic value has little impact on selection, authentic identities can influence selection by also providing practical value related to how willing a customer is to trust the producer(s). In the health industry, being associated with a particular medical provider is secondary to trusting that the provider will be able to solve health issues that the patient faces. This concern about trust is only increased where such health issues are life threatening. As discussed above, authenticity is essentially a question about the sincerity or genuineness of the presented identity – whether the producer is who he claims to be (Trilling 1972; Grazian 2005; Hahl and Zuckerman 2014; Lizardo 2015). Our findings indicate that perceptions of authenticity can affect market selection in this industry because these perceptions inspire the audience to have more trust in the producer than those who lack authenticity. This means that authenticity can have impact not just on markets where symbolic value is important, but also where uncertainty and risk are high and perceived trust determines market selection.

This highlights a clear limit to much of the recent research on authenticity. Because this research has focused on the ways in which the term is used by customers, the concept’s
perceived usefulness in organizational research is limited to one that seems trendy and less central to how organizations and markets operate beyond cultural industries (e.g., Carroll and Wheaton 2009). However, our study points out that authenticity is fundamentally associated with trust (cf., Kim et al. 2015). Trust, is of course, a vital factor in market exchange and organizational behavior (Williamson 1981; Adler 2001; Evensky 2011). By being true to the roots of the concept we have hoped to show the usefulness of the concept as a potentially more central issue to market exchange in general. Perceptions of authenticity can serve as a basic foundation to trust in market exchange, but as research on authenticity points out, it can also be managed and socially constructed (Peterson 1997; Grazian 2010; Lena 2013). This idea highlights the fact that firms can be more or less successful when they employ impression management strategies that aim to increase perceptions of authenticity and trust (cf., Elsbach 1994; Elsbach, Sutton, and Principe 1998; Elsbach and Cable 2014).

**Commercializing the Sacred and the Potential Identity Impact of Outside Investors**

This research also highlights some important factors related to the increased economic involvement of private equity firms. Private equity companies seek financial returns by 1) investing in underfunded businesses and industries, 2) providing management expertise to increase these firm’s profit potential, and 3) selling the financial stake of the improved company to the public or other investors (Gompers, Kaplan, and Mukharlyamov 2014). At times, these outside investors can serve a role in enhancing social welfare by funding industries, like areas of health care, that have broader social impact. This focus on providing capital to underfunded industries can, at times, lead these firms to find opportunities in industries where profit orientation and economic logic contrast with existing logics. As
exemplified by the case of Alpha described above, the visible presence of these outside investors can negatively influence a firm’s identity in ways that not only reduce the outside investor’s ability to increase return on their investment, but also threaten to undermine the practice as a whole. However, these new logics can be appropriated in markets where they were previously absent. As has been shown in the market for cancer research, market participants who were previously defiant of the introduction of commercialization learn to adapt and even prosper within these new logics (Murray 2010).

We have shown that a key factor in determining whether or not these outside investors increase the likelihood of market penalties depends on the interpretation of their motives or intentions for the business. Previous work on commercializing businesses or relationships that were previously not commercialized argues that the meaning of commercialization can be socially constructed (e.g., Zelizer 1979; Zelizer 1995; Zelizer 2007). Healy (2000; Healy 2006) showed that as markets for blood donations became commercialized, donors were more willing to give to those institutions whose previous identity was considered pro-social or altruistic in nature, such as churches or relief organizations. Often it is the stereotypes associated with these institutions that lead to inferences about whether the intent of the institution is acceptable or not, influencing likelihoods of selection. These stereotypes can be overturned, as we show and consistent with work by Turco (2012), who shows that revealed profit-oriented motives in businesses where these motives are thought to be at odds with customer commitment leads to rejection not only by customers, but by employees recruited with these values in mind. While previous work is less clear on what factors might determine whether the meaning of commercialization is acceptable or not, our study highlights how
information about commitment and authenticity can serve to filter the interpretation of such activities.

Implications for the Cognitive Underpinnings of the Multi-Category Penalty

Finally, our findings and theory have important implications for the literature on penalties for category spanning (e.g., Hsu, Hannan, and Kocak 2009; Negro and Leung 2012; Leung and Sharkey 2014). Recent work has highlighted the idea that variance in these category spanning penalties can be explained by differences in appreciation for spanning by different audiences (Pontikes 2012; Goldberg, Hannan, and Kovács 2016) or by the distance between the categories spanned (Kovacs and Hannan 2015). While previous work has focused on the relationship between macro level patterns and characteristics, we have provided evidence that the cognitive underpinnings of these penalties are, in some part, related to concerns about commitment to the focal audience. This is consistent with previous work on the idea that certain aspects of a firm’s identity can insulate a firm or social actor from identity-based penalties for category spanning (Phillips, Turco, and Zuckerman 2013; Sgourev and Althuizen 2014). While these studies show that status can insulate a firm from concerns about quality related to category spanning, we have shown that perceptions of a firm’s authenticity can explain differences in firms’ perceived commitment.

Finally, comparing our work to Phillips et al., (2013) also highlights an important empirical contribution to work on demand-side limits to boundary spanning and related diversification. While, Phillips et al., (2013) show qualitatively that a firm that diversifies into a related business is not safe from concerns about commitment, we have provided the first causal evidence that two firms that differ in their perceived commitment creates differences in
market selection when they attempt to diversify into related business areas. We have argued and shown that diversification will be penalized by consumers when it is perceived as a show of lack of commitment to a firm’s customers. Where activities serve as ambiguous signals of a firm’s intent, identity features, such as authenticity, can serve as the filter through which the activity is interpreted and insulate those who have it from penalties reserved for those who do not.
TABLES

Table 1 – Mediation analysis for Hypothesis 1, showing commitment concerns and perceived capability mediate the negative relationship between investor owned firms and likelihood of market selection after diversification.

<table>
<thead>
<tr>
<th></th>
<th>Model 1 DV: Likely to refer</th>
<th>Model 2 DV: Commitment Concern</th>
<th>Model 3 DV: Perceived Capability</th>
<th>Model 4 DV: Likely to refer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investor owned</td>
<td>-1.56*** (0.28)</td>
<td>-1.16*** (0.22)</td>
<td>-0.93*** (0.23)</td>
<td>-0.33 (0.19)</td>
</tr>
<tr>
<td>Commitment Concern</td>
<td></td>
<td></td>
<td></td>
<td>-0.74*** (0.08)</td>
</tr>
<tr>
<td>Perceived Capability</td>
<td></td>
<td></td>
<td>0.41*** (0.08)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>4.82*** (0.19)</td>
<td>3.68*** (0.15)</td>
<td>5.84*** (0.16)</td>
<td>5.15*** (0.68)</td>
</tr>
<tr>
<td>N</td>
<td>109</td>
<td>109</td>
<td>109</td>
<td>109</td>
</tr>
<tr>
<td>R2</td>
<td>0.23</td>
<td>0.21</td>
<td>0.13</td>
<td>0.73</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001
Table 2 - Mediation analysis for hypothesis 2, showing how perceptions of authenticity mediate the negative relationship between investor owned firms and commitment concerns after diversification.

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV: Commitment Concern</td>
<td>DV: Authenticity</td>
<td>DV: Commitment Concern</td>
</tr>
<tr>
<td>Investor owned</td>
<td>1.16***</td>
<td>-1.16***</td>
</tr>
<tr>
<td>(0.22)</td>
<td>(0.26)</td>
<td>(0.18)</td>
</tr>
<tr>
<td>Authenticity</td>
<td>-0.58***</td>
<td></td>
</tr>
<tr>
<td>(0.06)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>3.68***</td>
<td>5.28***</td>
</tr>
<tr>
<td>(0.15)</td>
<td>(0.18)</td>
<td>(0.34)</td>
</tr>
<tr>
<td>N</td>
<td>109</td>
<td>109</td>
</tr>
<tr>
<td>R2</td>
<td>0.21</td>
<td>0.16</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001
REFERENCES


Figure 1 shows the comparison of therapists reported likelihood to refer patients by ownership structure and whether the firm was diversifying its services or not growing at all (error bars represent 95% ci).
Figure 2 shows the comparison of therapists reported likelihood to refer patients by ownership structure and whether the firm was diversifying its services or not growing at all (error bars represent 95% ci).
Figure 3 shows the change in therapists reported commitment concerns within each ownership type, comparing a condition with no information about motives (Study 1) and a condition with additional counter-stereotype information about motives (Study 2).
Figure 4 shows the change in therapists reported likelihood to refer patients within each ownership type, comparing a condition with no information about motives (Study 1) and a condition with additional counter-stereotype information about motives (Study 2).


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