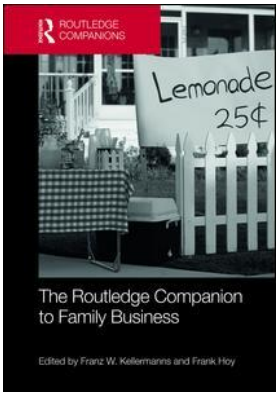

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19

MORE THAN A FEELING

The Promise of Experimental Approaches for Building Affective and Cognitive Microfoundations of Family Firm Behavior

David S. Jiang and Timothy P. Munyon

Introduction

"Do family firms really behave differently from nonfamily firms? If so, how and why are they different?" (Chrisman Chua & Sharma 2005, 567). Family firm scholars have long argued that family involvement and behavior in the firm leads family firms to have unique strategic outcomes relative to their nonfamily counterparts. Overlapping family and firm systems are thought to introduce family members' emotions and goals into management, enabling family firms' unique outcomes (Gómez-Mejía, Cruz, Berrone, & Castro, 2011). Despite intentions to integrate family and firm assumptions, family firm research has traditionally focused on family firms' unique strategic outcomes at the expense of not fully understanding the family members' cognitions, emotions, goals, and behaviors that drive them. Indeed, family firm research often: (1) builds broad assumptions about how structural aspects of the family, such as the number of family members in the firm or the number of generations involved in the firm, will impact strategic and firm-level outcomes and (2) uses distal firm-level proxies to latently measure family behavior (Berrone Cruz & Gómez-Mejía 2012; Morris & Kellermanns 2013). Consequently, the family firm literature's microfoundations, which we characterize as the family firm members' affective, cognitive, and behavioral factors that drive unique family firm outcomes, remain unnaturally constricted and generally untested.

There have been several calls for research to better understand the microfoundations of family firms (Berrone et al. 2012; Morris & Kellermanns, 2013; Pieper, 2010; Sharma, 2004). However, these calls often go unanswered because family firm scholarship lacks appropriate methodological precedent for capturing family emotions, cognitions, goals, and behaviors in family firm environments (Berrone et al. 2012; Kellermanns Dibrell & Cruz 2014; Morris & Kellermanns 2013). Here, recognizing that family firm assumptions are often inherently psychological in nature (Pieper, 2010), we argue that experimental approaches, especially when combined with other methods, can help build and extend research on family firm microfoundations. Psychological scholarship employing experiments finds that different contexts can change the nature and direction of expected relationships (Johns 2006; Taylor & Fiske 1978). With family firm research rarely focusing on how psychological factors and contexts within family firms drive behavior (Pieper 2010), we believe that experimental approaches can, therefore, play a vital role in opening new impactful avenues for family firm scholarship to explore.

Through our efforts, we hope that experimental approaches provide methodological tools that can help move research beyond a dichotomous view of family firms vs. nonfamily firms to an understanding of heterogeneity within and between family firms. However, we recognize that we cannot cover all of the necessary theoretical and methodological ground needed for this venture into the psychological microfoundations of family firm behavior within the page limits of this chapter. Therefore, we have purposefully focused on methodological concerns, recognizing that scholars can use their own theories to specify interesting relationships in experiments that push family firm research forward. In order to motivate our arguments and suggestions, we begin by outlining the shortcomings of correlational approaches and advantages of experimental approaches for the family firm scholarship. Then, we walk through various steps in experimental design processes. Finally, we conclude by discussing future directions and possibilities from which family firm scholars can use experiments to explore family firm microfoundations.

Correlational Approaches to Studying Family Firms

Correlational research approaches, especially archival and survey designs, are sturdy workhorses in family firm scholarship (Berrone et al. 2012). Although these approaches have offered tremendous insights about family firms' unique strategic behaviors and outcomes, they are not particularly suited for examining family firm microfoundations, or the causal effects driving these unique behaviors and outcomes (Kellermanns et al. 2014; Morris & Kellermanns 2013). There are several issues in an extant family firm research that leaves the causal drivers of unique family firm behavior up to question.

A heavy reliance on latent firm-level measures to make dynamic family-related arguments lies at the heart of these issues (Morris & Kellermanns 2013). By its very nature, family firm theorizing inherently involves multiple levels of analysis, spanning from the individual level to the family level and then to the firm level and beyond (Sharma 2004). However, a traditional focus on unique family firm strategic behavior has often led researchers to condense rich theoretical arguments that cross multiple levels into assumptions that are measured latently with only firm level proxies. These approaches not only leave core assumptions untested but can also lead to mixed results when researchers use similar proxies for different theoretical arguments (Boyd Gove & Hitt 2005; Ketchen Boyd & Bergh 2008). Additionally, family firm researchers often draw on atheoretical anecdotes and qualitative research from earlier stages of the field to make broad and general assumptions about how specific generational members in a family firm are expected to behave, using indications that these generations are involved in management or ownership to support their arguments about family firm behavior (Morris & Kellermanns 2013). Such approaches have helped explain unique firm behavior *when* certain family members are involved in the firm. However, these approaches fail to provide sufficient evidence to explain *why* and *how* family members cause unique firm behavior or *what* they do to cause it. Consequently, causal drivers behind unique family firm behaviors generally remain untested.

Why Do Family Firms Experiment? A Brief Overview of Experiments and Their Benefits

It is difficult to infer causality from current approaches to family firm research because family members' behaviors are generally not measured, leaving little room to assess the direction of relationships or account for confounding variables that might instead be driving the results. In order to infer causality, general tenets in philosophy of science argue that a research approach should account for: (1) the cause and effect occurring close in time, (2) the cause occurring

before the effect, (3) whether the effect does not occur without the presence of the cause, and (4) how alternative explanations can be ruled out (Hume 1748; Mill 1856). While many of these conditions are often met in family firm studies, few rarely address all four. Experimental designs, in contrast, have long been praised as an ideal gold standard across numerous research domains because they allow researchers enough control over conditions to address all four of the aforementioned principles (Campbell & Stanley 1963). For these reasons, experiments have long been the go-to method for psychologists interested in studying emotions, goal pursuits, and other human behaviors that family firm researchers generally assume but generally do not measure (Harmon-Jones Amodio & Zinner 2007).

Before providing examples of how family firm researchers can use experiments to explore family firm microfoundations, it is important to outline the general tenets and benefits of experiments. Experimental methods have several advantages that allow researchers to make stronger causal inferences than they can with correlational or other methods (Campbell & Stanley 1963). First, psychologists often rely on experiments for studying affective and cognitive phenomena because they allow more control over variables (Wilson Aronson & Carlson 2010). An experiment allows the researcher to isolate and manipulate a theoretically important variable (independent variable) to observe its effect on another important variable (the dependent variable). Random assignment ensures greater control because participants all have an equal chance of being in any group, thus reducing systematic biases and helping control for confounding relationships (Campbell & Stanley, 1963; Wilson et al. 2010). Indeed, random assignment acts as an important equalizer. When there is a large enough sample, random assignment to conditions helps reassure researchers that individual differences among participants are equally distributed across conditions. Any observed differences between conditions in the experiment are then likely due to the manipulation of the independent variable (Campbell & Stanley, 1963; Spencer Zanna & Fong 2005).

A Guide to Designing Experiments That Build and Extend Family Firm Microfoundations

At the core, two key attributes define an experiment: (1) participants are randomly assigned to conditions and (2) researchers manipulate independent variable(s) in conditions while holding other variables constant (Wilson Aronson & Carlsmith 2010). However, when considering how to design and execute an experiment, the process can be broken into five basic steps: 1) setting the stage, 2) constructing the independent variable, 3) measuring the dependent variable, 4) conducting post-experimental procedures, and 5) considering additional steps to extend findings. Capturing these steps and providing recommendations, Table 19.1 summarizes important points that can help family firm scholars design experiments that extend family firm microfoundations. In the following sections, we walk through these steps while considering how different aspects of family firm literature can also be taken into account.

Setting the Stage

Compared to methods that employ archival data or latently measure variables through firm level proxies, experimental efforts to examine the causal root of family firm decision-makers' actions require more invention and direct access to desired family firm populations (cf. Zellweger et al. 2012). When designing a family firm experiment, scholars can manipulate the context within which family firm members make decisions and therefore are afforded opportunities to ascertain the effects of family members' emotions, goals, and other theoretically relevant variables

Table 19.1 Experimental Design Steps and Recommendations

Experimental Design Steps	*Recommendations*
1. Setting the Stage	– Determine whether experimental (e.g. between subjects or within subjects) design is appropriate
	– Utilize a context that is theoretically relevant and psychologically consistent with the research question
	– Consider using a cover story that maximizes participant attention and minimizes bias
	– Anticipate whether additional methods can be used to offset weaknesses or strengthen findings of the experiment
2. Constructing the Independent Variable	– Assign participants randomly to conditions
	– Keep independent variable free from all other sources of variation
	– Manipulate independent variable seamlessly so participants are unaware
	– Utilize manipulation checks to increase validity and mitigate biases
3. Measuring the Dependent Variable	– If using a cover story, make sure dependent variable fits the story
	– Measure behavior or physiology if possible
	– Disguise self-report dependent variables to reduce bias
4. Conducting Post Experimental Procedures	– Check with participants about research clarity
	– Check for participant bias or suspicions
	– Educate participants about the research
	– Make sure participants leave in a good state of mind
5. Considering Additional Ways to Extend Findings	– If doing programmatic research, consider which methods can offset weaknesses of findings
	– Use different operationalizations of the same variables to increase confidence in findings
	– Replicate and extend findings across studies

on important outcomes. Because researchers have more control in experimental studies than correlational studies, family firm scholars that employ experiments have the ability to examine core but often directly untested assumptions of the family firm literature.

Researchers must, therefore, take great care to set the stage, or context, for family firm experiments so that, theoretically, interesting relationships that extend family firm microfoundations are not confounded but instead shine through. Family firm researchers have several experimental tools at their exposure, such as vignette study and conjoint analysis experimental approaches (e.g. Aguinis & Bradley 2014). However, we believe that traditional social psychological experiment approaches that employ cover stories, or some form of misdirection and/or deception, are especially powerful for research questions intended to extend the affective and cognitive microfoundations of family firm behavior. Indeed, experiment participants are generally intelligent and curious adults that might change responses to conform to social expectations or what they believe the experimenter intends to measure. Cover stories that misdirect participants from the true purpose of the study but still provide a sensible, internally consistent, pretext and rationale for the context enriches both data collection efforts and the chances that participants do not detect the true intent of the study (Wilson Aronson & Carlson 2010).

It is important to note that researchers try to consider fully what is required of the research question, allowing them to frame a cover story that is as theoretically tight and psychologically plausible (Harmon-Jones Amodio & Zinner 2007). Often, less is more with experimental design. If a simple setting or context successfully provides a plausible cover story and captures the attention of participants, then there is little need to expand or embellish a cover story. However, in contrast, for more complex research questions and in-depth micro-oriented theoretical problems, it might be harder to capture the attention of family firm owners than general population managers or employees. In many cases, cover stories that selectively embellish key details can increase the validity of research designs (Harmon-Jones et al. 2007; Wilson et al. 2010).

For example, suppose family firm researchers want to understand how family business members directly respond to the threat of potential family firm failure. Researchers could try addressing this research topic through a vignette experiment asking family business participants what decisions they might pursue or what emotions they might experience if they learned that their business was likely to fail. However, critics argue that a vignette experiment by itself might not necessarily capture how participants react to stimuli in reality (Aguinis & Bradley 2014). Family business experimenters have stronger chances of realistically arousing strong emotions and more realistic decisions when they craft a cover story that is selectively embellished with real contextual features tied to the participant's family business. For instance, experimenters could present family firm decision-makers with a cover story that they are demoing a financial forecasting software program. Using this cover story, participants would enter information about their business in a faux software program with the expectation that they receive realistic feedback about their business' future projections. The plausibility of the cover story can be enhanced by being administered in sales or a professional environment, such as that of a tradeshow. In reality, regardless of what financial and nonfinancial information participants enter into the faux software, they are randomly assigned to a "projected business failure" condition, "projected business survival" condition, or a control condition. One could go further to provide advertisement material for the faux software that also serves as an independent variable manipulation that accompanies the business failure independent variable manipulation. Dependent variables such as family members' emotional reaction to the threat of failure or intended actions to mitigate potential business failure could be captured in a faux customer feedback survey incorporated at the end of this software demo cover story.

The point we are making with the above example is that when conducting a family firm experiment that aims to manipulate and examine aspects of family members' thoughts, feelings, or actions, the reasoning for the cover story should be as airtight as possible. Researchers must carefully set the stage, considering how the context of a cover story addresses the research question of interest while also keeping family business participants unaware of the true intent of the study. There are accumulated benefits that come from carefully designed experiments. Although all variables of interest might not tightly fit into one experiment, as we will elaborate more on later, researchers can combine other similar but slightly differing tightly designed experiments and well-executed research methods with an experiment to make stronger causal inferences for family firm related phenomena (cf. Eid & Diener 2006).

Constructing the Independent Variable

Experiments cannot test their hypotheses unless their independent variables manipulate what they are supposed to manipulate. Consequently, independent variable construction is one of the most important and difficult aspects of experimental design (Wilson et al. 2010). In order to be theoretically rigorous, researchers should design independent variable manipulations that are as

free of other sources of variation as possible. Similarly, comparing a manipulation to a control group can be extremely useful. Control groups fundamentally allow researchers to understand how participants not exposed to the stimuli would respond, providing a stronger causal inference than even "high" or "low" levels of a stimulus. In a perfect world, it is useful to randomly assign participants to varying levels of a stimulus or a control. Researchers must also be cautious about priming participants using pre-tests or instructions, as this can introduce a variety of spurious influences into findings via social desirability, self-presentation, and even deviance mechanisms. Pre-recorded instructions are one way of ensuring that participants receive the same information and non-verbal cues concerning an experiment.

When constructing independent variables, researchers begin with conceptual variables, which are the theoretically important variables that the experimenter thinks will have a causal effect on the desired dependent variable (Wilson et al. 2010). Understanding the nature of the conceptual variable, the researcher is tasked with designing a manipulation or procedure in the experiment that captures the nature of the conceptual variable as perfectly as possible without influencing other factors (Harmon-Jones et al. 2007; Wilson et al. 2010). There are several effective vehicles for independent variable manipulation, including audiovisual stimuli (Rottenberg Ray & Gross, 2007), interaction tasks (Roberts Tsai & Coan 2007), mental image or memory recall tasks (e.g. Shteynberg Hirsch Galinsky & Knight 2013), and vignettes (Aguinis & Bradley 2014), that can be used to operationalize a conceptual variable. Recognizing this, below we will discuss how various potential cognitive and affective manipulations can be operationalized in studies intending to extend the microfoundations of family firm behavior.

Cognitive Manipulations

Family firm research has long argued that family firms differ from nonfamily firms because the overlap between family and firm systems leads family members to think differently about their business and pursue different goals than their counterparts in nonfamily firms (Chrisman et al. 2005; Gómez-Mejía et al. 2011). Although latent measures in family firm research often leaves these assumptions untested (Morris & Kellermanns 2013; Kellermanns Dibrell & Cruz 2014), psychological research has long relied on experimental manipulations to activate cognitive constructs and goal-relevant knowledge so that experimenters can examine their effects on behavioral outcomes (Förster Liberman & Friedman 2007; Higgins 1996; Taylor & Fiske 1978). Indeed, working with a limited amount of available attention, the human mental system has a remarkable capacity to both consciously and unconsciously recognize cues that activate goals (Förster et al. 2007). From a cognitive psychological perspective, goals operate as desired end states. Knowledge about specific goals is stored in ways such that certain stimuli can make it accessible and activated in cognition, instigating "top of head phenomena" that guides behavior (Higgins 1996; Taylor & Fiske 1978). Consequently, research finds experimental manipulations can be used to prime goals and cognitive states in ways that mirror real psychological processes (Higgins 1996; Förster et al. 2007). Cognitive priming could especially be useful for manipulating family firm goals such as having better environmental performance (Berrone et al. 2010), ensuring succession (Zellweger et al. 2012), engaging stakeholders (Cennamo Berrone Cruz & Gómez-Mejía 2012), or maintaining a spiritual mission (Kellermanns, 2013), and other goals that are mentioned but often latently measured in the family firm literature.

When manipulating theoretically relevant goals in a family firm experiment, it is important to recognize relevant goal-priming principles (See Förster et al. 2007 for a review) such as *goal shielding*, which occurs when mental representations of competing goals are inhibited by the mere activation of a focal goal (Shah Friedman & Kurglanski 2002). Goal priming principles

suggest that successfully manipulated goals will elicit a participant behavioral and/or attitudinal response. Thus, manipulations may be used to prime participants to consider specific family or firm goals during an experiment. For example, maintaining family control has been an important theoretical goal and variable in several family firm studies. If interested in understanding how individual family members actually react to changes in family control, researchers can ask participants in one condition to consider how they would respond if their companies were subjected to an initial public offering (IPO) or hostile takeover that reduces or eliminates family control. The experimenter wouldn't necessarily be interested in their response as much as in eliciting participant cognitions concerning (lost) family control.

Subtle manipulations can also be used to capture the correspondence between goals and participant behaviors. For example, asking participants to show pictures of or discuss loved family members during an interview could be useful for activating goals such as family cohesion, continued family control, or family succession in participants' cognition. On a different note, family firm scholars have used firm level proxies to argue that family firms pay greater attention to environmental performance (Berrone et al. 2010). Yet, research has shown that some companies engage in "greenwashing" to the public when they espouse environmental values only in communications (e.g., Dahl 2010), and it is plausible that the same phenomenon could occur in family firms. To test whether family firm participants actually practice their espoused beliefs concerning environmental practices (cf. Berrone et al. 2010), one could use a subtle manipulation where participants are offered a bottle of water or soda during an interview or task. By continuing the simulation until the bottle was empty, the researchers could see if the participants place the empty bottle in a recycling bin or wastebasket when leaving the interview or task. Placing the wastebasket in the lab and the recycling bin outside would demonstrate additional effort as long as the researchers could demonstrate (perhaps through a pilot) that participants were aware of the recycling bin's presence.

Affect Manipulations

Emotion and affect can be very complex phenomena. There are several differences in emotional states that should be taken into consideration when designing a study. At its core, the choice of emotion, mood, or both must reflect the theoretical questions being asked. It is also critical to measure affective states appropriately since they fluctuate by moment, hour, time of day (e.g., morning, afternoon, evening), day, week, or in general (see Watson & Clark 1997 for related discussion). Affective states are also thought to fluctuate according to set individual rhythms (Frijda 1988). Thus, experiments incorporating affect must first decide which type of affect to use, and then decide at what point in time its measurement is most appropriate. After selecting the appropriate affective state and considering how it will be measured, it is critical to consider how the affective state of the participants will be manipulated (or not altered in the control condition). This is where a cover story can be useful, incorporating details that fit the appropriate affective state researchers are trying to capture while also keeping participants from understanding the true purpose of the experiment itself.

In their research on anxiety and negotiation outcomes, Brooks and Schweitzer (2011) undertook four experiments that manipulated participant anxiety in negotiation tasks. In the first experiment, these researchers exposed participants to several minutes of music from either the movie *Psycho* (anxious condition) or Handel's *Water Music: Air* (neutral condition) while they worked on a negotiations task. In this study, participants were given the cover story that they were needed to evaluate music as part of a separate study unrelated to their negotiations. In the second study, the researchers changed the operationalization of the independent variable

so that video clips were used to induce emotions in the negotiation task. Then, Brooks and Schweitzer (2011) used the same video manipulations in study 3 and study 4 but changed the dependent variable to examine different theoretically related outcomes in negotiations. In each of these studies, participants were given a cover story that shrouded the true purpose of the study. However, it is important to note that the cover story did not include a risk of significant harm to participants. The cover stories were also used because of the risk of contamination and bias should participants uncover the true purpose of the study. Of course, this implies that cover stories may be unnecessary in studies where such social desirability or participant awareness concerns are less of a risk.

Cover stories are also less needed when well-validated manipulations are used. For example, Lang, Bradley, and Cuthbert (1999) produced an emotional stimulus measure that exposes participants to a selection of more than 600 pictures that induce discrete emotions. Robinson and Clore (2001) tested this measure to ascertain whether participants would report similar levels of emotion when responding in a concurrent simulation or online context. Their findings suggest that participants in the concurrent simulation experienced more fear, anxiety, and excitement than participants in the online condition when exposed to the commensurate slides. However, it is also notable that participants in both settings had largely convergent estimates, implying that discrete emotions may be consistently manipulated in either setting.

Although such "off the shelf" measures are intuitively attractive, we advocate that researchers consider how the overt manipulation of emotion may inform participants about the underlying purposes of the research, which can result in spurious variance. For example, the Lang et al. (1999) measure has been used to test a variety of physiological responses that accompany emotional activation (reviewed in Robinson & Clore 2001). Such applications are not prone to social desirability or participant awareness concerns in the same manner as social science applications.

Subtle ways of eliciting emotion often rely on the senses or interpersonal interaction (see Harmon-Jones Amodio & Zinner, 2007 and Roberts Tsai & Coan 2007 for reviews). The aforementioned Lang et al. (1999) measure accomplishes this through the visual presentation of pictures. Brooks and Schweitzer (2011) incorporated music (i.e., sound) as their manipulation, and this could easily be modified. For example, unpleasant traffic and construction sounds may be used to elicit negative emotions, while exposure to positive sounds like singing birds may be used to elicit positive emotions or put individuals in positive or negative mood states before completing a family firm related experimental task. Similarly, pleasant or unpleasant odors can activate emotion and modify mood. Certain smells may also elicit memory recall and concomitant emotion in individuals. Even touch may elicit emotions and modify moods based on the participant's comfort and interaction with an environment.

Manipulation Checks

To insure that researchers have indeed manipulated what they intended to manipulate, it is important to incorporate manipulation checks in the experiment. Manipulation checks can be direct or inferential, but are essential to ascertain if and how experiments function. Direct manipulation checks involve interviewing or surveying participants before and after exposure to a given manipulation. Inferential manipulation checks involve observing participants and inferring the presence of manipulated states based on differences in behavior. For example, strong activated emotions, such as anger and surprise, often manifest outward physiological signs in the participant. The advance of inferential manipulation checks is that the researcher reduces the probability of influencing the results through observer- or subject-expectancy effects. However,

inferential manipulation checks should only be used when manipulation checks would unduly prime participants or represent an intrusion to the experimental process. Inferential manipulation checks also necessitate coding by outside observers, increasing the research burden.

Conversely, direct manipulation checks often include pre- and post-test surveys or interviews. The former reduces the possibility of observer-expectancy effects; although, subject-expectancy effects are still a possibility. Ideally, manipulation checks are designed in intervals and with a cover story that reduces the prospect of incurring bias. For example, manipulation checks in the software demo example offered earlier could be incorporated in the customer feedback survey part of the cover story under the guise of better understanding how the software affects feelings of prospective customers. In experiments where participant-expectancy effects are not viewed as detrimental, direct manipulation checks may simply involve giving individuals a standard survey to complete while being debriefed. The advantage here is that such scales can easily be interpreted statistically to ascertain if the treatment(s) worked as intended. Such scales can also measure intervening mediator variables thought to underlie affective-cognitive processes.

Measuring the Dependent Variable

As mentioned previously, proper specification of an experiment requires forethought regarding the placement and manipulation of variables. However, there is sometimes a tendency for scholars to focus on manipulations at the expense of the criterion, or dependent, variable. This is certainly a possibility for family firm researchers, so here we will briefly discuss various approaches to collecting dependent variables and then review some of the potential levels of analysis that could be useful for extending family firm microfoundations.

A main dilemma that researchers face in measuring dependent variables in experimental research is whether to use self-report, physiological, or behavioral measures (Harmon-Jones et al. 2007). If researchers are using a cover story, the quality of the cover story and potential tradeoffs between types of measures that can plausibly be incorporated in it should be taken into consideration. Ideally, behavioral and physiological measures are preferred because, if properly disguised in a cover story, they are not as vulnerable to social desirability as self-report measures (Harmon-Jones et al. 2007; Wilson et al. 2010). However, the reality of the context for the cover story helps guide the appropriate use of a dependent variable measure. For example, it would be difficult to plausibly incorporate physiological measures (such as heart rate or hormone levels) in the software demo cover story mentioned earlier but self-reports (e.g. Watson Clark & Tellegen's 1988 PANAS scale) of emotional reactions can more easily be incorporated in the customer feedback survey aspect of the cover story. However, different cover stories that draw on narratives related to participant health and wellness in the workforce might be more suited for using physiological dependent measures.

Additionally, it is important for the dependent variable's level of analysis to fit the context of the research question. Family firm research has a tendency to make arguments about emotion and goal pursuits that are suited to individual and dyadic/family levels of analysis but that are instead measured at the firm level (Morris & Kellermanns, 2013). Research questions and designs aimed at individual and dyadic/family levels, as well as some firm level variables, could therefore be especially fruitful for disentangling theoretical confounds and extending family firm microfoundations. We discuss each of these variables in turn below.

First, there is significant opportunity to craft interesting research questions that measure dependent variables at the individual level of analysis. Researchers also have the widest range of options, such as self-report, behavioral, and physiological approaches, that can be used to

measure dependent variables at the individual level. While family firm research often focuses on firm-level variables, individual assumptions about specific generations or family members' emotions, commitments, trust, and actions in the firm often go untested (Gómez-Mejía et al. 2011; Pieper 2010). Additionally, there are opportunities for researchers to capture the subjective well-being or satisfaction that family firm members derive from their position in the firm. Context often drives how people individually respond to a situation (Johns 2006); picking appropriate individual level dependent variables from psychology and organizational behavior research can therefore add much needed depth to the family firm literature.

Second, researchers could develop research questions and designs that examine interpersonal concerns or family member dyads of interest, such as founder and successor or spouse dyads. Testing at the dyadic or family level requires the incorporation of more than one family member either directly within an experiment or indirectly as a part of the experiment. Altruism has long been an important topic in family firm research (Schulze, Lubatkin, Dino, & Buchholtz, 2001). Using multiple family members from a family, economists have used experimental procedures to examine altruism in family contexts (Peters Unur Clark & Schulze 2004). Such approaches could potentially be replicated in family firms or used to show how altruism in family firm contexts might differ. Additionally, researchers could evaluate factors such as shared attention (c.f. Shteynberg, 2015) towards important issues or conflict between family members (c.f. Kellermanns & Eddleston 2004; McKee, Madden, Kellermanns, & Eddleston, 2014) regarding the prioritization of specific goals or potential actions.

Finally, there is the strategic, or firm, unit of analysis. Testing at this level is difficult because the researcher must observe and measure behavior *in situ*, or enable participants to make prospective judgments regarding firm actions under varying conditions. The latter provide less valid results since behavioral intentions, rather than behaviors, are measured. For example, family firm leaders' financial valuations, propensity to sell to non-family members, divestiture or acquisition of units, and expansion goals might provide interesting prescriptions about family decision-makers' financial vs. nonfinancial concerns. When experimenting using firm-level dependent variables in the family firm member population, it is important to consider whether participants are positioned to adequately make the needed inferences. Thus, participant screening can also be a useful tool to ensure that participants are exposed to firm operations in a manner that enables them to adapt firm activities.

Conducting Post-Experimental Procedures

An experiment, especially if it employs a cover story, should not end after the researcher has collected the last dependent variable. When deception is used in an experiment, participants should gently be debriefed about the true purpose of the study as soon as possible after completing it. Debriefing participants has both important ethical implications and research design implications. We will briefly discuss these implications here.

When debriefing participants, researchers have three main goals: (1) to make sure that the participant leaves the experiment in a healthy frame of mind, (2) to explain and make certain that participants understand the importance and purpose of the study's hypotheses, manipulations, and outcomes, and (3) to gain feedback on the effectiveness of the manipulations and procedures so as to discern whether participants were able to identify the true intent of the study (Harmon-Jones et al. 2007; Wilson et al. 2010).

When deception is involved in a research design, depending on the severity, manipulations can pose potential risks such as stress or emotional distress. Therefore, it is important for researchers that use deception to be cognizant of how the study is debriefed.

Consequently, researchers often have to approach debriefing in a thoughtfully deliberate and caring way. A best practice approach to debriefing is to first ask the participants if they have any questions about the experiment. If they do not, then the experimenter should ask the participant to discuss whether they thought the instructions and purpose for the experiment and each part of it was clear. Furthermore, it is good to explain that people react to experimental studies in many ways and ask them how they feel they were affected by the experiment. Following a logical flow like this allows the experimenter to probe for demand bias or participant awareness of the true intent of manipulations while gradually and gently debriefing participants.

Considering Additional Efforts That Can Extend Experimental Findings

We have continually emphasized the importance of using experiments to extend theoretical microfoundations supporting unique family firm behaviors. Indeed, independent variable manipulations allow experimenters to observe how family members actually react to change, helping avoid common pitfalls associated with latent measures in the family firm literature. However, it is important to note that not all variables of interest for a research question can always fit into one study. When researchers want to delve deeper to rule out alternative explanations or explore a family firm phenomenon further, a multimethod approach can be used to triangulate and potentially extend and strengthen the results of an experiment. Indeed, multimethod research programs are a common practice in social psychology and organizational behavior scholarship (Eid & Diener 2006). Scholars in these areas put a great deal of thought into how each study builds on and enhances the previous one. Researchers employ multiple studies to offset weaknesses or alternative explanations for one study with the research design of another study. Such an approach could be extremely useful for scholars who want to extend the microfoundations of family firm behavior. Experiments can be bolstered with several types of research designs, such as additional experiments, experience sampling methods, surveys, qualitative studies, and archival studies. Below we provide some examples of published research and potential methods that can be combined with experiments to create a stronger theoretical impact.

Additional Experiments

It is a common practice in social psychology to offset the weaknesses of one experiment with other experiments. Brooks and Schweitzer's (2011) research on anxiety and negation provides an excellent example of how several experiments can be used to reinforce and enhance research findings. Whether it is with another between-subjects design or a within subjects design, social psychologists often try to replicate but slightly vary the design between experiments. These scholars often use different operationalizations of independent and dependent variables to build additional confidence in the experimental results. This is accomplished by demonstrating what researchers intended to manipulate was indeed manipulated not only once but also across different settings and with different samples.

Surveys

Additionally, an experiment can often be combined with a carefully crafted survey that first helps establish correlational relationships of a phenomenon. After establishing correlational relationships in a survey, an experiment can be used to examine the causal mechanisms underlying the relationships. As an example, Fast and colleagues' (2013) research examined the role of

manager self-efficacy in soliciting employee voice. To address this research topic, the researchers first used a field survey to find support that managers who have lower self-efficacy are less likely to solicit employee voice. Then, wanting to establish a stronger causal direction for this relationship, these researchers manipulated low self-efficacy in an experiment to show that it leads to less solicitation of employee input. Considering that there are several psychological relationships in the family firm literature that are implied but not directly tested, similar approaches that first establish a relationship with a survey and then examine the causal roots with an experiment could prove very beneficial for extending family firm microfoundations.

Experience Sampling Methods

Considering that emotions are temporally situated and occur in response to events that change valued goal pursuits, experimental approaches are some of the most appropriate methods for researchers that want to examine different emotional reactions between groups experiencing various levels of a theoretical important variable. However, researchers that want to replicate or extend experimental findings to also account for within person affective or cognitive states over time and in a more ecologically valid setting can pair their experiment's findings with experience sampling methods (Beal & Weiss 2003). Experience sampling methods are useful because they provide a systematic way to collect samples of ongoing affective states, cognitions, and/or behaviors in real time. For example, Seo and Barrett (2007) used experience sampling to examine how emotional and financial concerns interact in decision-making during a stock-investment simulation that went on for 20 consecutive business days, finding interesting results that suggest more intense feelings aided decision-making performance in this financial task. Just as Seo & Barrett (2007) examined emotional and financial tradeoffs, family firm scholars could use experience-sampling methods to test financial and nonfinancial tensions that are often emphasized in several areas of family firm theory. Furthermore, family firm researchers could strategically utilize experience-sampling methods by selecting a specific time where emotions would especially be expected to influence family firm phenomena. For example, Trougakos et al. (2008) conducted an experience sampling study where they were interested in how breaks helped increase positive emotional settings in service related areas of work. Drawing inspiration from this approach, family firm scholars could select specific times that factor into a particular facet of a theory. For family firm scholars that want to examine how specific emotional states change commonly held theoretical relationships, such fine-grained micro-oriented data from experience-sampling approaches could really help increase ecological validity and extend experimental results.

Qualitative Studies

Researchers interested in the processes and the meaning behind family firm decisions might find it worthwhile to explore multimethod investigations that include both experiments and qualitative methods. Indeed, qualitative methods such as ethnographic, case study, grounded theory, content analysis, or discourse analysis, can be used to assess meaning of decisions or the processes that either lead to or follow particular family firm decisions that are examined in an experimental study. For example, consider the approach that Raaijmakers and colleagues (2014) took for understanding tensions in time to compliance decisions under different types of institutional complexity. In this article, the authors were interested in how long it would take decision-makers to comply with a coercive demand. Using a vignette experiment, the experimenters varied institutional pressures from the government to comply with a new law

and coworker support of the law. Following the experimental vignette, researchers interviewed participants on the steps and processes they would take to deal with compliance. Using this interview data, they had both information about a experimentally controlled decision and processes that participants would follow to address their decision, allowing them to use grounded theory qualitative methods to come up with a process model for delay in decision compliance. For family business researchers, a similar design approach could be useful for studying family behavior related to succession, reputational concerns, or ties with outside stakeholders to understand the meaning, processes, or sense making behind specific family firm decisions.

Archival Studies

As we mentioned earlier, a large portion of family firm research draws on indirect proxies from archival data. These studies shed light on unique family firm strategic outcomes but are not clear on factors that influence these strategic outcomes. Thus, for researchers interested in delving deeper into causality leading to the unique strategic outcomes examined in these types of studies, it might be fruitful to pair archival data with experiments that mirror conditions believed to precede strategic outcomes of interest. This can help open new possibilities for building research on family member behaviors driving specific strategic outcomes.

Discussion and Future Directions

In this chapter we offered guidelines for designing experiments that can extend family firm scholarship's affective and cognitive microfoundations. Family firm research up to this point has largely used distal firm level proxies across archival and survey studies to infer that emotions, particular goal pursuits, and/or behaviors drive unique family firm decisions. While these methodological approaches have made tremendous strides advancing the family firm literature, they focus on the outcomes and not the causes of unique family firm behavior. Here, we have argued that to better understand causal relationships driving unique behaviors and firm outcomes, researchers cannot only rely on latent measures but must also have enough control over the study to isolate and manipulate variables of interest. Experiments, especially when paired with other studies that complement their strengths and offset their weaknesses, provide researchers with methodological tools that can unpack the family firm literature's microfoundations. The advice that we offer in this chapter is meant to serve as guidelines and is definitively not meant to be exhaustive. Indeed, as we hope we have shown, there are numerous theoretical benefits that experimental design can provide the family firm literature. However, here we would like to discuss what we believe to be three important implications and future research directions.

Motivated to build a body of work that shows how, why, when, and where family firms differ from nonfamily firms, over three decades of family firm scholarship provides evidence that family firms do behave differently than nonfamily firms (Chrisman et al. 2005 Sharma 2004). Focused on differentiating family firms' unique strategic outcomes from nonfamily firms' strategic outcomes, extant family firm scholarship has provided sufficient evidence suggesting that family firms are indeed different. In this way, family firm research has answered its first generation question (Are family firms different from nonfamily firms?) and now faces its second generation questions concerning how, why, and when family firms are not only different from nonfamily firms but also how family firms differ from each other. Experimental methods offer a greater degree of control and precision over variables and study conditions that will allow family firm researchers to get at the heart of the microfoundational relationships supporting unique family firm behaviors.

Applying creative theoretical approaches to the guidelines and suggestions offered in this chapter can help family firm scholars observe family member behavior and processes behind unique family firm outcomes. Manipulating specific emotions and goals in experiments can add depth and a psychological base to the family firm literature in ways that encourage scholars to move beyond structural and dichotomous views of family firm relations. Indeed, family firm research tends to paint broad portraits of how first generation family members might act vs. later generation family members or how family members might react differently to events than nonfamily members. With experiments, first and later generations can be treated as separate samples that receive the same experimental treatment (i.e. replication) and stronger, more nuanced, inferences about each generation's behaviors can therefore be drawn from comparison between samples. The same ideas can be applied to samples of family members vs. nonfamily members to hopefully uncover more nuanced differences and theoretical implications than are currently found in the literature.

Finally, when seeking to extend family firm microfoundations, there is a rich methodological tradition and numerous theoretical models that family firm scholars can exploit in their experiments. Social psychologists and organizational behavior scholars often use experiments to explore research questions tied to emotion and goal theories. By combining family firm scholarship's core assumptions with psychological theories in experiments, family firm scholars have the opportunity not only to extend family firm theory but also to challenge broader management theories. In order to garner interest from other disciplines, family firm experiments can be used to show the limitations or boundaries of commonly held assumptions about emotion and goal pursuits.

In conclusion, there is significant opportunity for both family business and organizational behavior scholars to begin building the microfoundations of family firm behavior. We believe that experiments can play an important role in these efforts. Integrating psychology and family firm theory will surely provide a strong base for interesting research that not only examines family firms' unique strategic outcomes but also the family members' causal roles in shaping those outcomes. As research on family firms continues to grow we hope that researchers will begin exploring these avenues, accounting for unique family behaviors within firm contexts.

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