RESEARCH STATEMENT

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"Life is a perpetual instruction in cause and effect." - Ralph Waldo Emerson

OVERVIEW

I am interested in how employees' understanding of cause and effect influences an organization's ability to form and execute effective strategies. Figuring out the causal relationships between strategic choices that generate organizational performance is essential for employees to make sense of what's happening and to decide what to do next. But making good causal judgments in organizational contexts is hard due to the complexity of strategic environments, the disagreements that often come with selecting a causal direction, and the difficulty of testing whether these cause-and-effect models actually work. Thus, my research asks: how do employees' causal beliefs affect an organization's strategic success and how can organizations help their employees' form consensus on more effective causal understandings? Using formal modeling, computational simulation, AI methods such as large language models (LLMs), and empirical analysis, I study the relationship between employees' causal understandings and organizational strategy. In pursuit of this interest over the past five years of my PhD, I have published three papers and have four full working paper drafts.

MOTIVATION AND RESEARCH APPROACH

In my work I argue that causal understandings, such as theories and causal narratives, are core drivers of successful strategic decisions. This is because causal mental models are more parsimonious models of the complex strategic environment than associative ones – causal models are always simpler representations and are often more accurate ones as well. Building on the theory-based view of strategy, I show that the simple structure of causal models leads to better performance when forming and executing strategy.

However, I am also interested in the inherent disagreement that selecting a causal direction is likely to form, something I call the 'chicken-and-the-egg' problem of causality. Everyone can agree the chicken and the egg are related, but in selecting a causal direction to the relationship (first the chicken, then the egg or vice versa) disagreement is more likely. My published work on the sociology of interpretation suggests that the selection of an interpretation is likely a socially negotiated process. I argue that representing the world causally may increase the disagreement between employees in that process, but I show how organizations may be able to mitigate the possible divergence generated by causal thinking through structuring work.

My methodological approach, which includes formal modeling and computer simulation, as well as empirical investigation, is uniquely suited to my research question. The foundational questions of whether and why causal understandings are better than other models for selecting successful strategies or forming consensus are difficult to parse out in the noise of the real world. I am an invited member of several formal modeling groups who are enthusiastic about these formal approaches in business research, including the theoretical organizational modeling society (TOM) and the ION Management Science Lab (Utah) where I serve as a fellow. However, I also acknowledge how essential context is in strategy research, and I am working on several research proposals that empirically test my theoretical work.

The response to my work, in the publication of both an empirical paper (in *Humanities and Social Sciences Communications*) and two theoretical pieces (in *Annual Review of Sociology*

and in *European Economic Review*), has encouraged me in the pursuit of this line of research. My theory work, which was a finalist for the Edgar Schein Best Paper Award, has allowed me to engage deeply with the theory-based view of strategy and managerial cognition communities. And my four working papers, which form a research agenda for causal understandings in the search for strategies, represent my curiosity and enthusiasm for developing my own understanding of the relationship between employees' causal thinking and organizations' strategic outcomes.

WORKING PAPERS

Below I outline two of my solo-authored working papers on causal understandings, which represent two instances of unpacking the relationship between employee causal understandings and organizational strategy.

First, in my solo-authored job market paper, "*Any Old Theory Will Do: Why Cause-and-Effect Performance Links Form Parsimonious Mental Models of Complex Strategic Environments"* I tackle the question of why mental models based on cause-and-effect performance links help decision-makers find better strategies than models based on associations. Using both a formal model and computer simulation, I show that mental models with cause-and-effect links more effectively navigate the trade-off between simplicity and accuracy of representation as environments become more complex. This parsimonious representation by causal mental models leads to better performance, where decision-makers using a mental model with cause-and-effect links consistently select more performant strategies across complex strategic environments.

While my job market paper focuses on how causal models help individuals make better strategies, my second solo-authored paper "*First the Chicken, Then the Egg: How Ordering Strategic Choice Helps Organizations Learn and Decision-Makers Disagree"* looks at how these models affect group consensus in organizations. I explore the idea that choosing a cause-and-effect direction—like deciding whether the chicken or the egg came first—can create more disagreement than just seeing these choices as associated. I introduce a concept of causal models called d-separation, which describes when two strategic choices are disconnected in a causal model. I argue that when employees have d-separated experiences, they're likely to disagree on causal understandings. My findings show that how organizations structure work can influence whether this disagreement occurs, and I suggest ways to design employee experiences to support better consensus.

My other two working papers—including a 'lab-in-the-field' experiment of start-up founders' narratives, and a theoretical paper using the Ising model to study strategic alignment in the pursuit of multiple goals—continue to focus on how the formation and divergence of causal understandings affect organizational performance.

OUTLINE OF FUTURE WORK

My current work argues that causal understandings help create successful strategies but also can cause disagreement in organizations. In the future, I plan to test this theory through empirical research and explore how organizations can balance the advantages and challenges of causal understandings through tools such as narratives and AI. Aligned with this goal, I am pursuing several early-stage projects.

First, I'm developing a set of projects to test my theory papers above in collaboration with other scholars engaging in the theory-based view of strategy, who emphasize theories as an

effective tool for entrepreneurial experimentation. In addition to actively searching for a field site to test whether causal understandings can generate more innovative and performant strategies, I have also crafted an experiment proposal to test whether employees with d-separated experiences are more likely to disagree on what causes what in their organization. This project uses experiments where participants see the same strategy from different perspectives to ask: do people with d-separated experiences form different causal understandings of their organization's strategy? If so, which structures of organizational strategy might mitigate this disagreement?

Second, extending work with my advisor Amir Goldberg on the "*Sociology of Interpretation*" published in the *Annual Review of Sociology*, we develop a theory of narratives as causal models made relative to interpretations. Using ideas from the semantic theory of possible worlds, we argue that narratives can only be understood and evaluated when an interpretation of the narrative is specified, and we outline a formal method for analyzing causal narratives this way.

Finally, I'm working on a stream of research using AI to both help identify causal models in text and to improve strategic decision-making. In a paper co-authored with Professor Jon Atwell, we study how AI can help map the different models people hold. Large Language Models (LLMs) tend to favor the most common associations held in a population. We're asking: can we use this bias—and other signals in the LLMs—to uncover what models people hold and how common they are? Our early results with BERT show how this model weights associations relative to their true occurrence in the population, and we're now testing a newer model (Llama) to refine and confirm our findings.

I was also recently invited to attend an AI and Strategy conference, where strategy scholars involved in OpenAI, Google, and research on AI for strategic decision-making debated the question: can AI do strategy? Our conversation highlighted that while AI is an impressive technology, it often lacks the causal reasoning ability to make effective strategic decisions. I am interested in exploring how AI can be an effective tool for strategy and how humans and AI technology can work together to improve causal reasoning and strategic choice.

Overall, my future work builds on the theory I developed during my PhD about how causal understandings affect organizational strategy and how organizations can help employees agree on better causal understandings. One of the best parts of being a scholar has been the opportunity to continuously learn from my collaborators, my faculty, and my students. Since all research involves a little 'me-search', I hope my work brings me into a new community with colleagues and students that help me grow my own causal understanding of our complex world.