FOUNDATIONS

"Well begun is half done"

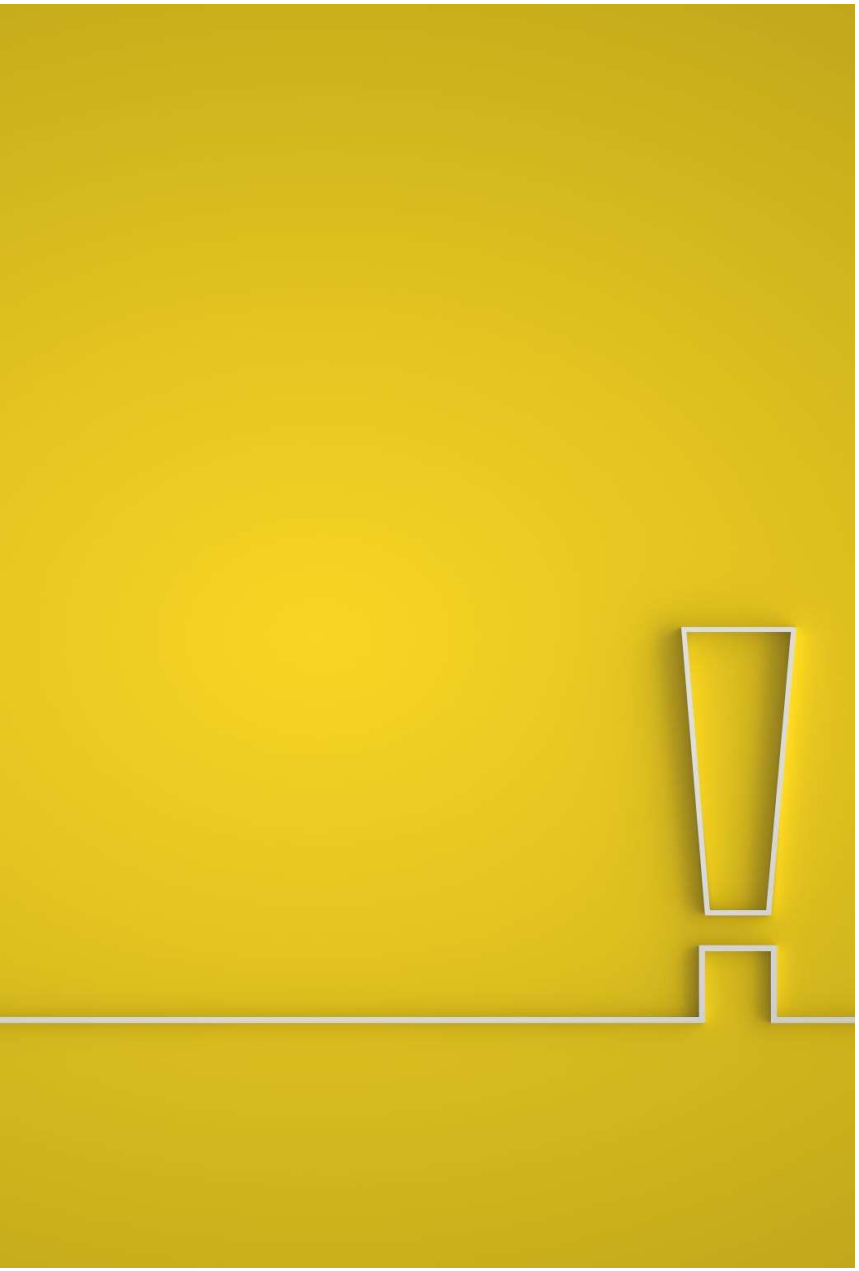
(Aristotle in Trochim & Donelly (2007: 25))

QUANTITATIVE RESEARCH METHODS (4336) | 20.03.2024

CONSTANZE KERRES (11740147) | CLARISSA SCHOTT (12128760)

Agenda

- Introduction
- Vocabulary & Language
- Philosophy of Research
- Ethics in Research
- Discussion
- Conclusion
- Questions?



Why should we care?

AS RESEARCHERS, WHY SHOULD WE CARE ABOUT THE UNDERPINNINGS, FOUNDATIONS, AND LANGUAGE OF RESEARCH?

Join at menti.com | use code 2574 0514

Vocabulary & Language

HOW DO WE TALK ABOUT METHODOLOGY

AND WHAT DOES IT IMPLY?

SMS | Strategic Management Journal

RESEARCH ARTICLE | Full Access

Being extraordinary: How CEOS' uncommon names explain strategic distinctiveness

Yungu Kang, David H. Zhu, Yan Anthea Zhang

First published: 23 August 2020 | https://doi.org/10.1002/smj.3231 | Citations: 23

Funding information: National Natural Science Foundation of China, Grant/Award Number: 71628202; Fudan University

[Correction added on 24 July 2021, after first online publication: The copyright line was changed.]

Building upon recent theories and studies in social psychology on relational self, which explains why people with uncommon names tend to have a self-conception of being different from peers, we investigate how CEOs with more uncommon names may exhibit a self-perception of being different from peers and accordingly pursue greater strategic distinctiveness—the degree to which a firm's strategy differs from the strategies of other firms in the same industry (Crossland, Zyung, Hiller, & Hambrick, 2014; Geletkanycz &

Example Study

Types of Studies

Descriptive: describe what is going on
Relational: identify a relationship between variables
Causal: one variable causes outcome variable

"Building upon recent theories and studies in social psychology on relational self, which explains why people with uncommon names tend to have a self-conception of being different from peers, we investigate how CEOs with more uncommon names may exhibit a self-perception of being different from peers and accordingly pursue greater strategic distinctiveness"

What type of study is the example study?

- Descriptive
- Relational
- Causal

Time in Research

Cross sectional: takes place at single point in time

Longitudinal: over time (several waves of measurement)

- Repeated measures: few waves of measurement
- Time series: many waves of measurement over time

"Our sample frame consists of all companies in the Execucomp database between 1998 and 2016. We chose this time frame because data on some key variables has been available only since 1998. […] Missing values for variables (primarily the dependent variable) reduced our final sample to 1,172 firms and 8,449 firm-year observations between 1998 and 2016."

What type of study is the example study in relation to time?

- Cross-sectional
- Longitudinal

Unit & Level of Analysis

Entity that you are analysing

"Building upon recent theories and studies in social psychology on relational self, which explains why people with uncommon names tend to have a self-conception of being different from peers, we investigate how CEOs with more uncommon names may exhibit a self-perception of being different from peers and accordingly pursue greater strategic distinctiveness—the degree to which a firm's strategy differs from the strategies of other firms in the same industry"

What is the unit of analysis in the current study?

- Individual
- Group
- Social interactions
- Artefacts
- Organization
- Field

Nature of Relationship

Correlational relationship: two variables perform in a synchronized manner
Causal relationship: one variable causes the other
Third-variable problem: unobserved variable accounting for correlation

"Building upon recent theories and studies in social psychology on relational self, which explains why people with uncommon names tend to have a self-conception of being different from peers, we investigate how CEOs with more uncommon names may exhibit a self-perception of being different from peers and accordingly pursue greater strategic distinctiveness—the degree to which a firm's strategy differs from the strategies of other firms in the same industry"

What is the nature of relationship identified in the study?

- Correlation
- Causation

Causal Claims

Causal claims are based on propositional reasoning (if…then) with the underlying assumption of regularity.

Theoretically interrelate a set of events (A and B) into specific contingent statements (“if-then” arguments) suggestive of a causal connection.

Reflecting on the example study,

what could be the risk of that?

Cornelissen & Kaandorp (2023)

The Idea of Causal Triangulation

"Researchers should focus their efforts on strengthening their causal claims by iterating across multiple theoretical vantage points and addressing multiple conditions for claiming a causal inference" (p.836)

- Idea of strengthening causal claims through theoretical triangulation
- Causal matters are not always a "method" issue regarding replication or reliability, but they can also be a theoretical issue
- As a theoretical issue, causation needs to be approached with a diverse set of reasoning strategies and theoretical angles to widen the fields of vision

Cornelissen & Kaandorp (2023)

Counterfactual Reasoning

"An effective approach would be to compare and contrast different inferential strategies when assessing the grounds for a causal claim, thereby building up a composite picture of the causal process(es) that may be at work" (p.851)

Systematically altering part of a presupposed causal scenario

- Purported antecedent cause (A)
- Transitive process
- Outcome (B)

- Does the same effect (strategic diversity of firms) occur in the absence of the proposed cause (CEO's uncommon names)?
- Would a different set of transitive processes have also led to the same outcome?
- What could be alternative antecedents to the observed effect?

Cornelissen & Kaandorp (2023)

Reverse Causal Search

"Reverse" search for regularities

- What may enable of affect A?
- What causes B?
- Why would we assume that A causes B?

- What causes strategic distinctiveness of firms?
- Why would we assume that uncommon names of CEOs cause strategic distinctiveness of firms?
- What may enable or affect uncommon names of CEOs?

Gelman, A., & Imbens, G. (2013)

Pattern of Relationship

Positive relationship: high values on one variable associated with high levels on other
Negative relationship: high on one, low on other

"Building upon recent theories and studies in social psychology on relational self, which explains why people with uncommon names tend to have a self-conception of being different from peers, we investigate how CEOs with more uncommon names may exhibit a self-perception of being different from peers and accordingly pursue greater strategic distinctiveness"

What is the pattern of relationship identified in the study?

- No relationship
- Positive relationship
- Negative relationship
- Curvilinear relationship

Variables

Strategic distinctiveness (attributes)

- (a) advertising intensity (advertising expense/sales)
- (b) inventory level (inventories/sales)
- (c) plant and equipment newness (net plant and equipment/gross plant and equipment)
- (d) research and development (R&D) intensity (R&D expense/sales)
- (e) nonproduction overhead (selling, general, and administrative expense/sales)
- (f) financial leverage (total debt/equity).

CEO name uncommonness: we calculated the commonness of a CEO's given name as the frequency of its appearance (by gender) in the SSA national data set on given names between 1880 and 2016

"Being extraordinary: How CEOS' uncommon names explain strategic distinctiveness"

Is "CEOs uncommon names" the dependent or independent variable?

- Dependent
- Independent

Hypothesis

Alternative Hypothesis: The more uncommon a CEO's name, the greater the firm's strategic distinctiveness.

What would be the null hypothesis in this case?

Philosophy of Research

PHILOSOPHICAL UNDERPINNINGS OF DOING RESEARCH

Ontology – Epistemology – Methodology

Ontology: Understanding what it means to exist (Metaphysics).

Epistemology: Studying how we come to know something (Knowledge).

Methodology: The specific ways that we can use to understand the world better (Methods).

Why does this matter?

Positivism & Post-Positivism I

Positivism:

In its broadest sense, positivism is a **rejection of metaphysics**. It is a position that holds that the **goal of knowledge is simply to describe** the phenomena that we experience.

Post-Positivism:

The rejection of positivism in favour of a position that **one can make reasonable inferences** about phenomena based upon **theoretical reasoning combined with experience-based evidence**.

Skyrms (2000), Hume (1748/ 1988), Popper (1935/ 2002), Lakatos (1978), Trochim & Donelly (2007), Mras (2023).

Positivism

Historical background:

- Emerged in the 19th century, influenced by Enlightenment ideals and the rise of empirical sciences.
- Prominent figures: Hume, Smith, Mill

Philosophical underpinnings:

- Rejection of metaphysics, advocating for a focus on observable phenomena.
- Belief in determinism and the idea that science can uncover objective truth through empirical observation.

Implications for research:

- Emphasis on empiricism and the scientific method.
- Prioritization of direct observation and measurement in research.

Specific role of knowledge:

- Knowledge is seen as descriptions of observable phenomena.
- Science aims to predict and control the world by uncovering natural laws through empirical investigation.

Skyrms (2000), Hume (1748/ 1988), Trochim & Donelly (2007), Mras (2023).

Post-Positivism

Historical background:

- Emerged as a reaction to and critique of positivist views, gaining prominence in the late 20th century.
- Prominent figures: Kuhn, Schlick, Carnap, Neurath, Popper, Lakatos

Philosophical underpinnings:

- Rejects the idea of a single, objective reality that can be fully known.
- Emphasizes the fallibility of observation and the theory-laden nature of knowledge.

Implications for research:

- Advocates for the use of multiple methods and perspectives to understand reality.
- Acknowledges the role of bias and cultural influences in shaping knowledge.

Specific role of knowledge:

- Knowledge is seen as provisional and subject to revision.
- Objectivity is viewed as a collective endeavor rather than an individual trait.

Popper (1935/ 2002), Lakatos (1978), Trochim & Donelly (2007), Mras (2023).

Positivism & Post-Positivism II

Differences

Epistemological stance:

- Positivism asserts that knowledge aims to describe objective reality, while post-positivism highlights the fallibility of human observation and the theory-laden nature of knowledge.

Role of objectivity:

- Positivism sees objectivity as achievable by individuals through adherence to scientific methods, whereas post-positivism views objectivity as a social construct achieved through criticism and multiple perspectives.

View of reality:

- Positivism assumes a deterministic, knowable reality, while post-positivism acknowledges the limitations of human understanding and the complexities of multiple perspectives shaping reality.

Similarities

Rejection of metaphysics:

- Both positivism and post-positivism reject metaphysical explanations in favor of empirical investigation and observation-based knowledge.

Acknowledgment of empirical methods:

- Both perspectives recognize the importance of empirical methods in scientific inquiry, although post-positivism emphasizes the need for complementarity with other approaches.

Evolutionary nature of knowledge:

- Both positivism and post-positivism acknowledge the revisable nature of knowledge, although they differ in their views on the achievability of objective truth and the role of individual bias.

Skyrms (2000), Hume (1748/ 1988), Popper (1935/ 2002), Lakatos (1978), Trochim & Donelly (2007), Mras (2023).

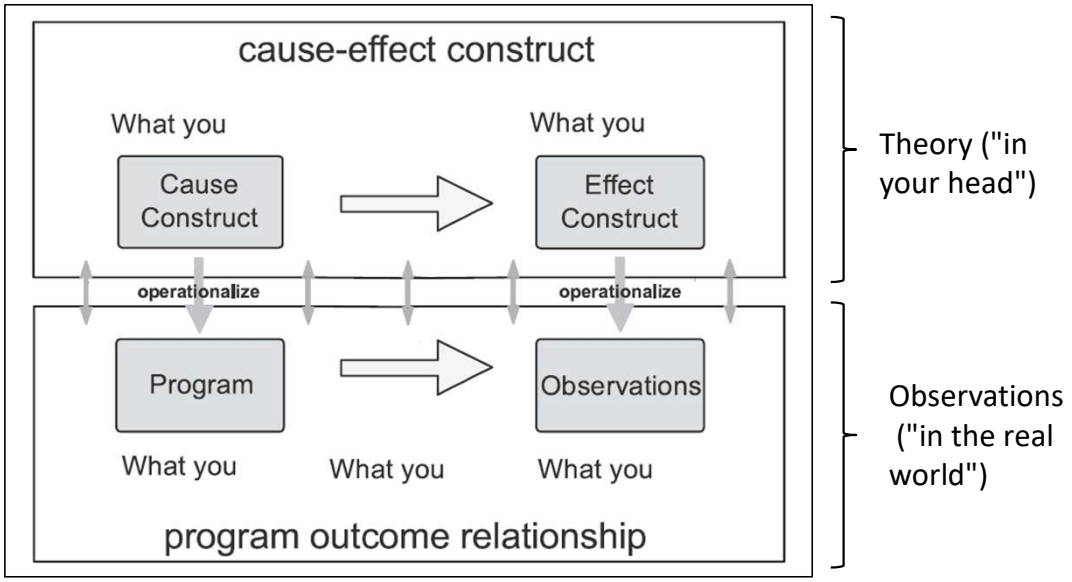
Critical Realism	The belief that **there is an external reality independent of a person's thinking** (realism) but that **we can never know that reality with perfect accuracy** (critical).
Subjectivism	The belief that there is **no external reality** and that the world as you see it is solely a **creation of your own mind**.
Constructivism	People who hold a philosophical position that maintains that **reality is a conceptual construction** (they can be realists or subjectivists).

… and beyond

TROCHIM & DONELLY (2007).

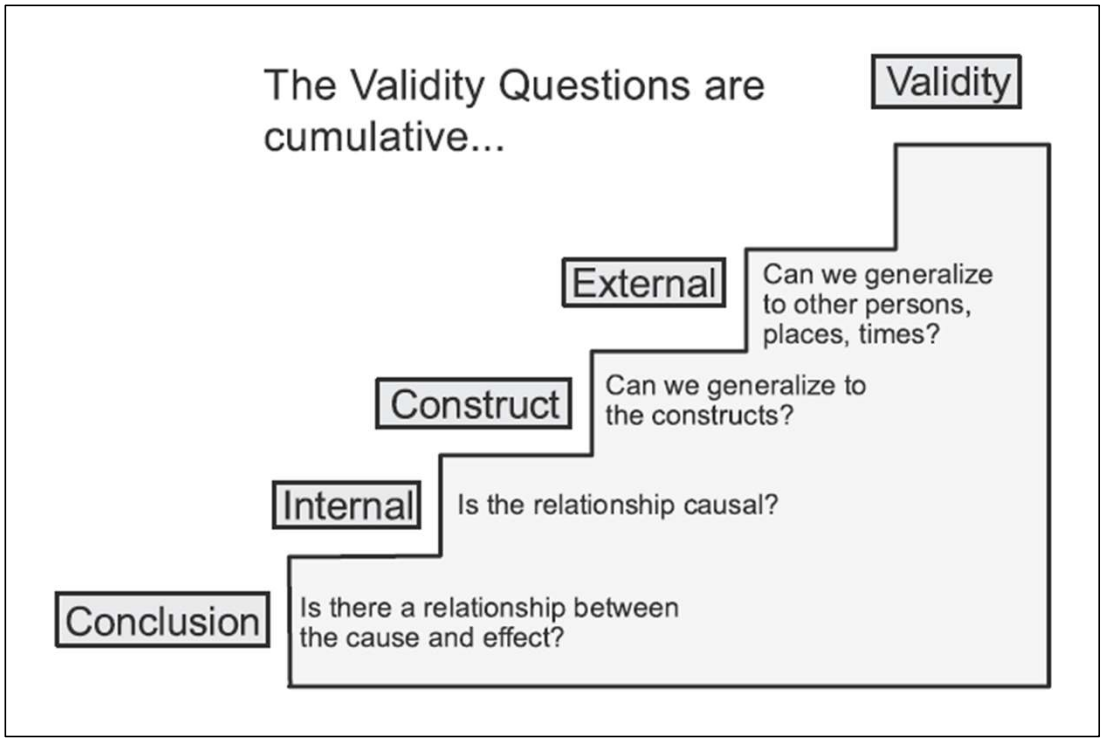
Validity I:
Realms and Components of Research

Validity: "The best available approximation to the truth of a given proposition, inference or conclusion."
(Trochim & Donelly (2007: 21)



Trochim & Donelly (2007: 21)

Validity II:
Steps of Validity



Trochim & Donelly (2007: 22)

- Each type of validity corresponds to a specific methodological question.
- Each type presupposes an affirmative answer to the previous one.
- Underlying these, is a (causal) research question.

Ethics in Research

THINKING ABOUT ETHICAL BEHAVIOUR IN RESEARCH

Voluntary Participation: The principle of voluntary participation requires that people not be coerced into participating in research.

Informed Consent: This means that prospective research participants must be fully informed about the procedures and risks involved in research and must give their consent to participate.

Confidentiality: Almost all research guarantees the participants confidentiality – they are assured that identifying information will not be made available to anyone who is not directly involved in the study.

Anonymity: The stricter standard is the principle of anonymity which essentially means that the participant will remain anonymous throughout the study – even to the researchers themselves.

Right to Service: When that treatment or program may have beneficial effects, persons assigned to the no-treatment control may feel their rights to equal access to services are being curtailed.

IRB: Most institutions and organizations have formulated an Institutional Review Board (IRB), a panel of persons who reviews grant proposals with respect to ethical implications and decides whether additional actions need to be taken to assure the safety and rights of participants.

(Trochim & Donelly, 2007: 24)

Basics in Conducting Research

Hume's ‘Is-Ought’ Fallacy

"Hume says here that no ought-judgment may be correctly inferred from a set of premises expressed only in terms of ‘is,’ and the vulgar systems of morality commit this logical fallacy. This is usually thought to mean something much more general: that no ethical or indeed evaluative conclusion whatsoever may be validly inferred from any set of purely factual premises."

Stanford Encyclopedia of Philosophy (2004)

Discussion

What is our responsibility as researchers?

- Does our responsibility end with the *descriptive* (e.g. stick to describing the "is")?
- Or should we also investigate and push for what we *should* do (e.g. also be concerned with the "ought")?
- Does this perspective change in light of "grand challenges"? How?

- What is our responsibility as researchers in terms of world-making?
- What kind of worlds do our theories, research instruments, and publications create?
- Which inclusions and exclusions are we reproducing through our research?

Conclusion

WHAT CAN WE LEARN FROM THIS?

Again, why should care about this?

Join at menti.com | use code 2574 0514

Key Message

The foundations of research are not only vocabulary and language but imply fundamental considerations and require substantial thought and care.

Talking about methodology does not only entail talking about "methods" and "tools" but relates to questions of ontology and epistemology.

No matter the study, our role as a researcher entails many responsibilities.

THANK YOU

QUESTIONS?

Bibliography

Cornelissen, J., & Kaandorp, M. (2023). Towards stronger causal claims in management research: Causal triangulation instead of causal identification. *Journal of Management Studies*, 60(4), 834-860

Gelman, A., & Imbens, G. (2013). Why ask why? Forward causal inference and reverse causal questions (No. w19614). National Bureau of Economic Research.

Hume, D. (1988). *An Enquiry concerning Human Understanding – My Own Life – An Abstract of A Treatise of Human Nature.* Open Court Publishing Company.

Kang, Y., Zhu, D. H., & Zhang, Y. A. (2021). Being extraordinary: How CEOS'uncommon names explain strategic distinctiveness. *Strategic Management Journal*, 42(2), 462-488.

Lakatos, I. (1978). *The Methodology of Scientific Research Programmes.* Cambridge University Press.

Lipton, P. (1991). Contrastive explanation and causal triangulation. *Philosophy of Science*, 58(4), 687-697.

Mras, G. (2023). Qualitative Research Methods (1469). Vienna University of Economics and Business MyLearn (https://learn.wu.ac.at/dotlrn/classes/pool/1469.23w/one-community?page_num=0).

Popper, K. (2002). *The Logics of Scientific Discovery.* Routledge.

Stanford Encyclopedia of Philosophy (2004). *Hume's Moral Philosophy.* Hume's Moral Philosophy (Stanford Encyclopedia of Philosophy)

Skyrms, B. (2000). *Choice and Chance – An Introduction to Inductive Logic.* Wadsworth.

Trochim, W. M. K. & Donelly, J. P. (2007). *The Research methods Knowledge Base* (3rd edition). Atomic Dog.