Learning to be sustainable (?)

Julian Barg
julian@jbarg.net

Ivey Business School

2021-03-02

Last time around...

1. Data in search of question

Last time around...

1. Data in search of question
2. Why learning?

Last time around...

1. Data in search of question
2. Why learning?
3. Sustainability & Learning

Last time around...

1. Data in search of question
2. Why learning?
3. Sustainability & Learning
4. What data do I need?

Table of Contents

Objective

What I **am** doing

- Expand on last presentation
- Show my thinking
- Test out the argumentation of my thesis

What I am **not** doing

- Traditional paper presentation

Invitation to conversation!

Table of Contents

Definitions[1]

1. Reliability: is the learning outcome public, stable, and shared

[1] March et al. (1991)

Definitions[1]

1. Reliability: is the learning outcome public, stable, and shared
2. Validity: does learning aid in understanding, prediction, and control

[1] March et al. (1991)

Valid learning

Creation of quantitative/mental models that inform in advance or lead to desirable states.

- Robust climate models (Manabe & Wetherald, 1967; Forster, 2017)

  vs. invalid learning

- Surprising, unpredicted arctic ice loss (Guarino et al., 2020)

Definitions[1]

1. Reliability: is the learning outcome public, stable, and shared
2. Validity: does learning aid in understanding, prediction, and control

[1] March et al. (1991)

Reliable learning

Developing a mental or formal model that is widely accepted.

- Collective learning process (Wright & Nyberg, 2017)
- Bridging epistemic communities (Aronczyk & Espinoza, 2019)

vs. unreliable learning

- Unintentional or deliberate rejection of learning (Hermwille & Sanderink, 2019; Koontz & Thomas, 2018)
- Persistent resistance or ignorance (Boudet et al., 2020)

What keeps valid knowledge from being reliable?

Example of conflicts

- Biases (e.g., Makov & Newman, 2016)
- After building coalition, validity of knowledge in doubt (e.g., Aronczyk & Espinoza, 2019; Wright & Nyberg, 2017)
- Entrenched invalid learning (e.g., Boudet et al., 2020)
- Knowledge gap between layman and (relative) experts (e.g., Camilleri et al., 2019)
- Self-interest (Rerup & Zbaracki, 2021)

Example I

Maguire and Hardy (2009)

1. # Summarize MH using their language

Examples

MH Figure 1

Pipeline figure 1

Example II

Pipeline industry

1. # Summarize pipeline industry using my language

Table of Contents

Why should we (sustainability researchers) care about reliability & validity?

Sustainability theory I

Validity–
Environmental management

1. Organizational level narratives

Reliability–
Ecocentrism

1. Organizational level and above

2

[2] For now borrowing terminology from Purser et al. (1995)

Sustainability theory I

Validity–
Environmental management

1. Organizational level narratives
2. Technology & clean-up

Reliability–
Ecocentrism

1. Organizational level and above
2. Greenwashing & pollution

2

[2] For now borrowing terminology from Purser et al. (1995)

Sustainability theory I

Validity–
Environmental management

1. Organizational level narratives
2. Technology & clean-up
3. Rationality & bounded rationality

Reliability–
Ecocentrism

1. Organizational level and above
2. Greenwashing & pollution
3. Social constructivism

2

[2] For now borrowing terminology from Purser et al. (1995)

Sustainability theory I

Validity– Environmental management	Reliability– Ecocentrism
1. Organizational level narratives	1. Organizational level and above
2. Technology & clean-up	2. Greenwashing & pollution
3. Rationality & bounded rationality	3. Social constructivism
4. Learning diffuses horizontally	4. Learning meets counterforce

2

[2] For now borrowing terminology from Purser et al. (1995)

Sustainability theory I

Validity– Environmental management	Reliability– Ecocentrism
1. Organizational level narratives	1. Organizational level and above
2. Technology & clean-up	2. Greenwashing & pollution
3. Rationality & bounded rationality	3. Social constructivism
4. Learning diffuses horizontally	4. Learning meets counterforce

2

$\Rightarrow$ Underlying models of change & collective learning

[2] For now borrowing terminology from Purser et al. (1995)

Table of Contents

Exemplary phenomena

1. Industry-driven deregulation in Texas/Louisiana

Exemplary phenomena

1. Industry-driven deregulation in Texas/Louisiana
2. Pipeline spill into Houston River 94'

Exemplary phenomena

1. Industry-driven deregulation in Texas/Louisiana
2. Pipeline spill into Houston River 94'
3. Public/private differences

Thanks!

References I

Aronczyk, M., & Espinoza, M. I. (2019). Sustainable communication: Green PR and the export of corporate environmentalism, 1989–1997. *Environmental Sociology*, *5*(3), 308–322. https://doi.org/10.1080/23251042.2018.1564455

Boudet, H., Giordono, L., Zanocco, C., Satein, H., & Whitley, H. (2020). Event attribution and partisanship shape local discussion of climate change after extreme weather. *Nature Climate Change*, *10*(1), 69–76. https://doi.org/10.1038/s41558-019-0641-3

Camilleri, A. R., Larrick, R. P., Hossain, S., & Patino-Echeverri, D. (2019). Consumers underestimate the emissions associated with food but are aided by labels. *Nature Climate Change*, *9*(1), 53–58. https://doi.org/10.1038/s41558-018-0354-z

Forster, P. (2017). Half a century of robust climate models. *Nature*, *545*(7654), 296–297. https://doi.org/10.1038/545296a

References II

Guarino, M.-V., Sime, L. C., Schröeder, D., Malmierca-Vallet, I., Rosenblum, E., Ringer, M., Ridley, J., Feltham, D., Bitz, C., Steig, E. J., Wolff, E., Stroeve, J., & Sellar, A. (2020). Sea-ice-free Arctic during the Last Interglacial supports fast future loss. *Nature Climate Change*, *10*(10), 928–932. https://doi.org/10.1038/s41558-020-0865-2

Hermwille, L., & Sanderink, L. (2019). Make Fossil Fuels Great Again? The Paris Agreement, Trump, and the US Fossil Fuel Industry. *Global Environmental Politics*, *19*(4), 45–62. https://doi.org/10.1162/glep_a_00526

Koontz, T. M., & Thomas, C. W. (2018). Use of science in collaborative environmental management: Evidence from local watershed partnerships in the Puget Sound. *Environmental Science & Policy*, *88*, 17–23. https://doi.org/10.1016/j.envsci.2018.06.007

References III

- Maguire, S., & Hardy, C. (2009). Discourse and Deinstitutionalization: The Decline of DDT. *Academy of Management Journal*, *52*(1), 148–178. https://doi.org/10.5465/amj.2009.36461993
- Makov, T., & Newman, G. E. (2016). Economic gains stimulate negative evaluations of corporate sustainability initiatives. *Nature Climate Change*, *6*(9), 844–846. https://doi.org/10.1038/nclimate3033
- Manabe, S., & Wetherald, R. T. (1967). Thermal Equilibrium of the Atmosphere with a Given Distribution of Relative Humidity. *Journal of the Atmospheric Sciences*, *24*(3), 241–259. https://doi.org/10.1175/1520-0469(1967)024⟨0241:TEOTAW⟩2.0.CO;2
- March, J. G., Sproull, L. S., & Tamuz, M. (1991). Learning from Samples of One or Fewer. *Organization Science*, *2*(1), 1–13. https://doi.org/10.1287/orsc.2.1.1

References IV

- Purser, R. E., Park, C., & Montuori, A. (1995). Limits to Anthropocentrism: Toward an Ecocentric Organization Paradigm? *Academy of Management Review*, *20*(4), 1053–1089. https://doi.org/10.5465/amr.1995.9512280035
- Rerup, C., & Zbaracki, M. J. (2021). The Politics of Learning from Rare Events. *Organization Science*. https://doi.org/10.1287/orsc.2020.1424
- Wright, C., & Nyberg, D. (2017). An Inconvenient Truth: How Organizations Translate Climate Change into Business as Usual. *Academy of Management Journal*, *60*(5), 1633–1661. https://doi.org/10.5465/amj.2015.0718