

Message from Judea Pearl

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Dear colleague in causality research,

This is a belated End-of-Summer greeting from the UCLA Causality blog, welcoming you back to an open discussion of causality-related issues. Below please find four new postings and three hot topics for discussion.

1. New postings:

Three new papers and several lecture videos have been posted on our website.

1.1

Pearl and Bareinboim, "Transportability across studies: A formal approach" October 2010.

http://ftp.cs.ucla.edu/pub/stat_ser/r372.pdf

The paper introduces a formal representation for encoding differences between populations and derives procedures for deciding whether (and how) causal effects in the target environment can be inferred from experimental findings in another.

1.2

J. Pearl, "The Causal Foundations of Structural Equation Modeling" August 2010.

http://ftp.cs.ucla.edu/pub/stat_ser/r370.pdf

The paper summarizes how traditional SEM methods can be enriched by modern advances in causal and counterfactual inference.

1.3

Greenland and Pearl, "Graphical Analysis of Full and Partial Covariate Adjustment" June 2010.

http://ftp.cs.ucla.edu/pub/stat_ser/r369.pdf

The paper answers a commonly asked question: Would adjustment for one variable reduce, increase, or leave unchanged the effect of a second variable on a third. A complete answer is given in terms of causal diagrams.

1.4

Videos of Symposium Lectures

All lectures given at the UCLA Symposium on Heuristics, Probability and Causality (March 12, 2010) are now available on Youtube.

Heuristics Session:

<http://bayes.cs.ucla.edu/TRIBUTE/videos-heuristics.htm>

Probability Session:

<http://bayes.cs.ucla.edu/TRIBUTE/videos-prob-reasoning.htm>

Causality Session:

<http://bayes.cs.ucla.edu/TRIBUTE/tribute-videos.htm>

2. Discussions:

2.1

My open letter to Nancy Cartwright (posted in June) has received Cartwright's response, (link: [Cartwright2.doc](#)) accompanied by two of her recent addresses to the American Philosophical Society. (link: [Cartwright1.doc](#), [Cartwright3.doc](#)).

As you can see, Cartwright maintains that the structure-based theory of counterfactual does not answer the questions that policy makers wish answered, yet she does not provide (an example of) an input-output description of such a policy question.

Can we conclude perhaps that, once we cast a problem in an input-output description it becomes solvable by the structure-based theory?? I think so.

2.2

This summer witnessed an interesting discussion on causal inference between two camps of economists: the "structuralists" and the "experimentalists," the former acknowledge their reliance on modelling assumptions, the latter pretend they dont.

The discussion was published in the Spring 2010 issue of the Journal of Econometric Perspectives (vol 24 No 2), with Angrist and Pischke representing the "experimentalist" position and Leamer, Nevo and Keane defending the structural approach. Worth reading.

My view: To the extent that the "experimental" approach is valid, it is merely a routine exercise in structural economics. However, the philosophical basis of the "experimentalist" approach, as is currently marketed, is misguided and potentially dangerous, for it takes semblance to the CRT ideal to be its guiding principle. The fallibility of this paradigm has surfaced in a number of examples (e.g., http://ftp.cs.ucla.edu/pub/stat_ser/r363.pdf) and has given birth to a school of research that avoids making modelling assumptions transparent.

2.3

Another take on the "experimental - structural" debate is provided by Heckman (link: [heckman.pdf](#)) who reiterates the superiority of the structural over the Neyman-Rubin model, but falls short of identifying the key reason for that superiority. After all, the structural and potential-outcome approaches are

logically equivalent, differing only in conceptual transparency (see Causality pages 230-34).

If I had Heckman's platform, I would cite the inability of the "experimentalist" approach to encode counterfactual modeling assumptions in a transparent way, the bad practical advice that emerges from this deficiency (see http://ftp.cs.ucla.edu/pub/stat_ser/r363.pdf and the insecure, dismissive attitude that this deficiency engenders among its carriers (e.g., http://ftp.cs.ucla.edu/pub/stat_ser/r348.pdf)

As always, your thoughts are welcome and will surely be put into some good cause if conveyed to other blog readers.

Best

=====Judea Pearl