

A few comments and questions related to Ingeborg Waernbaum's lecture

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“A causal parameter is a measure of outcomes that would occur under *interventions*”

Can sex be a cause?

Gender perhaps, but not sex under the intervention assumption, implying that the individual could be both a woman and a man

”How the translation from the subject matter problem to a statistical model is done is often the most critical part of an analysis” (Cox)

Is the substantial theory on mechanisms relating causes to effects essential for causal explanations?

In my view, yes. Just observing an effect in a randomised trial is not enough

In RCTs "the estimated effect does not depend on that individuals selected to treatment were different to the controls"

In expectation no, but this cannot be assumed in the single case

Interpretations become particularly problematic if there are outliers in the experimental or control group

Cochran

“causal assumptions – hold under a randomized experiment”

Not necessarily true for the single case

This is why meta-analyses like the Cochrane and Cambell collaborations are important

”no unmeasured confounding”

This is of course well known and difficult to achieve – in social science the question of self-selection may be the most difficult problem to handle

”The causal effect of homework support on schoolgrades”

Do different groups of children react similarly on support?

The issue of external validity

Can the results from one study be exported to other contexts?

”Direct interpretation of a treatment parameter in a regression model”

Depends critically on the specification of the model in terms of the underlying theory

(As Ingeborg indicated)

”Propensity score regression”

Is the problem of confounding solved/easier to handle with propensity scores?

”The effect of education on health ... with income as a possible mediator”

Is education an intervention (and can the confounding factors be controlled – self-selection)?

It seems important to establish in what ways the acts and conditions of, say, those with different levels of education result in differing health, when causal conclusions are based on global variables like education and income

While it is important to study
the *effects of causes*,
it is essential that we don't forget the more fundamental question of
the *causes of effects*

Finally

Ingeborgs lecture was both interesting and very informative

Thank you