AMALGAMATING EVIDENCE ABOUT CAUSES

Medicine, the medical sciences, and beyond

Introduction

The amalgamation of a variety of diverse kinds of evidence to produce causal knowledge is a widespread challenge for scientists and those aiming to rely on causal claims in decision-making. This is acutely important in the biomedical sciences and in medical practice. In this project, we study the amalgamation of causal evidence in each of the following domains:

Clinical expertise

Is a physician's expertise a reliable guide to the effectiveness of medical interventions?

Effect sizes

How should we quantify the effects of an intervention, and amalgamate the results from diverse studies?

Diverse evidence

Is statistical evidence enough to establish causation, or do we also need other types of evidence, like mechanistic evidence?

Expert judgements

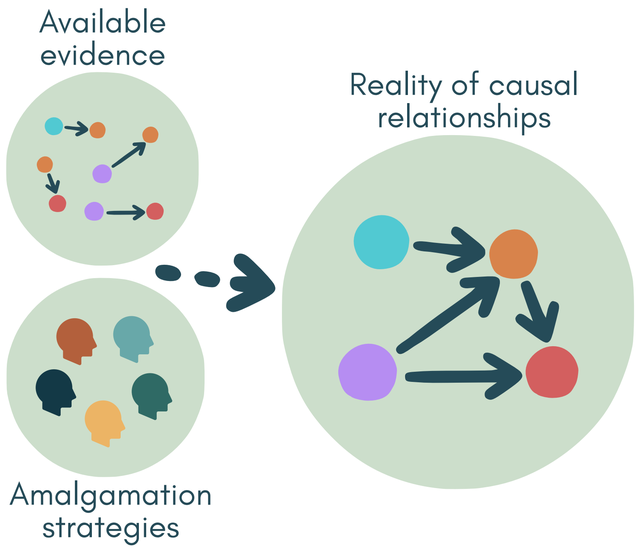
Under what conditions does expert consensus bring us closer to the truth?

WP A: Case Studies

Describe and assess methods of amalgamating evidence.

WP B: Foundations

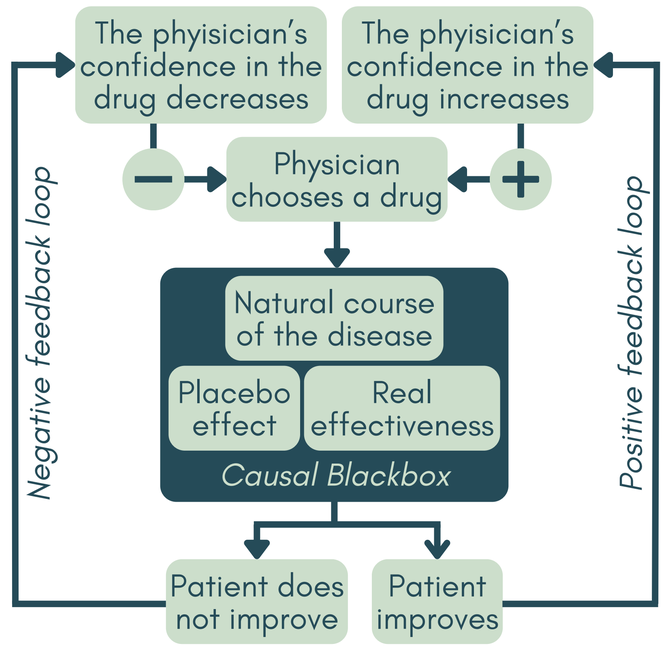
Develop philosophical and formal foundations for evidence amalgamation.



Which amalgamation strategy gets us closest to the reality of causal relations?

WP C: Simulations

Create virtual models to simulate methods of evidence amalgamation.



Stephan Hartmann

PI, LMU

S.Hartmann@lmu.de

Jacob Stegenga

PI, Cambridge

jms303@cam.ac.uk

Jürgen Landes

Postdoc, LMU

Adrià Segarra

Postdoc, Cambridge

Arts and Humanities Research Council

DFG Deutsche Forschungsgemeinschaft

UNIVERSITY OF CAMBRIDGE

LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN