

CAUSALITY - MODELS, REASONING AND INFERENCE

by Judea Pearl

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"Correlation does not imply causation." This is an often repeated admonition by our statistics or epidemiology professors to caution us that correlation alone is not sufficient for evidence of causation. If correlation does not imply causation, then what does? This is the central theme around the book "Causality: Models, Reasoning and Inference" by Judea Pearl, winner of the Turing Award 2011.

The book starts off by laying down the foundational groundwork for topics like probability, graphs and causal models. Inevitably, there is a good dose of mathematical representations of the concepts and theories presented. However, there are clear expositions of these concepts and theories which make them easy to follow.

The subsequent chapters introduce the various tools to identify and formalise causal inferential problems. These tools

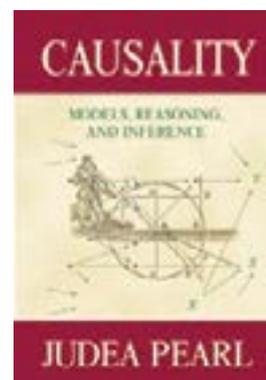
include structural equation which is a common recurring theme in the book as it fits the general framework of defining causal inference by Pearl.

Common issues plaguing causal inferences like Simpson's paradox and confounders are also explained. Finally, counterfactuals are presented to complete the model of causal inference that Pearl proposes.

This book is definitely not an easy read but the concepts presented are very understandable and within grasp of someone without much prior knowledge on the topic. With the wide interest in causality across domains, this book provides the reader with a framework to consider such problems.

It is a recommended read for anyone interested in any form of scientific inquiry that aims to determine causal relationships. Readers of the book should also know that

Professor Pearl is a regular participant on the Structural Equation Modelling Discussion Network (SEM-NET) mailing list where he readily discusses and clarifies many of the concepts he proposed in this book. The URL for information on the list is <http://www2.gsu.edu/~mkteer/semnet.html>.



Pearl, J. (2000). Causality: Models, Reasoning and Inference. Cambridge University Press.

NHG RESEARCH TRAINING CALENDAR

for February – March 2013

Date	Time	Training Programme	Venue	No of Seats
Ongoing	00:00 - 23:59	Proper Conduct of Research Online - Basic I & III (PC101 & PC103) Workshop	http://www.elearning.nhg.edu.sg	100
		Proper CConduct of Research – Basic II^ (PC102) Workshop		
20 – 22 Feb 2013	09:00 – 18:00	Biostatistics Workshop	PSB Academy, Level 2, E-202	25
22 Feb 2013	09:00-16:30	Proper Conduct of Research - Advanced II (PC302) Workshop	PSB Academy, Level 2, A-202	30
25 Feb 2013	09:00-18:00	Advanced Biostatistics Workshop	PSB Academy, Level 2, E-206	30
11 - 13 Mar 2013	09:00-17:00	Intellectual Property Seminar	NHG College (Jackson Square) Block B, Synergy 3	30

For registration and full details, please visit www.research.nhg.com.sg (Training & Education > Search for a Course)

*Dates are subjected to changes without prior notice

^For more information, refer to www.research.nhg.com.sg (Training & Education -> Proper Conduct of Research Courses)