

Introduction

Agency and causation in our indeterministic world

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ERC Project “Indeterminism Ltd.”



European Research Council

Established by the European Commission

- ▶ Five years, 2011–2015
- ▶ Three workshops and a conference
- ▶ This is the second workshop, after a kick-off event in January 2012



Universiteit Utrecht

Context: two projects

What is really possible? (NWO VIDI)

- ▶ “Philosophical explorations in branching-history-based real modality”
- ▶ Different notions of possibility
- ▶ Cues from natural language and from the sciences
- ▶ Main aim:
formal models for modality, tense, causation, substance

Indeterminism Ltd. (ERC StG)

- ▶ “An intervention on the free will debate”
- ▶ Interaction with current debate about free will experiments
- ▶ Main aim:
defensible libertarian (indeterministic) notion of free will



“Our indeterministic world”: Really?

Well, *is* our world indeterministic?

Clarify definition:

Our world is deterministic iff
there is only one possibility for the future to turn out
(Pertinent notion of possibility: real possibility)

Who is in charge of this question?

- ▶ Philosophy?
- ▶ Science?
- ▶ Philosophy and science in tandem?



“Our indeterministic world”: Arguments

Philosophical approach:

- ▶ There are phenomena for the proper conceptualization of which we need to assume indeterminism. E.g., agency. And we know that we act.

Scientific approach:

- ▶ There are phenomena that cannot be explained deterministically. E.g., quantum correlations. These phenomena are experimentally established beyond doubt.

Philosophy and science in tandem (I):

- ▶ The notion of experiment, central to modern science, collapses under determinism. There can be no science in a deterministic universe.

Philosophy and science in tandem (II):

- ▶ Technology



Technology: Quantum randomness

A technological example:

<http://www.idquantique.com/>



Agency, causation, and limited indeterminism

Arthur Prior (1962), "Limited indeterminism"

Quotes Jonathan Edwards (1754) on the will:

If it were so, that things only of one kind, viz. acts of the Will, seemed to come to pass of themselves; [. . .] this very thing would demonstrate that there was some Cause of them, which made such a difference between this Event and others, and that they did not really happen contingently. For contingency is blind, and does not pick and choose a particular sort of Events. Nothing has no choice. This No-Cause, which causes no existence, cannot cause the existence which comes to pass, to be of one particular sort only, distinguished from all others. Thus, that only one sort of matter drops out of the heavens, even water [. . .], shows that [. . .] something besides mere contingency has a hand in the matter.



Agency, causation, and limited indeterminism

Prior:

It is clear that this argument, if it is any good at all, will apply not only to those who say that the nature of acts of will is such that they (and they only) can occur causelessly, but also to anyone who says that the nature of *any* sort of event, say an electron's "jumping" from one limited set of orbits to another, is such that events of this sort, and of this sort only, can occur causelessly. But *is* the argument any good?



Agency, causation, and limited indeterminism

Prior:

We cannot and do not need to say that it is in the nature of “volitions,” or of certain volitions, which makes their coming-to-be possible but not necessary, and the nature of other non-existent or not-yet-existent occurrences which makes their coming-to-be either necessary or impossible. It is rather that there are certain already-existing objects which have certain capacities, and some which lack them, and non which have certain other capacities. Persons, say, have the power, without the necessity, of doing X in certain circumstances; for oysters, on the other hand, doing X may be necessary or impossible; and Y , say turning into a dragon, may be something which no existing object has the power to do.



Agency and causation in our indeterministic world

Focus of this workshop:

Can we make sense of causation and agency in our indeterministic world?

Wide spectrum of issues:

- ▶ Understand the physical/biological “implementation” of our agency
- ▶ Clarify technical approaches to representing indeterminism and agency
- ▶ Trace out conceptual interrelations between agency, causation, and possibility

