

## Norms to Explain By

### 1 Introduction

**Project:** Use expressivism/quasi-realism to rehabilitate an irrealist, empiricist-friendly conception of scientific explanation and explanatory relevance.

– (*Successful*) explanations: (correct) answers to why questions, i.e. reasons why

**Goal:** vindicate ordinary scientific discourse about explanation and relevance

– without assuming that these claims track/represent ontic relevance relations

**Internal Adequacy:** account for the (intelligible) claims and judgments internal to a given discourse, e.g. scientific explanatory discourse (Gibbard 2003)

- e.g. morality: vindicate “murder is wrong”; “altruism is good”
- Goal here: vindicate “greenhouse gas emissions explain climate change” and even “the correct explanation does not depend on us”

**Thesis:** to judge that an answer is explanatory is to express an attitude of *being for being satisfied by that answer* (express acceptance of a set of norms that permit this)

### 2 Explanatory Relevance Relations

**Descriptivist realism** (opponent): claims about explanatory relevance must:

- 1.) track or represent features of reality (*descriptivism*)
- 2.) purport to be objective and mind-independent (*realism*)

Rampant disagreement about ontic explanatory relevance relations  $R$ :

- Hempel (1965): laws are relevant; Skow (2016): only causes and grounds
- Strevens (2008): causal difference-makers; Lange (2017): sometimes, no causes
- Railton (1981) & Lewis (1986): *any* information about the event’s causal history

#### THREE PROBLEMS FOR DESCRIPTIVIST REALISM

- 1.) Epistemic: difficult to determine correct ontic relevance relations
- 2.) Requires unnecessary ontological commitments for aim of internal adequacy
- 3.) In tension with ordinary causal relevance relations used in science:
  - only one objective, mind-independent causal relevance relation: *complete causal history* (all events in explanandum’s backwards light cone)
  - But science uses more selective causal relevance relations (part of cone)

*Strategy:* reject descriptivism; vindicate objectivity and mind-independence

**WORRY:** how can non-descriptivism avoid an “anything goes” attitude?

Problem facing van Fraassen’s (1980) pragmatic account of explanation:

- context determines what counts as explanatorily relevant
- no ontological constraints on explanatory relevance relations
- Kitcher and Salmon (1987):  $\nu F$ ’s account cannot rule out “anything goes”
- *any* true proposition can be made into a maximally good explanation

*Response:* expressivism provides a non-descriptivist approach that can vindicate the objectivity and mind-independence of explanatory relevance

### 3 Expressivism about Explanation

**Descriptive claims:** represent states of affairs, mirror reality,  
– “straightforwardly factual” (Field 2009)

**Non-descriptive claims:** perform functional roles that do not represent reality

– e.g. express action-directed states of mind: norm-acceptance, being-for, planning

**Gibbard’s Norm-expressivism:**

- *Expressivism about moral wrongness:* to judge that murder is wrong is to express acceptance of a system of norms that permit disapproving of murder
- Extension of possible worlds semantics:
- Adjoin a non-descriptive set of norms  $n$  to each possible world  $w$ 
  - Descriptive-normative worlds, given by a pair  $\langle w, n \rangle$
  - $n$  settles what is obligatory, permissible, or forbidden

**Expressivism about Explanatory Relevance:**

- Descriptive component  $w$  tracks whether *explanantia* obtain (e.g. laws, causes)
  - phlogiston does not exist  $\Rightarrow$  cannot appeal to it in an explanation
- Normative component  $n$  settles norms on explanatory relevance:
  - 1.) Which relevance relation(s)  $R$  to use
  - 2.) What it takes to *optimally* satisfy a given  $R$ 
    - evaluative component of explanation
    - N.B.: bad explanations are still minimally successful explanations

**Relevance Expressivism:** “ $R$  is an *explanatory relevance relation* for questions  $Q$ ” expresses acceptance of a set of norms that permit using  $R$  to answer  $Q$ -questions

**Explanatory Irrelevance:** to judge that  $R$  is NOT explanatorily relevant is to express rejection of any set of norms that permit using  $R$  to answer  $Q$ -questions

– Recasting using Schroeder’s (2008) attitude of *being-for*:

- “Murder is wrong”: expresses attitude of *being for disapproving of murder*
- “ $R$  is a relevance relation” expresses attitude of *being for using  $R$*
- “ $R$  is not relevant” expresses an attitude of *being for not using  $R$*

**Explanatory expressivism:** to judge that an answer  $B$  to a why-question  $Q$  is *explanatory* (i.e. a reason why) is to express one’s acceptance of a system of norms that permits this answer. This amounts to *being for answering  $Q$  with  $B$* .

**Explanatory Failure:** To say that an answer is *not explanatory* is to express one’s rejection of any set of norms on explanation that permits this answer.

– Expresses attitude of *being for not answering this question with that answer*

– Explanations can be better or worse  $\Rightarrow$  need a gradated attitude:

- When an answer is explanatory, one ought to be *satisfied* by it
- When searching for an explanation, we are dissatisfied in some regard

**Explanatory expressivism<sub>gradated</sub>:** to judge that an answer  $B$  is explanatory to degree  $d$  is to express acceptance of a system of norms that permit being satisfied with this answer to degree  $d$ .

– Expresses attitude of *being for being satisfied by this answer to that degree*.

## 4 Vindication through Selective Minimalism

- Difficult for non-cognitivism to vindicate truth-claims within a discourse
- Contemporary expressivists embrace minimalism about truth (deflationism):

**Disquotation principle:** “ $p$ ” is true if and only if  $p$

- Vindicate “Relation  $R$  is explanatorily relevant for a class of questions  $Q$ ”

$\Rightarrow$  it is true that  $R$  is explanatorily relevant

- Vindicate “ $B$  explains  $P$ ”  $\Rightarrow$  it is true that  $B$  explains  $P$
- vindicates truth of scientific claims such as “lightning explains thunder” and “greenhouse gas emissions explain global warming”

## 5 Objectivity and Mind-Independence:

Must also vindicate internal claims about objectivity of explanation

- Higher-order norms recover objectivity and mind-independence:
  - prevent first-order norms from changing based on our attitudes
  - wrongness of tripping people is independent of people’s attitudes
  - Science: higher-order norms that explanation is not anything goes
  - Matters of explanatory relevance are not settled by scientific opinion

### TWO PROBLEMS

- **Instability problem:** why endorse one system of explanatory norms over any other?
- **Fallibility problem:** how to accommodate possibility of error, e.g. “I believe this explains it, but I could be wrong.”
- **Strategy:** provide an account of how norms improve (Horgan/Timmons 2015)
  - “ $B$  is explanatory, but I might be wrong” expresses the following attitude:
  - epistemically possible that better norms entail that  $B$  is not explanatory
  - **Stable** set of norms: no nearby or obvious improvements
  - If stable, then we should not be worried about alternative norms

### BUT WHAT ARE THE NORMS?

- This question takes us from metatheory to a first-order account:
  - Criteria for improvement presuppose an aim
  - What functional roles do explanatory judgments perform?
  - *Non-explanatory aims:* prediction, control, empirical adequacy
- **Explanatory instrumentalism:** a system of norms is better than another provided that it better facilitates the non-explanatory aims of science
  - Explanations do not possess final value
  - Explanations are instrumentally valuable for non-explanatory aims of science (van Fraassen 1980)

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