



The Role of Theory in Research on Congenital Deafblindness

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Darwin in a letter to Fawcett.



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- ▶ About 30 years ago there was much talk that Geologists ought only to observe & not theorise;⁶ & I well remember some one saying, that at this rate a man might as well go into a gravel-pit & count the pebbles & describe their colours. How odd it is that every one should not see that all observation must be for or against some view, if it is to be of any service.—
- ▶ <https://www.darwinproject.ac.uk/letter/DCP-LETT-3257.xml>



Main goal of the presentation

- ▶ I will argue that theories both
- ▶ Are unavoidable in science (Part I)
- ▶ Can cause distortions in how we understand the scientific object (like for instance CDB communication), and therefore must be used and discussed critically (Part II)
- ▶ Phenomenology might provide some material for a critical analysis (part III)



Part I. Temptations for a bottom-up approach = no initial theory

- ▶ A theoretical claim is a general claim, so using theory will have top-down elements.
- ▶ Working bottom-up might seem tempting in some areas because we want the phenomena to show themselves.
- ▶ CDB research because the phenomena (congenital deafblindness) under investigation appears unique.
- ▶ E.g. regarding language and communication one might argue that the experiences underlying communication and bodily expressions are so particular that more general theories about language won't work.
- ▶ The area under investigation should therefore be siloed, and our job as researchers would be to give a best possible description of this particular area.



Part I. Inductive, or bottom-up, reasoning

- ▶ Inductive reasoning : Concluding from several individual cases to a general case.
- ▶ (Example: inferring from seeing many white swans to the general claim that «All swans are white»).
- ▶ Theories are built from local observations.
- ▶ So, in the English empire «black swan» was a term used for an impossible event, but when the Captain James Cook came to Australia in 1768 there was indeed black swans!
- ▶ Obvious objection: the inductive inference is invalid. Just because all the swans I have happened to see are white doesn't mean that all are white.



Part I. Two worries with a bottom-up approach

- ▶ 1) There is a big consensus in philosophy of science that there are no theory-free observations. You cannot observe without a theory.



Part I. Two worries with a bottom-up approach

- 2) Without a theory how would we know that our facts are about how things really work? How would we know how to sort different phenomena together? Why and how do we sort the different stones in the gravel pit?
- Theories lets us pick out things. Theories are tools why need for knowing why, what and how to investigate.

Also to find the counter examples



Part I. Two worries with a bottom-up approach

- Worry 1) and 2) leads to the following conclusion:
- You neither can nor want to do observations without theory.



We all carry theories, or frameworks, with us. Also in the scientific practice



You would lack the intellectual machinery for knowing why, what and how to investigate something



Part I. Local theories.

- ▶ So, we have to have theories. But maybe we could just make local theories like this:
- ▶ We make a hypotheses, we test it, its confirmed or its falsified, we revise the hypotheses and we test again. And so we go about as scientists.
- ▶ We don't need any big theories, just theories suited for our local field.
- ▶ This has a name: The Deductive-Nomological model (often associated with Karl Popper, sometimes called the covering law model, associated with Carl Hempel).

Local theories

- Nomological part: General Laws of light.
 - Conditions:
 - C1: Angle of the sun at a certain time.
 - C2: Height of the flagpole.
 - = Empirical phenomenon: Length of the shadow cast by the particular flagpole.
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 - Conditions:
 - C1: Angle of the sun at a certain time.
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 - = Empirical phenomenon: Height of the flagpole.





Part I. Local theories.

- Consider the following example:
- Nomological part: Men who takes birthcontrol pills does not get pregnant.
- Conditions:
- C1: Men in Hamar takes birthcontrol pills.
- Empirical phenomenon: Men in Hamar does not get pregnant.



Part I. Explanation.

- ▶ Central works in the philosophy of science has converged on in the criticism of the DN-model that explanation is a core feature of science.
- ▶ With explanations you get theories, and theories that holds together and attempt to explain in terms of fewer patterns. Kitcher e.g. argues that:
- ▶ *Science advances our understanding of nature by showing us how to derive descriptions of many phenomena, using the same pattern of derivation again and again, and in demonstrating this, it teaches us how to reduce the number of facts we have to accept as ultimate. (p.432, 1989, "Explanatory Unification and the Causal Structure of the World", in Kitcher and Salmon 1989: 410–505.)*
- ▶ Ultimately the goal is to understand how things in the broadest possible sense of the term hang together in the broadest possible sense of the term. Sellars in "Philosophy and the Scientific Image of Man," in *Frontiers of Science and Philosophy*, Robert Colodny (ed.) (Pittsburgh, PA: University of Pittsburgh Press, 1962): 35–78; reprinted in SPR: 1–40, ISR: 369–408.



Part II. Problems with theories.

- Theories can distort your observations, or you might not even observe crucial facts.
- Theories can make you ask the wrong questions.
- A theory, or framework, might be deeply ingrained in your thinking.
- One problem in CDB research, or areas of it, is that most of the general theorising is done by members of the population that sees and hears.
- Applying a theory straight into the CDB domain might be problematic.
- (E.g, a theory of social cognition that highlights direct observation of mental states in other people or one that takes for granted that common knowledge is established by being physically, i.e. through vision, co-present (M. Gilbert)).



Part II. Theories must be discussed critically

- Critically not in the sense of saying «that is wrong!» but in reflective examining the limits and well-foundedness (validity) of the theori.



Part III. Why study congenital deafblindness and experience?

- ▶ Experiences in general is important, for instance experiencing joint attention which is important for language development or participation in experiences that are important for well-being.
 - ▶ CDB is likely to lead to at least some different kinds of experiences than what the majority population has.
 - ▶ Jaiswal, Atul, Aldersey, Heather M, Wittich, Walter, Mirza, Mansha, & Finlayson, Marcia. (2020). Meaning and experiences of participation: a phenomenological study with persons with deafblindness in India. *Disability and Rehabilitation*, 42(18), 2580–2592. <https://doi.org/10.1080/09638288.2018.1564943>
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Part III. Different types of theories relevant to the study of mind (including experiences)

- ▶ The philosophy of mind may be factored into the following disciplines or ranges of theory relevant to mind:
- ▶ Phenomenology studies conscious experience as experienced, analyzing the structure—the types, intentional forms and meanings, dynamics, and (certain) enabling conditions—of perception, thought, imagination, emotion, and volition and action.
- ▶ Neuroscience studies the neural activities that serve as biological substrate to the various types of mental activity, including conscious experience. Neuroscience will be framed by evolutionary biology (explaining how neural phenomena evolved) and ultimately by basic physics (explaining how biological phenomena are grounded in physical phenomena). Here lie the intricacies of the natural sciences. Part of what the sciences are accountable for is the structure of experience, analyzed by phenomenology.
- ▶ Cultural analysis studies the social practices that help to shape or serve as cultural substrate of the various types of mental activity, including conscious experience, typically manifest in embodied action. Here we study the import of language and other social practices, including background attitudes or assumptions, sometimes involving particular political systems.
- ▶ Ontology of mind studies the ontological type of mental activity in general, ranging from perception (which involves causal input from environment to experience) to volitional action (which involves causal output from volition to bodily movement).
- ▶ (Smith, David Woodruff, "Phenomenology", *The Stanford Encyclopedia of Philosophy* (Summer 2018 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2018/entries/phenomenology/>)



Part III. Phenomenology.

- ▶ With phenomenology we might get better understanding of persons with CDB's own experiences, and we might be able to better appraise majority based theories with those descriptions in hand.
- ▶ For some similar concerns coming from phenomenology and theoretical presuppositions (or the more broadly «framings» as they call it following Husserl) see: *The Body as the Problem of Individuality: A Phenomenological Disability Studies Approach* Tanya Titchkosky and Rod Michalko In Goodley, Dan; Bill Hughes; Lennard Davis. *Disability and Social Theory* . Palgrave Macmillan UK.



Part III. Cultural analysis

- ▶ One important point to be aware of is that experiences happens in a social setting with different social institutions. There will be power relations in play that affect what is being studied and how people experience. So, we need to add in those kinds of investigations as well.
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