

# Chapter 6

## Laws and Explanations in Biology and the “Special sciences”

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# Dissatisfaction with Causal Explanations

- Deeper insight into why events happen: intelligibility.
- Two sorts of traditional answers to the question: rational intelligibility (logic) explanation or final-cause(purposive, teleological ) explanation.
- Challenges for the two options.
- 1.Teleology
- 2.Necessity

# Problem for teleology

- 1. reverse the order of explanation: explain the cause by effect.
- 2. the effects never happen, but the cause still explain the effects.
- Physical theory reject teleology, so physicalism has three choice: regard purposive explanations as pseudo-ones; regard those as irreducible to physical ones; or teleological explanations are the same as physical one in fact.

# Proprietary Laws

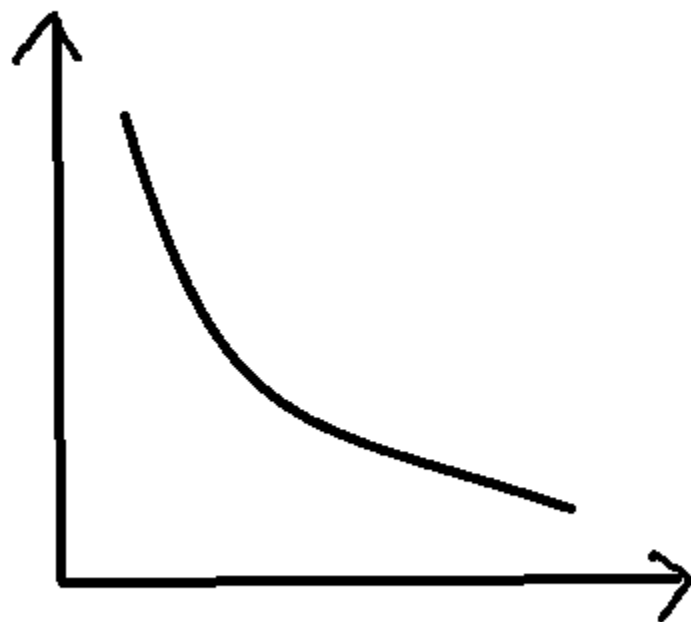
- How to understand teleological explanation?
- 1. Teleological explanation as a kind special explanation from natural science and causal explanation?
- 2. Or teleological explanation as a kind of causal explanation?

# 1.Teleology

- 1.1 How to understand teleological explanation?
- 1.1.1 Teleological explanation as a kind special explanation from natural science and causal explanation?
- 1.1.2 Or teleological explanation as a kind of causal explanation?

# Proprietary Law as a challenge for 1.1.2

- If we try to understand teleological explanation as a special causal explanation, we need to presuppose some laws such as rational principle as the law for teleological action.
- However, those laws are proprietary laws.
- Proprietary law as unscientific or just different approach from causal explanation?
- 1.1.2 is unjustified.



# Problem for 1.1.1

- 1. why the mental states can have influence on physical world?
- 2.why the mental states can explain the events?



# Preparation for Function law

- Question from last part :
- why the mental states can explain the events?
- Now that it is difficult to answer directly, we go back to find a easier way: biological explanations in teleology. (avoid mental-body problem)

# Problem for those “selected-effects” analysis

- Biology explanation : teleological explanation or causal explanation?
- The teleological explanation can be translated as causal one by the natural selection and adaption to circumstance.(selected- effects analysis)
- P97

# Why Function law not a causal explanation

- Function law is not easy to be translated as “selected-effect” model.
- Function law is not give explanations by giving purpose but analysis complex things into simpler components.

# Enlightenment of Darwin's theory

- Purpose is not necessary when we try to explain some complicated phenomena. The causal explanations have some force to do the same thing.
- Purpose is not a good way to understand the intelligibility requirement.
- We need some other resource to finish our work—necessity.

# Form intelligibility to necessity

- Empirical explanations can describe what happen but can not explain why and decide if the law will universal.
- Rationalist try to find some necessity to reveal the universality which once is caught by human beings, there is no need to ask why events happen—they follow the rules.

# Leibniz

- All scientific theories are related and bond together.
- All laws need to be logical coherent.
- Problems: if the packages of laws is the unique option to understand the events?—underdetermination.
- Leibniz's solution: teleology. –God and the best world.

# Kant

- The necessity is rely on Newtonian mechanics.
- Synthetic a priori truths
- Problem for Kant, the Newtonian theory is not true, let alone a priori truth.
- Dilemma for Kant: Necessary truth without contents (without explanatory power) or contingent truth with contents and explanatory power.