

# Reductionism, Explanatory Pluralism and Invariance

Eronen, Markus (2008) Reductionism, Explanatory Pluralism and Invariance. In *[2008] Reduction and the Special Sciences (Tilburg, April 10-12, 2008)*.

Full text available as:

[Microsoft Word](#) - Requires a viewer, such as [Microsoft Word Viewer](#)

## Abstract

I compare two competing positions regarding relations between sciences: reductionism and explanatory pluralism. I argue that reductionism is not warranted by evidence from scientific practice, but on the other hand, it is important to emphasize certain fundamental differences between generalizations and explanations of different levels. To show this, I take up Woodward's notion of invariance, arguing that lower-level generalizations generally have a higher degree of invariance under interventions than higher-level generalizations. Since degree of invariance tracks degree of explanatory depth, lower-level explanations are in this sense better than higher-level ones.

**Keywords:** reductionism pluralism neuroscience invariance

**Subjects:** [General Issues: Reductionism/Holism](#)

**Conferences and Volumes:** [\[2008\] Reduction and the Special Sciences \(Tilburg, April 10-12, 2008\)](#)

**ID Code:** 3971

**Deposited By:** [Eronen, Markus](#)

**Deposited On:** 08 April 2008