A Revealing Parallel between Husserl's Philosophy of Science and Today's Scientific Metaphysics

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Outline

1. Husserl's diagnosis of the "crisis" of science and Habermas's critique of Husserl's proposal
2. Today's scientific metaphysics and its commonality with Husserl's approach
3. Lessons for the current debate on the significance of scientific theories

The Crisis of the Sciences

In § 2 of *The Crisis of the European Sciences and Transcendental Phenomenology* (1936), Husserl bemoans science's loss of its significance for life ("Verlust ihrer Lebensbedeutsamkeit"):

> The exclusiveness with which the total world-view of modern man, in the second half of the nineteenth century, let itself be determined by the positive sciences . . . meant an indifferent turning-away from the questions which are decisive for a genuine humanity . . . : questions of the meaning or meaninglessness of the whole of this human existence. (1970, 5–6)

In § 9, he traces this loss back to Galilei's mathematization of nature:

> But now we must note something of the highest importance that occurred even as early as Galileo: the surreptitious substitution of the mathematically substructed world of idealities for the only real world, the one that is actually given through perception, that is ever experienced and experienceable—our everyday life-world. (48–49)

The Phenomenological Response to the Crisis

> Mathematics and mathematical science, as a garb of ideas, . . . *represents* the life-world, *dresses it up* as "objectively actual and true" nature. It is through the garb of ideas that we take for *true being* what is actually a *method* . . . (51)

This objectivistic self-misunderstanding of physics subsequently spreads throughout philosophy and the sciences, with particularly detrimental effects in psychology (§§ 10-27).

As a "science of the life-world" (§ 34), transcendental phenomenology is supposed to overcome this self-misunderstanding and consequently to restore to the sciences their significance for life.

> . . . in the form of universal, responsible science, in which a completely new mode of scientific discipline is set in motion where all conceivable questions—questions of being and questions of norm, questions of what is called "existence"—find their place. (298)

Pure Theory as a Guide to Life?

But how can the phenomenological approach restore this life-orienting role of science?
Jürgen Habermas ("Knowledge and Human Interests", 1965, Sect. III) suggests the following reconstruction:

1. By pointing to the life-world as the (forgotten) meaning-fundament of natural science, phenomenology undermines the objectivism of the sciences.
2. Instead of naïve objectivism, phenomenology brings with it a truly theoretical attitude, which no longer suffers from an unacknowledged dependence on practical interests.
3. This attitude engenders a novel sort of practice, rendering humanity "capable of an absolute self-responsibility on the basis of absolute theoretical insights".

Habermas accepts 1 and 2, but criticizes Husserl's notion of *theory* that underlies the step from 2 to 3.

The Hidden Cosmology in Classical *Theoria*

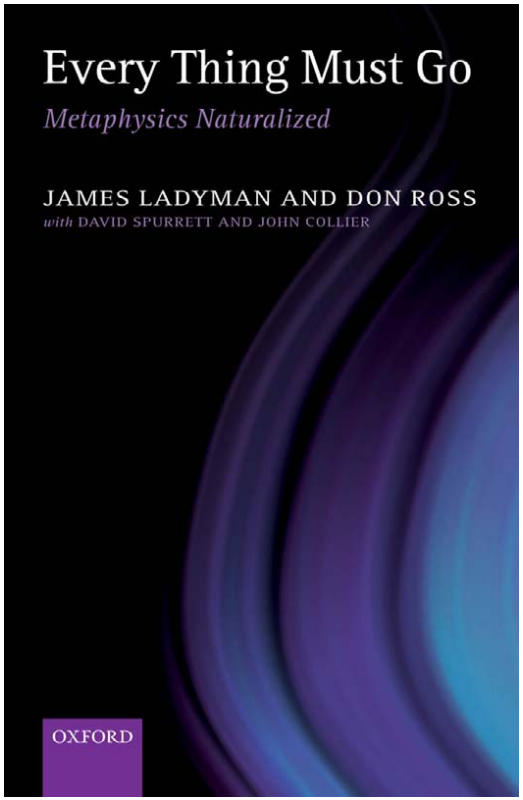
- The demand that theory ought to be life-orienting originates in the platonic notion of *mimesis*: having grasped the cosmic order through theorizing, the philosopher brings himself into accord with it.
- This presupposes two elements, only the first of which is retained in the phenomenological approach:
  1. the theoretical attitude, which transcends the interests of everyday life,
  2. the ontological assumption of a structure of the world independent of the knower.
- Husserl could only justifiably ascribe a life-orienting role to theory if he were to accept the second element as well:

> Theory in the sense of the classical tradition only had an impact on life because it was thought to have discovered in the cosmic order an ideal world structure, including the prototype for the order of the human world. Only as cosmology was *theoria* also capable of orienting human action. (Habermas 1965 [2005], 313)

Contemporary Scientific Metaphysics

The Main Idea

"...to explore what a metaphysics looks like that is judged by scientific standards and that avoids appeals to intuition" (Kincaid 2013, p. 1)



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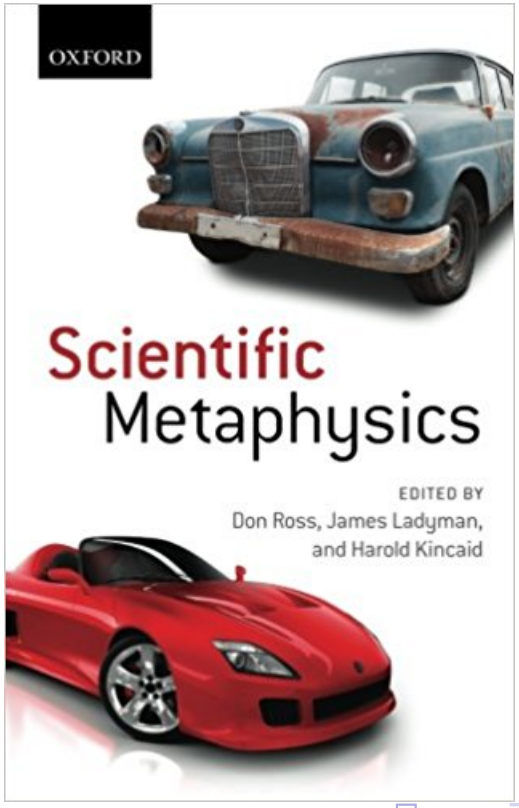

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Scientific Metaphysics and Husserl's Phenomenology

Some obvious points of disagreement:

- According to scientific metaphysics, there is no crisis of the sciences. Rather, there is a crisis of philosophy insofar as it ignores the methods and the results of science.
- Consequently, there is no acceptable method of philosophy beyond the methods accepted in the sciences (in sharp contrast to the methodology of transcendental phenomenology).
- By presupposing (at least a modest form of) scientific realism, scientific metaphysics retains the ontological element of the traditional understanding of *theory* which was abandoned in the phenomenological approach.
- Scientific metaphysicians view mathematization as the road to objective knowledge, not as a surreptitious substitution of idealities for the real world.

Husserl and Scientific Metaphysics: First Parallel

Scientific metaphysicians share Husserl's adherence to the ideal of a theoretical attitude that frees those who take it from the bias of everyday interests. The difference is just that they see this attitude fully realized in mathematized science, rather than in transcendental phenomenology.

> Fortunately, people learned to represent the world and reason mathematically—that is, in a manner that enables us to abstract away from our familiar environment, to a degree that has increased over time as mathematics has developed—and this has allowed us to achieve scientific knowledge. (Ladyman and Ross 2007, 2)

This connection appears most clearly in Ladyman's and Ross's appraisal of Weyl's contribution to quantum mechanics (which seems to have been profoundly influenced by Husserl):

> The central point of philosophical relevance here is that the mathematical idea of invariance is taken by Weyl to characterize the notion of *objectivity*. It is this that liberates physics from the parochial confines of a particular coordinate system. (146)

Husserl and Scientific Metaphysics: Second Parallel

Ladyman and Ross subscribe to Husserl's demand that scientific theorizing (even in domains without practical application, such as fundamental physics) ought to have significance for our practical lives:

> The best motivation for trying to synthesize our scientific knowledge into a unified picture—that is, for building naturalistic metaphysics—is the crucial service this activity potentially performs in extending the Enlightenment project. If science is not seen to provide the basis for a general worldview, then people will continue to collectively confabulate alternative general pictures. This in turn matters because the confabulated pictures inspire groundless and usually wasteful and destructive politics and policy. We see no reason to be coy about the fact that, like the logical positivists, our philosophizing is inspired by a normative commitment: while acknowledging the importance of conserving what is valuable, we abhor conservatism, which we view as a sad refusal to explore the magnificent range of possibilities that our ability to do mathematics allows us, and thus betrays the best reason for caring passionately about objective truth. (Ladyman and Ross 2013, 113)

Scientific Metaphysics as a Guide to Life?

- With respect to Habermas's critique, scientific metaphysics seems to be in a better position than Husserl's approach, because it retains both the methodological and the ontological element of the traditional understanding of *theory*.
- Still, there are some obstacles in the way from theory to life-orientation:
  - Can we still entertain a notion of metaphysics that is robust enough to ground practical decisions? (Habermas denies that we can: "The insight that the truth of statements is linked in the last analysis to the intention of the good and true life can be preserved today only on the ruins of ontology" (320).)
  - How does pure theory acquire practical significance (if not by Platonic *mimesis*)?
- Ladyman and Ross seem to acknowledge these difficulties in their distinction between strong metaphysics (which they reject) and weak metaphysics (which they endorse).

Scientific Metaphysics as a Guide to Life?

Strong vs. Weak Metaphysics

- Strong metaphysics treats philosophical positions as doctrines and involves claims about the structure of reality that go beyond what the sciences imply.
- Weak metaphysics treats philosophical positions as stances (in the sense of van Fraassen 2002) and consist in articulating a unified world-view on the basis of a given stance (the "scientistic" one in the case of Ladyman and Ross).

The limited role of metaphysics when engaging with people who resist adopting the scientistic stance:

> Their resistance to science, which must be quite thoroughgoing if it is not to be unprincipled, will confront them with serious policy problems in the management of social affairs, and we will want to press them as hard as possible on these. But we would not try to convert them with metaphysics, for van Fraassen is right that that would require strong metaphysics, and strong metaphysics can't get off the ground. (Ladyman and Ross 2007, 64)

Conclusion

Habermas's critique brings out the parallel between Husserl's philosophy of science and contemporary scientific metaphysics:

- Husserl's expectations towards the *theoretical attitude* presupposes more metaphysics than he is prepared to admit.
- Conversely, metaphysics is less relevant to practical decision-making than the rhetoric of scientific metaphysicians suggests.

This convergence is rooted in the fact that both approaches suffer from the tension between the ideal of disinterested theorizing and the demand that such theorizing should matter to our lives.

- In contrast, Habermas suggests that our theorizing is never really disinterested, but is at least guided by what he calls the emancipatory interest.
- This idea deserves further consideration, given that it responds to a tension present in two approaches to science as different as Husserl's and present-day scientific metaphysics.

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Original Quotations

Husserl, *Krisis* §2:

> Die Ausschliesslichkeit, in welcher sich in der 2. Hälfte des 19. Jahrhunderts die ganze Weltanschauung des modernen Menschen von den positiven Wissenschaften bestimmen . . . liess, bedeutete ein gleichgültiges Sichabkehren von den Fragen, die für ein echtes Menschentum die entscheidenden sind . . . : die Fragen nach Sinn oder Sinnlosigkeit dieses ganzen menschlichen Daseins. (1976, 3-4)

§9:

> Aber nun ist als höchst wichtig zu beachten eine schon bei Galilei sich vollziehende Unterschiebung der mathematisch substruierten Welt der Idealitäten für die einzig wirkliche, die wirklich wahrnehmungsmässig gegebene, die je erfahrene und erfahrbare Welt – unsere alltägliche Lebenswelt. (49)

> Das Ideenkleid "Mathematik und mathematische Naturwissenschaft" . . . befasst alles, was . . . als die "objektiv wirkliche und wahre" Natur die Lebenswelt *vertritt*, sie *verkleidet*. Das Ideenkleid macht es, dass wir für *wahres Sein* nehmen, was eine *Methode* ist. . . (52)

Original Quotations

Husserl, Vienna lecture:

> ...in Form universaler verantwortlicher Wissenschaft, in welcher ein völlig neuer Modus von Wissenschaftlichkeit in den Gang gebracht wird, in dem alle erdenklichen Fragen, Fragen des Seins und Fragen der Norm, Fragen der sogenannten Existenz, ihre Stelle finden. (1976, 346)

Habermas, “Erkenntnis und Interesse”:

> Theorie im Sinne der grossen Tradition ging darum ins Leben über, weil sie in der kosmischen Ordnung einen idealen Zusammenhang der Welt, und das hiess: auch den Prototyp für die Ordnung der Menschenwelt, zu entdecken vermeinte. Nur als Kosmologie war *Theorie* zugleich der Orientierung des Handelns mächtig. (152–153)

> Die Einsicht, dass die Wahrheit von Aussagen in letzter Instanz an die Intention des wahren Lebens gebunden ist, lässt sich heute nur mehr auf den Trümmern der Ontologie bewahren. (167–168)