

# Science transformed? Debating claims of an epochal break

Prof Stefan Gruner

“The practical relevance of science, its great technological ambitions, its public appeal, and the heavy application pressure under which it operates today have prompted a flurry of analyses.” This is because we have, over the past few decades, been experiencing (although not always fully consciously) an accelerating cultural shift due to that “we are expecting from contemporary research not primarily the discovery of truth, but the solution of pressing problems”.

This magazine, *Innovate*, is itself a product, a witness, and an amplifier of the very same cultural and science-political tendencies that are addressed in the various chapters of *Science transformed? Debating claims of an epochal break*, edited by Alfred Nordmann, Hans Radder and Gregor Schiemann.

The question as to whether or not the most recent changes and evolutions in the sciences, in their applications, and in their sociopolitical contexts constitute a major ‘epochal break’ in this era of our civilisation is not only a question of history and philosophy of science, but also a question of philosophy of history. Our history-philosophical notion of what actually constitutes an ‘epoch’ will surely influence our judgement about whether or not we are currently witnessing an epochal break in the history of science and its related methodology. However, whether an epochal break or not, the empirically observed changes in our contemporary business of science are real and should not be ignored by any discerning scientist or academic.

The book is divided into two parts. In the first part, the authors of the various chapters discuss the epochal break thesis and reach different conclusions from a general perspective (without a particular focus on specific sciences). Such a more specific focus on particular sciences is then provided by the authors of the chapters in the second part of the book. The authors are especially aware of the irreversible effects of the digital computer – with all its enhanced possibilities of number crunching, data visualisation and complex process simulations – on the contemporary methods and methodology of a new kind of ‘technoscience’,

in which the classical borderline between technics and science is becoming increasingly transparent and invisible.

This book can be strongly recommended not only to the older generation of academics (who have known science before the most recent cultural shift), but also to the new generation of young researchers who were born in the midst of that shift and who have never known science before and outside its contemporary paradigm.

The book is also recommended to all economists, politologists, law-makers and policy-makers in the state and the commercial industry, as well as in the parastatal research funding agencies, who have such a strong influence on the ways and manners in which our contemporary sciences are carried out.

This book is published by Pittsburgh University Press. [➔](#)

