

Franck R., *Preface to: Deirdre Pratt, Modelling Written Communication, A New Systems Approach to Modelling in the Social Sciences, Springer, Methodos Series 8, 2011*

Preface

Deirdre Pratt's book provides us with outstanding new tools for improving both research and teaching. How is one to determine the best way to analyse composition, given the various approaches which have flourished since a half century? And how to take advantage of the wealth of observations and of ideas piled up about language, discourse, composition, academic writing, and social context? How to go beyond the multiform and idiosyncratic character of writing and to manage to identify what is constant in it? And how to find the way in which knowledge and writing are intertwined? How to define the social nature of composition? And how to take a stand on the competing epistemological tendencies, from positivism to post-modernism? These are long-standing and vexed questions to which the author brings luminous and elaborated solutions. She does so by implementing a new systems approach, and by initiating a new way of modelling academic writing. Moreover, these theoretical and methodological breakthroughs open the way to conceiving and finalizing a new electronic writing tutor program. The "New Electronic Writing Tutor" (*NEWT*) is now operational, having been tested out in several training centres, and can accommodate different teaching approaches, disciplines and learner levels, as it can be adjusted to suit the specific context in which it is used.

The author recounts the main points of an investigative journey which lasted for twenty years or more. The wording is elegant and simple. We are invited to share an intellectual adventure, meeting the obstacles and surmounting them together with her. At each new stage the problems at stake are re-examined from every angle, and we are informed about the diverse proposals which have been advanced in the literature in order to resolve them; these advances are discussed with care. We are thus kept up to date with the results reached until now about academic writing, and we may profit from the extensive bibliographic resources to which the author refers. We are also well-equipped to judge the relevance of the outcomes she discovered. What is more, her impressive self-critique helps us to form our own opinion, since each step forwards is immediately submitted to a ruthless examination in order to measure its limits.

"I am in a sense the 'pit bull' of investigation", she says, in describing her tenacity in seizing on a concept and worrying away at until having a more satisfactory answer (*Introduction*).

Francis Bacon, for his part, claimed that true scientific investigation needs the nose of a hunting dog. In order to explain writing – just as in order to explain heat or light – we need to accumulate clues like the hunting dog casting about everywhere for the scent of the prey. It was in comparing the countless observations which she collected that the author arrived at the *principles* or *axioms* of composition, and particularly, at a basic interactive principle. This way of doing research is *classical* induction¹, which Bacon proposed as a new *organon* in doing science, and which has nurtured the blossoming of modern sciences from Kepler until now. Bacon's induction has nothing in common with generalization from particular facts, and yet is persistently confused with it. Of course a collection of observations would remain sterile without being subjected to intensive reasoning in order to refine and progressively restructure their interpretation, as Bacon vigorously claimed four hundred years ago. Observation and reasoning, in classical induction, must be closely associated.

Practising induction leads easily to *realism*. When one wonders about the possibility of really knowing the world as it is, as philosophers tend to do, many objections to realism come quickly to mind. For instance our senses are deceiving; moreover, the knowledge we have of the world is, obviously, nurtured by culture and channelled by social life. Yet when practising induction we discover that sustaining our reasoning by extended observations gives us signal advantages when trying to explain some phenomenon. The author found support in *critical* realism, an illuminating approach issuing from Bhaskar's works. This kind of realism distances us from the empirical tradition established by Locke and Hume and which resulted in neo-positivism. Critical realism pursues another famous movement in the history of philosophy, that of classical realism supported by Bacon, Galileo, Newton, Huyghens and their allies. The author of this book is undoubtedly in good company. And to those ones who think that the philosophy of science is best inspired when looking to how researchers are doing their work, this will offer valuable guidance: it shows how critical realism takes shape in actual instances of research, and how classical induction can be carried out in the human sciences.

A most interesting and unusual feature of this book is its detailed account, at each new stage of the inquiry, of the research method which has been implemented. It allows the reader to

¹ Usually, philosophers confound *classical* induction with what is currently meant by the term induction, i.e. the generalization of some particular observation. Usually, they don't pay attention to the recommendation of *classical* induction to accumulate numerous and diverse observations, and to compare them; and usually, they don't pay attention to the difference between, on one side, a general statement about some observation, and on the other side a *principle* (or *axiom*) by which the numerous collected observations can be explained, which is the genuine target of *classical* induction.

judge the relevance of the scientific processing and its fruitfulness. Needless to say, this is a main supplementary motive for the *Methodos* series, devoted to improve research methods in the social sciences, to publish this book; in Daniel Courceau's and in my own opinion it might serve as a pattern of scientific research for the social sciences whatever the object of study, be it in economy, in demography, in sociology or elsewhere.

The core of the method followed by the author consists of taking advantage of two different ways of modelling, empirical and theoretical. Empirical modelling is well illustrated by causal modelling in econometrics, but it is also currently used anywhere, when we want to represent a network of observed variables which combine in some phenomenon. Theoretical modelling is much more difficult to arrive at: it tries to identify the abstract structure which underpins and determines an empirical network of variables; classical dynamic laws – for example the law of gravity – illustrate eminently the theoretical model. These two different sorts of models are confused in the social sciences more often than not, with the result that empirical models are often taken for theories.

In the first volume published in 2002 by the *Methodos* series, the difference between empirical and theoretical modelling has clearly been established and defined, and the relations between empirical and theoretical structures - structures which the two sorts of modelling respectively make apparent - have been scrutinized. The result is that, once differentiated, the two ways of modelling can improve each other, and after being duly combined they reinforce the quality of explanation of the concerned phenomenon. This methodological advance was reached after a thorough inquiry made by a multidisciplinary team of thirteen researchers into nine disciplines². Pratt had recourse to this methodological advance and it helped her to probe into the very nature of writing and to conceive the interactive principle on which her composition software was based. Her work backs up the efficiency of the methodology provided by Volume One of the *Methodos* series.

²These disciplines were archaeology, demography, economy, engineering, geography, comparative politics, experimental psychology, sociology and philosophy of science. Modelling practices examined were statistical modelling, mathematical modelling, conceptual modelling, diagrams, maps, machines, artificial neural networks and computer modelling. In Franck R. (Ed.) (2002) *The Explanatory Power of Models, Bridging the Gap between Empirical and Theoretical Research*. Boston, Dordrecht, London: Kluwer Academic Publishers (Methodos Series vol. 1)