

Specimen

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Bart Karstens

Recursion, Rhythm and Rhizome

Searching for patterns in the history of the humanities*

With *De Vergeten Wetenschappen* a groundbreaking study has appeared. It has no less an aim than to cover the history of almost all of the disciplines of the humanities from Antiquity onwards and runs in some cases well into the 21st century. Obviously there is a lot of historiography of the selected disciplines separately, such as the historiography of linguistics. But a history that covers the whole of the humanities has never been produced. For the natural sciences an abundance of such histories is available, for example Anthony M. Alioto *A History of Western Science* (1992) or in Dutch Rienk Vermij, *Kleine Geschiedenis van de Wetenschap* (2005). One can find such broad overviews of the history of science in 'classic' works such as E. J. Dijksterhuis, *The Mechanization of the World Picture* (1950) but also in the more popular genre like Bill Bryson, *A Short History of Nearly Everything* (2003). Perhaps only Hans Joachim Störig, *Kleine Weltgeschichte der Wissenschaft* (1953) does not only cover the natural sciences but the humanities as well. The author thus operates almost from scratch. At the same time he approaches his subject in a rather uncommon way. Bod constantly makes comparisons between what he finds in the separate disciplines and in different times. With the analysis these comparisons yield he aims to create an integrated picture of the development of the humanities.

The result is a truly impressive volume written in a highly accessible style. There are however more compelling reasons why the historian of linguistics should be interested in this book. First the study of language occupies a central role in the development of the whole of the humanities. The historian of linguistics may thus find something valuable in most of the chapters. Second the historiography of linguistics largely operates on its own. *De Vergeten Wetenschappen* offers many points of contact with other disciplines which can be taken up by historians of linguistics and offer fresh directions for further research. Third the use of broader perspectives can perhaps help the historian of linguistics to gain himself a broader audience. If we confine ourselves to the

*) Rens Bod, *De Vergeten Wetenschappen. Een Geschiedenis van de Humaniora*. Amsterdam: Bert Bakker 2010, 520 pp. [ISBN 978-90-351-3485-0; € 24,90].

professional audience, i.e. mainstream historians of science, it must sadly be said that the efforts and high level of scholarship displayed in the historiography of linguistics goes by mostly unnoticed. Exactly this is one of the things Bod wants to change. He argues that the neglect of the history of the humanities by most historians of science is unjustified. Hence the title of the book, 'vergeten' means 'forgotten', and it is mainstream history of science, whatever it may be, which has forgotten to include the history of the various disciplines of the humanities. Especially in times when sharp divisions between disciplines were uncommon, and the notion of the 'sciences' and the 'humanities' as separate fields did not even exist, say before the 19th century, mainstream history of science misses out on a lot that should be of its interest. The historical accounts produced are therefore at best incomplete.¹

The author has thus set the bar very high. He has to cover an enormous range of fields with enough historical sophistication to be taken seriously. On top of that he has to demonstrate that the history of science really misses something if the humanities continue to be 'forgotten'. The author has recognized that this Herculean task could only be performed by making selective choices. These choices are understandable and improve the unity of the work. Moreover they also support its main theses. Still the effectiveness of the choices in the long run can be questioned. I will first present the chosen demarcations, then highlight the main results of the book and finally move on to possible criticisms and thus also to the room for improvement this study has left open.

The first group of choices is made with respect to the selection of the humanistic fields. Bod has decided to use present day disciplines as guiding lanterns. The selected disciplines are: linguistics, historiography, philology, musicology, art theory (later art history), logic, rhetorics and poetics (the latter two 'replaced' by literary and theatre studies in the 20th century). The author uses these categories in a very pragmatic way, sometimes giving preference to historical categories such as 'musica', 'poetica' etc., sometimes using modern academic disciplines. This approach is understandable given the need to attain grip on the vast amount of historical material and the many interconnections within this material one has to deal with. Another choice is perhaps more curious. Bod has chosen to leave out important branches of the humanities such as theology and philosophy. He has done this for two reasons. First this choice has considerably reduced the complexity of the book and second theology and philosophy do not have a direct connection to empirical data as the other fields have. This latter criterion follows from a second group of demarcating choices.

¹) In De Bont/Wils (2008) a similar plea for more attention to the history of the humanities can be found.

The second group of choices concerns the way the selected fields are studied. Bod has given central focus to empirical material. In the humanities products of the human mind are studied. These products, such as spoken and written languages, theatre plays, logical schemes, works of art including architecture, musical plays etc., provide clear empirical material for the humanistic scholar. Now the main interest of the author is in the way scholars have tried to find regularities in these empirically identifiable products of the human mind. In every era he sums up which patterns were discerned in the available empirical material. Simultaneously the methodological principles with which these patterns have been uncovered are addressed. The main message is that sophisticated and far reaching regularities can be found in the humanities. These do not have to be strict laws as in the natural sciences but come surprisingly close in several cases. To take the establishment of patterns in data as the central concern of the humanities is backed by the argument that the human brain is fitted out to see patterns 'everywhere'. When it comes to scientific aspirations the trick is obviously to distinguish the significant patterns from the non-significant ones. Bod's main claim is that in the humanities, very much like the sciences, a process of sifting out significant patterns has taken place and this can be demonstrated by an historical narrative.

The demarcating choices thus facilitate the general aim of the book which is to draw a continuous line of development in the humanities up to the present. It deals in separate chapters with Antiquity, the Middle Ages, the Early Modern Period and Modernity. The chapters first describe the findings per discipline and at the end of each chapter, in a synopsis, the found patterns and principles are listed and compared to each other. Bod did not only focus on (Western) Europe and the USA but has included sources from Africa and Asia in his comparisons too. At the end of the book he further compares all the results found in the previous chapters and draws general conclusions. In the following discussion of these results focus will be on the found patterns and regularities and less on the methodological principles involved.

Bod has collected a wide variety of interesting patterns and regularities, for example Pythagoras' theory of consonant intervals, various patterns, both cyclical and structural, in history, illusionism (Plinius) and the sublime (Longinus) in art theory etc. etc.. Sometimes such patterns create a strong impression, especially if you have never heard of them. The book is also full of other interesting observations such as the depiction of developments in early modern musical theory as an important link in the scientific revolution. Bod notes that Galileo, Beeckman, Descartes, Huygens, Euler and others all devoted attention to the study of consonance and dissonance. They did not succeed in finding a universal law covering the phenomena but in the process a 'synergy' between theory and empirical information was formed which influenced other areas of

natural investigation. The book is full of such 'surprises' and since most of us have restricted backgrounds there is something to discover in it for almost anyone.

The patterns that stand out for the study of language are more familiar to the readers of this journal and the treatment of them will presumably interest them most. Bod distinguishes several grammars such as Panini's formal grammar, medieval example based grammar, the first ideas in medieval times of a Universal Grammar, 20th century generative grammar and logical grammar (term rewriting). Other patterns related to the study of language are analogist comparison of word forms, resemblances between logical and rhetorical arguments, rule systems for rhymed poems, the invention of a logical calculus, Lachmann's stemmatology, Grimm's Law of sound change, Schleicher's *Stammbaumtheorie* and the different structures of various literary genres.

At first I was a bit skeptical about the use of 'patterns' and 'principles' as analytical tools. These categories are in itself not very discriminative and regularities can obviously be found everywhere. But the author has given the approach extra bite in two ways. First he discriminates between procedural rule-systems, declarative rule-systems and example based approaches and also mentions possible combinations between them, thereby significantly increasing the analytical discrimination of the sort of patterns that have been postulated in the past. Second the chosen focus has given him the means to speak about progress in the humanities. To this end a comparative notion of progress is used. One can speak of progress in a given humanistic field when with the introduction of a new theory the problem solving capacity improves compared to existing theories. If some method leads to seeing more or sharper patterns in a given set of empirical data and if with these patterns more research questions can be answered, the author argues we have a clear measure of progress in a field of study at hand.

This is certainly not a new way of thinking about progress. Bod refers to Kuhn's idea of problem solving during periods of normal science but the comparative notion of measuring progress resembles others more closely. In the philosophy of science Larry Laudan (1977, 1984) has put forward an account of progress in science in terms of theory comparison with respect to problem solving capacity. In the history of science Nicholas Jardine (1991) has indicated that a problem oriented historiography of science can put the idea of problem solving capacity to establish progress to good use. Jardine's ideas about progress did not find much resonance among historians. Maybe Bod's account of the humanities is one of the first attempts in the historiography of science to put these ideas to work on a grand scale.

To facilitate comparisons with respect to progress it is necessary to identify key problems in the humanities that can be found in every era. The author in-

indicates these in the synopsis of the Early Modern Period. For linguistics the central problem is 'determining the form of words and sentences in a language', in history 'dating historical events' is central. In philology it is 'the measure of reliability of a textual source', in logic 'establishing the validity of reasoning', in art theory 'how to picture three dimensional objects on two dimensional surfaces'. Other disciplines have their central problems as well. While some progress with respect to these questions can of course be witnessed it must be said that it is highly doubtful that we have here at hand the central questions of the given disciplines in any given time. The disciplines have arguably been involved in many more other issues which were also of more central importance. Historical research for example is not just about dating past events. It is hard to speak of progress in the disciplines as a whole if the central research questions are not at issue. The author does cite with great enthusiasm a couple of examples in which changes in patterns were made by scholars when conflicts between their theories and empirical data became apparent. In poetics Dionysius of Halicarnassus provides an early example and the example of musicology in the early modern period has already been mentioned. These cases are indeed interesting but the full case for the notion of progress in terms of problem solving capacity, based on the historical record, has to be made more strongly in order to be really convincing.

It is possible to apply the selected progressive perspective on intellectual products (of the humanistic scholar) without the need to extensively contextualize all of these products. These contexts are thus largely abstracted away in the book which has basically yielded an internalist story of a specific type of human intellectual products i.e. the principles and patterns produced in the humanities. Given the pioneering stage in which the work had to be undertaken this is understandable: to fully contextualize all intellectual products mentioned in the book would require a series of thick books. At the same time it represents a weakness. One can very well argue that many knowledge claims made in the humanities can only be properly understood if the context in which these knowledge claims were made is known too. Major developments such as the emergence of medieval universities and later changes in the university system, the emergence of the Renaissance ideal of 'uomo universale', the emergence of orchestras etc. are not discussed at all while these certainly had a profound effect on the respective fields of study Bod has selected.

The drawback of leaving out context perhaps runs even deeper. At various times in the book a distinction between descriptive and normative (or prescriptive) regularities is made. Sometimes a change between them, from initially descriptive work towards prescriptive regularities is signalled, which for example was manifest in several disciplines in Antiquity. However what is taken as a norm is often, if not always, dependent on context. If we restrict ourselves to

the history of ideas, and for the moment abstract away from material, social and political circumstances, important clues of the broader mental context can be read off from contemporary philosophical and religious discourse. In this respect the choice of leaving these fields out has thus been an unfortunate one. The reasons for singling out a pattern as significant might in general be a contextual matter even if this pattern is of a descriptive nature. Such considerations lead to real *historical* questions: what were the motivations of scholars to venture into research and make particular knowledge claims? How were these claims received? Why did changes in them occur? How did these changes come about? Such questions are hardly posed in the book. Just a recourse towards (conflicts with) empirical data to answer these questions seems a bit too simple minded. Therefore, there is still a world to win here.

Internalist historiography makes one think of Whig historiography. The book indeed harbours more characteristics of whiggism. First repeated triumphalism can be encountered. Thus Panini is hailed as the father of linguistics, Alberti is seen as the greatest humanist scholar of all times and Vico is said to have been far ahead of his time. There is even a section at the end of the book containing the great figures and ground breaking ideas of the humanities. Second the account is presentist in a number of ways. Some degree of presentism is unavoidable in any historical project and not necessarily bad. In the present case one can for example live with carving things up along the lines of current disciplinary categories which has provided a useful grip on the enormous amount of material that had to be covered. Other forms of presentism are however more bothering. It is not always clear if a term used belonged to the historical actor's categories or if it is projection of a later term on the past by the author. When this is sufficiently clear the usage of modern terms often contains judgements which appear to be problematic. Thus the term postmodernism is applied to the 19th century, the word 'New Scientists' with capitals is used to refer to historical actors that were part of the period usually referred to as the Scientific Revolution, Panini's grammar is often mentioned when later grammars are discussed as being essentially the same and possibly even more successful and finally it is stated in the conclusion that the humanities had to be liberated several times in history of hindering straightjackets formed by religion, philosophy and early modern humanism. From this it follows that only from a modern perspective one can get a clear and undogmatic grip on the stuff that forms the empirical material of the humanities. It is debatable to look at things this way since one can equally argue that these 'straitjackets' engendered a lot of research and thus acted at least partially as fruitful frameworks in the historical development of the humanities too.

All these aspects of whiggism are recognized by the author as he tries to pre-empt this criticism at the end of the book. He defends himself by stating

that the meaning of the term whiggism has suffered from inflation and the threat of being labelled as a Whig has had inhibiting effects on historians of science, unnecessarily restraining their scope of research and consequently their output. While that might well be true, the characteristics one usually associates with whiggism: presentism, triumphalism, judgmentalism and anachronism are nevertheless abundantly present in the book. The author's attempt to pre-empt the criticism of being labelled as a Whig is therefore in my opinion not very convincing.

An interesting parallel with the high tone of the book can be made with Steven Shapin's assessment of the beginning of the historiography of science as a separate academic discipline in first decades of the 20th century. According to Shapin, in order to gain itself a legitimate place in the academic system, the first generation of professional historians of science, and most forcefully George Sarton, expressed themselves in a high tone. This explains the reference to geniuses, brilliant discoveries etc. and the stress on the unique and at the same time essential character of science for modern society. The high achievements of the past were a good selling point. When the history of science had become a recognized discipline in the university system there was no need for exaggeration anymore and a process of 'lowering the tone' could begin.²

The parallel seems obvious: one of the driving motives behind Bod's work is to present the history of the humanities as an important field that has a right to be studied, if not in the form of a separate discipline, then certainly as a valid subfield of the history of science. In order to make a compelling case Bod has put stress on important discoveries, great thinkers etc. with the message that these cannot be overlooked. Perhaps if the history of the humanities has gained more widespread recognition, a thing we can only hope for, this will be accompanied by a similar process of 'lowering the tone'.

This observation brings us to concluding general remarks about the status of the humanities. A few peculiarities about this status require further consideration. One may wonder why all products of the human mind should be capturable in patterns. The author recognizes that apart from a pattern seeking tradition there has also always been a pattern rejecting tradition in the humanities. His sympathy is clearly with the pattern seeking tradition. His notion of progress is built on it and where the pattern rejecting tradition is discussed, for example with hermeneutics or the anomalistic tradition in philology, this is done briefly and without much approval.

The picture of the humanities we get in this way is that they are very much *like* the sciences. This is why Bod rejects Dilthey's and Windelband's distinc-

²) Cf. 'Lowering the tone in the history of science' (Shapin 2010: 3-14).

tion between sciences directed at (causal) explanation (*erklären*) and humanities directed at understanding (*verstehen*). For Bod there is no principled difference, the humanities are not just interpretative and concerned with singularities only but yield regularities very similar to the ones produced in the natural sciences. Moreover there is a clear measure of progress available too in the humanities. The title of the English version of the book which will appear in 2011 will be: *The Forgotten Sciences. A History of the Humanities*. The terminological difference more clearly states the aim of the book which is to show that the humanities and the sciences have equal scientific merit.

Still the division the author wants to overcome has been his main point of departure. Especially for periods in which the distinction did not exist this is strange considering the ultimate goal of the project. If the goal of the project is to prove that the sharp distinction between the sciences and the humanities is untenable why first project this distinction on periods in which it did not even exist? What can be learned from these periods about the relation between the sciences and the humanities would be an interesting question given the author's perspective. This question is however not posed and has to be worked out by taking a closer look on interdisciplinary relations in periods before the 19th century.

We may also wonder if the very same distinction we owe from the Neo-Kantians isn't still present in the book in another way. From a distinction between the sciences and humanities we have now moved to the humanities itself in which a new distinction is made: on the hand we have a pattern searching tradition and on the other hand a pattern rejecting tradition. Just as with Dilthey the distinction is sharp and the two approaches do not seem to intersect. This makes one wonder where the real humanities can be found: in the pattern searching tradition, since that is supposedly very much like the sciences thus yielding more robust forms of knowledge? Or still in the pattern rejecting tradition since that set of approaches is exactly what makes the humanities unique and different from both the natural and the social sciences? Bod's position is that the 'good' humanities are very much like the sciences and that therefore the distinction is artificial. Thus he likes to speak about science as a unified endeavour. However the existence of the other tradition is undeniable nor can the effect it has had on human thought be downplayed. If Bod really wants to defend the idea of a unity of science he also has to argue with a vast amount of scholarship produced by historians and sociologists from the 1970's onwards in which the notion of a unified science is seriously undermined.

Did Bod bite off more than he could chew? The project he engaged in is almost impossible to execute without making mistakes in detail. I have not gone into these since I do not believe they undermine the central theses of the book

that in the humanities regularities and patterns can be found and that a continuous line of development from Antiquity onwards can be drawn. Similarly one can also point to significant patterns of the humanities which Bod has left out of the book such as Chomsky's idea of language acquisition by children which follows a clear pattern of development consisting of various critical phases of learning. Such comments are valuable but naturally only strengthen the general claims made in the book. Moreover the author has opened a website with a blog attached to it. Everyone can post his or her comments on the blog and the author is willing to check the comments made and improve his book if necessary. Thus the second print differs from the first at various points and no doubt the English translation will also differ from the Dutch prints. This continuous updating might well become the new form of authorship in the 21st century. Perhaps if we have switched fully to e-books then the books we are reading at time *t* are no longer the same as they are at time *t'*. Books might even change while we are reading them! Reading such constantly revised books would then almost be like being involved in scientific research itself.

All this being said I still believe the work is a positive contribution to the science studies. A strong case is made for the existence of patterns in the history of the humanities. Bod presents no new discoveries but by putting an enormous amount of patterns and regularities together he casts serious doubts on the existence of a strict demarcation between the sciences and the humanities. The history of the humanities certainly deserves more attention than it now receives. A strong asset of the book is the cross disciplinary and comparative form in which the attention to the humanities is poured. This focus enables wider questioning and concluding generalisations than usual and has also led to surprising analytical results. It may also help to overcome the great danger of disciplinary historiography which is that it turns out to be no more than an exercise in self-definition. The study of language has proven to be central in the whole of the humanities. Especially in the Early Modern Period philology with its strong empirical pull and elaborate source criticism is seen as *the* central discipline relating to and deeply influencing history, poetics, linguistics and many other fields of study. The interrelations of all these disciplines, among themselves but with the natural sciences, the social sciences and the areas of philosophy and theology as well promise to be fruitful directions for future research.

Such research projects can improve on the present one by posing more thorough historical questions to the material and contextualizing most of the patterns. This may not have to lead to a refutation of the general theses of the book at all. On the contrary, the increase of sophistication of the account might as well strengthen its central claims. I believe historians of linguistics should contribute to this kind of research since their profession can only benefit from

it. After all linguistics is the field *par excellence* in which the humanities and the natural sciences (and also the social sciences) have often met and interacted in a huge variety of interesting ways.

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