

cerning the existence of significant archaeological find in the area to be undated. The mobilization asking for the preservation of this archaeological heritage was not successful, a failure that Bento investigates with a focus on the role of media in the construction of scientific and technical objects. In the final chapter, Marisa Matias examines the controversy about the use of a cement factory in Souselas (a small town close to Coimbra) to incinerate industrial wastes. Matias discusses the dynamics through which the problem arises together with the objects of scientific controversy. She investigates as well how environmental policies and citizens' mobilisation enter the frame. The author suggests that this kind of studies can help in understanding the processes that confer existence (or non-existence) to public problems and collective actors. Far from being just a sample of Science Studies research in Portugal, the volume edited by Nunes and Roque is an important exercise in self-reflexivity that points out the originality of the Portuguese contribution to the study of science and technology in society, thus tracing a clear path for future developments.

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Reiner Keller
**Wissenssoziologische
 Diskursanalyse. Grundlegung
 eines Forschungsprogramms**
*(The Sociology of Knowledge Approach to
 Discourse Analysis. Groundwork for a
 Research Programme)*
 2011, VS Verlag, 360 pp.

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Reiner Keller's work constitutes one of those "exceptions" that prove that the academic scene is not yet as global as we tend to think. Keller has developed a research programme for the sociological analysis of discourses and their effects. Thanks to its concreteness and practical applicability in empirical research, the method has been harnessed by German scholars in a wide range of disciplines – not only in sociology but also in history, pedagogics and educational science, linguistics, political science, studies of religion, criminology... That Keller's manual has reached a third edition in barely six years can be taken as an indicator of its success. Oddly enough, no English translation is available yet, and while he is widely cited in Germany, international publications referring to Keller's work are still rare.

Keller's research programme for discourse analysis – he prefers to call it a programme since it includes both a theoretical framework and methodological tools – is grounded in the sociology of knowledge but incorporates insights from Foucault's work. The proposed research programme originated in his own discourse research on waste politics in Germany and France

in the early 1990s (mentioned in Keller 2010). There are some affinities with Maarten Hajer's work on story-lines in the acid rain controversy (Hajer 1995). Both scholars were interested in the circulation of knowledge and discourses concerning environmental conflicts. This affinity doesn't come as a surprise, since the two collaborated at the University of München. Nonetheless, Keller went much further than Hajer in developing a complete theoretical framework – social theory is presumably his actual area of interest – and published it in the manual under review.

In the brief introductory chapter of the manual, the author elicits that the research programme tries to reconcile two traditions that have drifted apart over the last decades: the sociology of knowledge on the one hand, and Foucauldian discourse analysis on the other hand. For the former tradition Keller takes the work of Peter Berger and Thomas Luckmann (1966) as reference point, while for the latter he departs from Foucault's *Archeology of Knowledge* (1969). Berger and Luckmann undertook an in-depth inquiry into the social legitimisation, social institutionalisation, and subjective internalisation of “whatever passes for ‘knowledge’ in society”. This sociology of knowledge has in Germany evolved into an important interpretative current in the social sciences, known as *Hermeneutische Wissenssoziologie* (hermeneutic sociology of knowledge). Keller believes that this tradition has much to offer for the analysis of discourses, but he contends that it has been focusing too much on the micro level of “language-in-use”. On the con-

trary, the foucauldian tradition of discourse analysis, he maintains, is situated at an all too abstract level of macro analysis, focusing on grand discourses, and is not really suited to empirical research. Keller's programme tries to find a middle way, by up-scaling the hermeneutic sociology of knowledge beyond the language-in-use level, while maintaining the social constructedness of discursive actors, institutions, and discursive practices.

The rest of the manual is organized in four large chapters. The first two describe the history of – respectively – the sociology of knowledge, and discourse analysis. The third chapter, covering one third of the manual, describes Keller's research programme for *Wissenssoziologische Diskursanalyse* (WDA) – or somehow oddly translated in English: the Sociology of Knowledge Approach to Discourse (SKAD). The last chapter of the manual discusses the role that the SKAD research programme can play with respect to wider social questions about risk, social responsibility, science and technology in society, politics of identity, or “life politics” in general.

So, what does the SKAD programme look like? SKAD understands discourses as “structured and structuring structures” that both reproduce and are reproduced by social practices. Discourses socially constitute knowledge systems, orderings of reality, institutional and material devices (Dispositif), and power effects in the network of social actors. Keller emphasises that the nature of discourses is concrete and material, both in construction as in effects. Therefore, he distinguishes three principal dimen-

sions of analysis: (i) the discourse content itself, (ii) the internal structuring of the discourse, (iii) the materiality of the discourse.

The first dimension contains those utterances and pronouncements that constitute instances of the discourse. The researcher might try to distinguish public discourses from specialist discourses, look for discourse formations, as well as minimal and maximal contrasts in the discourses.

The second dimension is the one that structures the internal meaning of the discourses. In order to lay bare the internal structuring, Keller mostly relies on concepts inherited from the hermeneutic sociology of knowledge. He proposes to look for the following elements in the discourse: the meaning-making schemes (*Deutungsmuster*), classifications, the structuring of external phenomena, narrative structures, models of action, and models for the involved actors.

Discourse has also a material dimension – on which Keller insists very much. In fact, the third dimension is constituted of: the actors that reproduce the discourse, the actors that are subjects of the discourse, the addressees of the discourse, the receivers of the discourse, the platform from which the discourse is disseminated, the material devices (*Dispositif*) that incorporate and/or reproduce the discourse, the practices that reproduce the discourse, and the practices that are provoked by it.

Therefore, SKAD is a research programme for the sociological analysis of discourses that maintains the middle ground between the socio-linguistic micro level of analysis and the fou-

cauldian macro level. Nonetheless, the research programme heavily rests upon the foundations of the sociology of knowledge, by assuming the social construction of knowledge orderings, their social legitimisation and institutionalisation. From Foucault's work Keller has retained the key idea that discourses have power effects and the recognition that discourses are materialised in devices.

His programme and concepts, however, are more static than dynamic. They cannot explain how discourses emerge, take over others, or become hegemonic. Nor do they throw light on the dynamics through which hegemonic discourse are challenged. Understandably, Keller admits that his programme does not pretend to be complete.

Moreover, I believe that the research programme is designed for the sociological analysis of political discourses, whereas it has little to say about the data collection. Keller refers to standard data collection methods such as interviews, ethnography, etc., but at various points he also invokes the Grounded Theory Method and the work of Anselm Strauss (Keller 2005, 2010). That he invokes the Grounded Theory Method seems odd since Keller's programme includes various pre-conceived theoretical dimensions, concepts and categories – yet this inevitably conflicts with the central idea in the Grounded Theory Method that the researcher should collect empirical data without any theory in mind.

In conclusion, the manual offers two valuable components. First, Keller rigorously sketches the double theoretical grounds in which his research pro-

gramme is rooted: the sociology of knowledge, and foucauldian discourse analysis. Second, he delivers a number of very user friendly tools and concepts for the analysis of empirical data. The success of his research programme in German academia can be taken as a guarantee for its applicability in a whole spectrum of issues, varying from global environmental controversies, over science and technology in society, to social identity politics.

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Philip Vannini
**Material Culture and Technology
 in Everyday Life. Ethnographical
 Approaches**
 2009, Peter Lang, 254 pp.

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The book edited by Philip Vannini – one of the more eclectic and prolific emergent scholars in the intersection between culture and technology – is a very useful step to fill a gap in the ongoing process of interconnection between different perspectives on the social studies of technology. This gap consists in the partial lack of dialogue between, on the one side, the science & technology studies and, on the other side, the material culture studies and, more in general, the context of cultural studies intended in their broader sense. Indeed, while these two areas of contemporary social sciences have hardly found explicit convergences, at a closer look they reveal a common feeling on the fact that social relations, technologies and objects are strictly interwoven with each other and, also, that at their junction it is possible to find a crucial dimension for the development of contemporary world. However, in spite of this, it is pretty hard to find scholars that are effectively committed to develop these connections and links. Philip Vannini and some of his colleagues certainly are among these few scholars.

As the editor recognizes in his introduction, the boundaries between these fields – STS and material culture – have remained solid more as the result of accidental scientific practices,