

The Constitution of Technology Choice

Greg Maniatopoulos
Newcastle University, United Kingdom

Abstract

This paper attempts to provide a reflective conceptual framework by using Castoriadis (1987) social and political theory to establish a structured understanding of the interaction between technology, institutions and markets. The aim of this position is neither to test Castoriadis ideas, nor to exemplify every aspect of his theory. Rather, this paper attempts to explore the applicability of some of Castoriadis ideas, and therefore to address the complex patterns of interaction between the perceived, the rational and the imaginary components of significations within the context of technology choice.

Keywords: technology choice, imaginary significations, Castoriadis

Permanent URL: <http://sprouts.aisnet.org/9-11>

Copyright: [Creative Commons Attribution-Noncommercial-No Derivative Works License](#)

Reference: Maniatopoulos G. (2009). "The Constitution of Technology Choice,"
Proceedings > Proceedings of ALPIS
itAIS, Italy . *Sprouts: Working Papers on Information Systems*, 9(11).
<http://sprouts.aisnet.org/9-11>

Over the last 20 years considerable attention has been given to the social study of technology across academic communities in Europe and the US. While some writers have tried to analyze the social context of the technology design process with a focus on the interpretive flexibility of artifacts, others again by following a more systematic approach tried to analyze the socio-political context of technology development and consumption and the heterogeneous associations between human and non-human elements within the actor-network. Accordingly, each approach treats technologies and the social realm that constitute them as ‘seamless webs’ (Hughes, 1986), ‘socio-technical ensembles (Bijker and Law, 1992) or ‘networks of human and non-humans’ (Latour, 1987). An important characteristic that all those different approaches share is the view that the black box of technology and therefore of society must be opened in order to understand the social origins and workings of technological development. However, variously these approaches have been criticized for overlooking and/or oversimplifying the processes of technology acquisition and the social consequences of technical choice and thus for their exclusive focus on the design stage of technology development and use (Pollock and Williams, 2007; Mackay and Gillespie, 1992; Winner 1993).

This paper attempts to provide a reflective conceptual framework by using Castoriadis (1987) social and political theory to establish a structured understanding of the interaction between technology, institutions and markets. The aim of this position is neither to test Castoriadis ideas, nor to exemplify every aspect of his theory. Rather, this paper attempts to explore the applicability of some of Castoriadis ideas, and therefore to address the complex patterns of interaction between the perceived, the rational and the imaginary components of significations within the context of technology choice. Castoriadis’ (1987) thought offers a reflective resource for the analysis of the complex character of technology choice and its relations to institutional desires, fantasy, and *imaginary practice*. Drawing upon his interest in Marxist theories of economics – which he later rejected – Castoriadis sought to understand the formation of social and political life by exploring the constitutive and interrelated elements of the “radical imagination” of the psyche and the “social instituting imaginary of society” through a closer examination of philosophical and psychoanalytical conditions.

A core element of Castoriadis (1987) thought - which this paper will attempt to explore in the context of technology choice - around the constitution of society and its institutions is the idea of *imaginary significations* as the main sources of meaning in social and cultural life. Drawing upon Castoriadis (1987) imaginary significations can be understood as conscious and/or unconscious ‘symbolic representation(s)’ of human activity towards the creation of meaning and sense making. For Castoriadis ‘symbolic representation(s)’ project significations which entail perceptions of the real-rational, but also a further imaginary component, which ultimately stems “from the original faculty of positing or presenting oneself with things and relations that do not exist, in the form of representation (things and relations that are not or have never been given in perception)” (Castoriadis 1987, p. 127). As such “the social world is, in every instance, constituted and articulated as a function of such a system of significations, and these significations exist, once they have been constituted, in the mode of what we called the actual imaginary (or the imagined)” (*ibid.* p.146). These imaginary frameworks play an important role in shaping the ‘choice’ of ‘symbolic representation(s)’ made by every society, and in particular the choice of its institutional symbolism as well as the ends to which it subordinates ‘functionality’ (*ibid.*).

In the context of technology choice, this paper suggests that these imaginary significations are the outcome of both rational techno-economic behaviour and discursive imaginary struggles that emerge at various points and in many forms by providing repositories of meaning about the content of technology and its application (Pollock and Williams, 2007). For the purposes of this paper, these significations and dominant interests are reflected in the form and functioning of technology in *imaginary practice*. This is an imaginary domain which individuals and institutions create in order to sustain and manifest ‘representations’ and ‘projections’ of possible alternative realities and visions of possible futures related to the content and application of a technology. Because of this symphysis between the perceived, the rational and the imaginary components of these significations this paper suggests that technology and its choice encapsulates not only the preferred techno-economic significations of the technology itself, but also the inscribed imaginaries of technology in society, work, institutions (i.e. the wider socio-political conditions of

technology in context). For example, the acquisition of certain technologies (i.e. Oracle, SAP, Microsoft etc.) can simultaneously provide evidence of membership of certain social groups, indicate valued relationships and incorporate imaginaries about knowledge practices, expertise (i.e. professionalism) and relations to other actors by encouraging new aspects of subjectivity (Bourdieu, 1984; Douglas and Isherwood, 1996). All the different levels of significations are intertwined in complex processes of negotiation of social order. The negotiated 'level of ordering' is somewhere in between the inscribed imaginary significations about technology in society, work, institutions and the performative techno-economic assessment of technology as ordered by developers, users and institutions in situated action. Indeed, it is the dialectic between all these different levels of significations that both technology choice and institutional practice become constituted.

These different forms of significations highlight the complexity of the IT markets and the importance of the circular and recursive relationship between actors, institutions and technology choice. As such designers, developers, suppliers, consultants, and users become intertwined together with institutions and social and material practices (i.e., markets, laboratories, and regulative bodies) in complex performative patterns of imaginary created significations which influence the trajectory of IT markets. Together these various actors frame and constitute markets, define available choices, and develop methods of evaluating outcomes through the creation and performance of significations to support these markets (Callon, 1998; 1999). These points are important in understanding the distinctive constitution of technology choice as a complex institutionally embedded pattern of imaginary significations. Indeed, technology choice cannot be understood as being pre-determined in any social or technological context, but rather as being 'performed' over time in the local and situated frame through the creation and constitution of imaginary significations.

Guided by these understandings, technology choice can be understood as a function of such a system of imaginary significations through the creation of the images and performative figures that support these significations. Subsequently, technology choice becomes stabilized through performative processes of negotiation of significations aiming to achieve rhetorical closure and community consensus. Indeed,

performative imaginary significations, influenced by various socio-political, economical and technical conditions, affect and constitute the technology selection process by providing a stabilized form of accountability.

References

Bijker, W., E., and Law J., (eds) (1992), *Shaping Technology / Building Society: Studies in Sociotechnical Change*, The MIT Press, Cambridge Ma

Bourdieu, P., (1984), *Distinction: A Social Critique of the Judgement of Taste*, trans. Richard Nice, Cambridge: Harvard University Press

Callon, M., (1998), *An Essay on Framing and Overflowing*, in Callon M., (Eds), *The Laws of the Markets*, Blackwell, Oxford, pp. 244-269

Callon, M., (1999), *Actor-Network-Theory: The Market Test*, in Law, J., Hassard, J. (Eds), *Actor Network Theory: and After*, Blackwell, Oxford, pp.181-195

Castoriadis, C., (1987), *The Imaginary Institution of Society*, Cambridge, Polity Press

Douglas, M., and Isherwood, B., (1996), *The World of Goods: Towards an Anthropology of Consumption*, New York: Basic Books, Routledge

Hughes, T., P., (1986), *The Seamless Web: Technology, Science, Etcetera, Etcetera*, *Social Studies of Science*, 16 (1986), pp. 281-292

Latour, B., (1987), *Science in Action: How to Follow Scientists and Engineers through Society*, Cambridge, Mass., Harvard University Press

Mackay, H., and Gillespie, G., (1992), *Extending the Social Shaping of Technology Approach: Ideology and Appropriation*, *Social Studies of Science*, 22 (1992), pp. 685-716

Pollock, N., and Williams, R., (2007), Technology Choice and Its Performance: Towards A Sociology of Software Package Procurement, Information and Organization, 17 (2007), pp. 131–161

Winner, L., (1993), Upon Opening the Black Box and Finding it Empty: Social Constructivism and The Philosophy of Technology, Science, Technology and Social Values, 18:3 (1993), pp. 362-378

Editors:

Michel Avital, University of Amsterdam
Kevin Crowston, Syracuse University

Advisory Board:

Kalle Lyytinen, Case Western Reserve University
Roger Clarke, Australian National University
Sue Conger, University of Dallas
Marco De Marco, Università Cattolica di Milano
Guy Fitzgerald, Brunel University
Rudy Hirschheim, Louisiana State University
Blake Ives, University of Houston
Sirkka Jarvenpaa, University of Texas at Austin
John King, University of Michigan
Rik Maes, University of Amsterdam
Dan Robey, Georgia State University
Frantz Rowe, University of Nantes
Detmar Straub, Georgia State University
Richard T. Watson, University of Georgia
Ron Weber, Monash University
Kwok Kee Wei, City University of Hong Kong

Sponsors:

Association for Information Systems (AIS)
AIM
itAIS
Addis Ababa University, Ethiopia
American University, USA
Case Western Reserve University, USA
City University of Hong Kong, China
Copenhagen Business School, Denmark
Hanken School of Economics, Finland
Helsinki School of Economics, Finland
Indiana University, USA
Katholieke Universiteit Leuven, Belgium
Lancaster University, UK
Leeds Metropolitan University, UK
National University of Ireland Galway, Ireland
New York University, USA
Pennsylvania State University, USA
Pepperdine University, USA
Syracuse University, USA
University of Amsterdam, Netherlands
University of Dallas, USA
University of Georgia, USA
University of Groningen, Netherlands
University of Limerick, Ireland
University of Oslo, Norway
University of San Francisco, USA
University of Washington, USA
Victoria University of Wellington, New Zealand
Viktoria Institute, Sweden

Editorial Board:

Margunn Aanestad, University of Oslo
Steven Alter, University of San Francisco
Egon Berghout, University of Groningen
Bo-Christer Bjork, Hanken School of Economics
Tony Bryant, Leeds Metropolitan University
Erran Carmel, American University
Kieran Conboy, National U. of Ireland Galway
Jan Damsgaard, Copenhagen Business School
Robert Davison, City University of Hong Kong
Guido Dedene, Katholieke Universiteit Leuven
Alan Dennis, Indiana University
Brian Fitzgerald, University of Limerick
Ole Hanseth, University of Oslo
Ola Henfridsson, Viktoria Institute
Sid Huff, Victoria University of Wellington
Ard Huizing, University of Amsterdam
Lucas Introna, Lancaster University
Panos Ipeirotis, New York University
Robert Mason, University of Washington
John Mooney, Pepperdine University
Steve Sawyer, Pennsylvania State University
Virpi Tuunainen, Helsinki School of Economics
Francesco Virili, Università degli Studi di Cassino

Managing Editor:

Bas Smit, University of Amsterdam

Office:

Sprouts
University of Amsterdam
Roetersstraat 11, Room E 2.74
1018 WB Amsterdam, Netherlands
Email: admin@sprouts.aisnet.org