The Social Shaping of Technology: A New Space for Politics?

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1 General introduction

The social shaping of technology (SST) perspective has developed as a response to techno-economically rational and linear conceptions of technology development and its consequences. It has brought together analysts from different backgrounds with a common interest in the role of social and political action for socio-technical change. Thus, SST is a broad term, covering a large domain of studies and analyses concerned with the mutual influence of technology and society on technology development. In this chapter we emphasise the political dimensions of social shaping, through a focus on the socio-technical processes entailed in technology development and change. Our perspective is based on the understanding that technological development is a social process. As such, it unfolds through processes with political implications, involving actors, occasions and strategies that help bring about technological change. Our intention is to pursue a broader view on the political dimensions of technological decision-making, and a broader treatment of socio-technical space, maintaining a focus on the inclusion and exclusion of actors, salient issues, and how they are dealt with and resolved.

Our analysis is based on lessons from a distinct selection of Danish technology assessment (TA) initiatives which provide the basis for illustrating this point. How influence comes about, not in a deterministic sense, but that things could be otherwise, in contrast to traditional technical, economic or social rationales. Furthermore, that such influences produce effects, which are non-neutral and distributed, as the processes of shaping themselves have been. Despite the claimed use of the social shaping concept in the assessments, the SST perspective in the respective Danish assessments do differ in a number of respects – institutional background, theoretical background, participatory ambitions etc. – the consequences of which will also be discussed.

The chapter develops the notion of SST through socio-technical spaces. Here a heterogeneous set of elements, comprising of techniques, social actors, attribution of meanings, and problem definitions, etc. together set the stage for technology development. Within the framework of socio-technical spaces, the TA activities are analysed to illustrate how social shaping can be identified in a range of instances: from actual influences on specific technology developments, to influences on larger societal discourses and policy conceptions.
Shifting the boundaries of the socio-technical spaces, through the inclusion and exclusion of actors, are demonstrated to have opened up new dimensions of technology. It is claimed that these activities may all be characterised in terms of ‘social shaping’, that is, they all extended the scope of technology analysis, actors and consequences, compared to more traditional industrial and industrial policy analyses. We suggest that the SST perspective will contribute to the further consideration and development of TA strategies and technology policy.

Our interest in exploring the SST perspective in relation to technology development and TA has mainly two motivations. On the one hand, there has been an interest on our part in the analysis of specific technologies and technology developments, both first hand, as well as learning from insights of colleagues, into the mutually shaped character of the social and the technical in processes of socio-technical change. On the other hand, there has been an interest in exploring the concurrent role of social shaping in the creation of socio-technical spaces, in which certain actors experience inclusion and exclusion. TA activities are one example, in their diversity, of such a space.

The final discussion will deal with the different ways in which the social shaping worked, and how spaces changed through the creation and repression of particular spaces. Our claim is that from an SST standpoint, TA has broadened the influence of a range of social actors on technological development, at various levels of technological change. TA has contributed to the shaping of technology through social processes and with political implications, via the allocation of resources for analysis, debate and participation, and thus the creation of new spaces. Constructive use of the dimension of influence for reflexive strategies in technology development and in TA, open up to how critique may be raised and how complexities of the socio-technical processes of change may be dealt with. Rather than a reductionist and thus narrow range of interventions, TA strategies may broaden the spectrum of actor positioning and of localising and sizing up the socio-technical political arena.

2 Socio-technical spaces and political processes

2.1 The technical, the social, and their mutual shaping

Approaches such as Actor Network Theory (ANT) and Social Construction of Technology (SCOT) are characterised by their lack of any absolute distinction between technology and its social context (Callon 1986; Pinch and Bijker 1987). SST as a tool for analysis has developed since its inception, and has increasingly come to include the viewpoint that the technical and the social dimensions are intertwined and must be regarded as one common unit of analysis (Williams and Sørensen 2002). Technology and society are seen as co-constructions, mutually shaping one another. They are to be studied, for this reason, without any sort of a priori distinction, as to whether a problem may be legitimated as being distinctly technical, or social, in scope. The SST approach to technological change is then,