

Society and Technology

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The prototypes in the original Lucas Plan were envisaged as being made in a less alienating form of industrial production, organised through careful planning, and underpinned by state spending in socialised markets. The Plan was informed by the ideologies and trade union experience of the Lucas Combine shop stewards. They sought (high) technologies for a restructured industrial society in which grassroots needs and ingenuity were brought into equitable contact with advanced manufacturing processes. As the movement moved out of this setting, into the spaces of community workshops and alternative economic strategy, so activities for wider scale diffusion came to be interpreted somewhat differently, to include popular planning, community involvement, gender and environmental issues.

The wider political and economic changes meant a combination of expediency and more business-oriented alliances broadened interpretations further still, such as in the Technology Networks, and where prototypes for socially useful production became objects for commercialisation. These included the commercialisation of technological artefacts, the institutionalisation of design principles and methodologies, new service models for energy, and organisational forms such as technology exchanges.

But in terms of the movement's radical framing, these moves were limited, offshoot achievements. Activists had taken seriously the idea of pursuing a different kind of innovation, and using concrete experience of trying to do innovation that way, to explore, reflect and rethink the

wider institutional, political and economic restructurings required. The movement was trying to build among the grassroots the power to do innovative things, at the same time as recognising that becoming mainstream practice would require power over innovation and economic agendas. Even without power over conventional agendas, however, alternative innovation was possible for a period in sympathetic spaces; and some of the innovations were even able to move out of those spaces as they developed into forms attractive on more conventional and commercial terms.

Debates concerning the purposes of prototypes and workshops were typical of the considerations in moving beyond alternative spaces. Should prototypes and networks become focal points for the mobilisation of campaigns for institutional change in line with the underlying goals of the movement? Or should they devote their efforts to the development of objects emerging from this milieu that were promising on more conventional commercial grounds? Was the goal to use grassroots innovation networks to stretch and transform the institutions of innovation, or to refine specific grassroots innovations to fit and conform to prevailing market institutions? In the end, for structural reasons, it became increasingly difficult to sustain the more transformative strategy. The more tactical and pragmatic negotiation of specific initiatives of social entrepreneurship and local economic development services became the more reasonable course of action available over the course of the 1980s.

More recently, as mainstream trajectories of development have had to bend to similar social demands today, such as the environment, so we see a return of some of the artefacts pioneered earlier. However, firms and policy-makers are not adopting these artefacts without adapting them to their own agendas and interests. Forrester argues activists in the 1970s,

‘exhibited a deeply political understanding of current and potential technology, in marked contrast to the purely technical nature of the alternative technology we recognize today. The term has shifted from describing a technology that will enable an alternative society, to a technology which provides an alternative means to enable current social structures to be maintained.’

(London: Centre for Alternative Technology, 2012).

What becomes apparent is that in the settings of local economic development, or community activism, or even human-centred technological research, the world is not organised into neat narratives for or against socially useful production. There is a much more complex interplay and intersection of demands, possibilities, and limitations across

a dynamic variety of spaces, and which activists need to negotiate. Indeed, the movement in this case study emerged through the intersections of workers, the Left, community activists, and others, already seeking pathways towards their goals. And as socially useful production as a relatively coherent movement fragmented, so some of the ideas, practices, and material symbols of its goals were carried away into other spaces, including those associated with the design profession, environmentalism, academia, and social entrepreneurship. (Robin Murray, GLC economic director, for example, went on to pioneer ideas in social innovation.)

Even where initiatives do not appear to leave long-lasting consequences, looking back and understanding how grassroots innovators and activists confronted challenges at the time identifies how their practical activity generated a rich plurality of knowledge. Whether highlighting and addressing the exclusions and inequities in existing grassroots innovation (e.g. hitherto unspoken privileges in workshops), or the more agit prop pointing to injustices in society; a figuring out of issues through material projects could prove both informative and expressive for participants. Movement initiatives and spaces permitted a finer-grained and more richly textured knowledge production, compared to, say, more rarefied analysis and argument in manifestos, reports, and policy documents. Material projects involving hands as well as minds, brought in more varied participants, allowed wider forms of expression, and addressed different audiences compared to, say, speeches and texts evoking an abstract revolutionary agent, entrepreneurial state, or overseeing governance framework. Practical reasoning presented a very different way of participating materially in debates, and could be quite empowering to those involved.

In that respect, path construction included spaces for a practical figuring out of the complex possibilities of grassroots innovation in socially useful production. Socially useful prototypes focused attention and activity in the development of objects, but were done in ways in which deliberation ranged far beyond those objects. The prototypes were devices that engaged wider socio-technical systems, and presented a broader social perspective on technologies. Participants at Lucas and elsewhere demonstrated by doing how technologies were not neutral tools, but rather material devices shaped by social values and structures. Some in the movement eloquently articulated and popularised arguments for democratic design and human-centred technology, but the prototype devices themselves were a material manifestation of the centrality of tacit skills and grassroots ingenuity in design. Arguably, in cases like the road-rail bus, the social usefulness was

not always immediately apparent, and some prototypes proved perhaps to be diversions. But nevertheless they allowed the gathering and accommodation of new and unusual allies, including engineers and community activists, and so should not be dismissed without consideration for the processes they helped catalyse. These objects were devices for engaging people in debates about the promise of technology in social realities, and urged reflection on how those relations might be changed.

Nevertheless, practical reasoning had to connect with political mobilisation. The experience at the London Energy and Employment Network (LEEN) illustrated vividly, for example, how householders had tacit knowledge about the thermal performance of their homes. Monitoring expertise and energy auditing methodologies developed at LEEN validated in technical forms acceptable to public authorities something that householders already knew: their homes were damp, cold, and inadequately heated at great cost. Conversely, it required the knowledge and skills of tenants' associations, community organisers, and the householders themselves to mobilise a campaign to win the public funds for the requisite technical remediation. All were mobilised through the process, but it is worth pointing out that the technical experts would not have been able to implement their techniques and devices without the power of the tenants' campaigns. There was a combination here of practical reasoning, propositional expertise, and political linkages involving a variety of actors and audiences.

To the extent that socially useful production was committed to involving the tacit knowledge of people conventionally overlooked by innovation institutions, it was always going to be difficult to enshrine and institutionalise it in clear codes. The movement wanted to uncover the ideas, skills and resourcefulness of workers and communities, and to try and empower them in ways that demanded constructive responses by more powerful investment agencies and political authority, without becoming engulfed by the logics and codes of the latter.

The social shaping of technology

The overall legacy of the Lucas and associated initiatives is the way they pointed clearly and with commitment to the fact that there is nothing natural or inevitable about technological trajectories; social forces and actor interests shape them. The movement pointed to this social shaping and, in a very practical and grounded way, explored how people might exercise greater conscious agency over alternative shaping processes for more socially useful purposes. In so doing, activists anticipated ideas and

analysis that was to consolidate into science and technology studies over the coming years; indeed, for some contributors to those studies, the Lucas Plan and associated movement for socially useful production was a formative inspiration. The traces of the movement's arguments and activities have been carried by activists in their subsequent careers, have been taken up and developed by others, and consequently contributed to opinion and activity to consciously shape technology for social benefit.

Returning to the roots of the movement for socially useful production remains instructive. Not only do we better appreciate one of the routes towards recent suggestions for the social shaping of technology, such as Constructive Technology Assessment, but we are also reminded why this recent work needs to recall some of its radical roots. Recalling that the political origins of some of these ideas suggest polite recommendations for opening up policy frameworks is unlikely to be sufficient for a more democratic shaping of technology and innovation. The experience of the Lucas Plan is one of ideas and practices being overwhelmed and appropriated by more powerful political and economic forces. The more challenging attempts at social shaping were closed down, such as direct democratic control of the technology development process, while other elements were co-opted and reconfigured by capital, such as ideas, methodology, and artefacts for flexible specialisation in manufacturing.

But the other instructive aspect to the history is the very practical attempts to involve people materially in technology development. Whereas methodologies like Constructive Technology Assessment (CTA) and others seek predominantly discursive approaches and arenas to shaping technology, the movement for socially useful production created (physical) spaces for practical and direct engagement in the development of technology. Technology Networks might have been quite limited, but they did enable people to engage in some material processes shaping technology in extra-discursive ways, and thereby reflect on the wider social, economic and political processes that made some workshops aspirations more elusive than others.

The current flourishing of hackerspaces, fab labs and grassroots digital fabrication suggests an insistent urge to shape technology directly from below and beyond formal institutions of technology development. The earlier movement's arguments for technological agit prop and participation through doing could be informative for current movements for makers and commons-based peer-production. Equally, the possibilities opened up by the more rapid, extensive, and versatile networking possibilities of the new technologies of social media recast these earlier ideas into interesting new

forms. That said, the emphasis on tacit knowledge, skill, and learning by doing through close face-to-face collaboration involving material objects that caught the attention and imagination of the earlier generation of activists, as a way of resisting automation, raises questions about the possibilities of codification and transmission of experience and know-how through social media. It suggests the new movements cannot and must not underestimate the off-line, local community-based activism component in any democratisation of a technology commons.

It is these early contributions towards the social shaping of technology that is the legacy of the movement for socially useful production. Neo-liberal deference to the market does not invalidate the argument made by the movement, even if neo-liberalism proved to be the more powerful and hegemonic social shaping agent at the time. Neo-liberalism provides an unreflective and narrow approach to the social shaping of technology: market choices became the social shaping processes of choice. Current concern for rising social inequalities, uneven and insecure economic development, and environmental sustainability suggest this is an inadequate way to shape the innovation of technology. The workers involved in the Lucas Plan and activists in the movement for socially useful production bequeathed us practical experience for thinking differently about the social shaping of technology, and perhaps doing innovation better.

<http://steps-centre.org/wp-content/uploads/Socially-Useful-Production.pdf>

