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Alternative Technology and Social Organisation in an Institutional Setting

PETER HARPER 🆔

Natural Sciences, University of Bath, Bath, UK

Introduction

I grew up in the decades after the Second World War. There was a clear sense of new beginnings and of technological optimism, typified by the UK's 1951 Festival of Britain, which I visited as a wide-eyed schoolboy. In retrospect, this very period experienced a step-change in many standard indicators of human activity, later labelled 'The Great Acceleration' (Steffen *et al*., 2015).

The sense of ineluctable progress has continued to be the dominant narrative, and it is as well to acknowledge it. But this essay explores particular veins of radical doubt regarding the trajectory of modern socio-technical development, which led to the emergence of the so-called Alternative Technology (AT) movement in the 1970s (Harper and Eriksson, 1972; Dickson, 1975; Winner, 1979; Smith, 2005).[1]

In retrospect we can distinguish two critical streams of thought. One was a *social and cultural* critique of technology, arguably going back to Ruskin, followed by (for example) William Morris, M.K.Gandhi, Lewis Mumford, Herbert Marcuse, E.F. Schumacher and Ivan Illich. The other was a physical/environmental critique commonly associated with Carson (1962), followed by (for example) Commoner (1966, 1971), Ehrlich (1969), Goldsmith (1972), and Meadows *et al*. (1972). The AT movement attempted to combine these two streams and follow through their implications. It also drew strongly on a wider pool of dissident ideas, summarised in Box 1.

Correspondence Address: Peter Harper, 20 Station Road, Corsham, Wiltshire SN13 9EY, UK. Email peter@peterharper.org

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BOX 1

Utopian socialism (Morris, 1970; LeGuin, 1974)
Anarchism (Kroptkin, 1974; Ward, 1973)
Deviant Marxism (Cohn-Bendit, 1969; Debord 1971);
Decentralist political theory (Kohr, 1957; Goodman, 1968);
Community living (Kanter, 1972; Gaskin, 1974)
Deliberately anti-modern communities such as North American Anabaptists (Hostetler, 1970);
Pre-modern societies (Schumacher, 1968; Sahlins, 1968);
Steady-state economics (Boulding, 1966; Daly, 1977)
Low-income lifestyles (Nearing and Nearing, 1960; Seymour and Seymour, 1973);
Metaphysical perspectives (Pirsig, 1974; Castaneda, 1968);
Fringe science (Reich, 1960; Watson, 1974).

But why the emphasis on technology? A core view was that uncontrolled technical innovation was a principal driver of growth and change for both good and ill. From the physical/environmental perspective, it was suspected that catastrophic risks were plausible and were strongly related to the scale and complexity of human activity. Unexpected, emergent properties of complex systems were widely noted (Platt, 1969; Forrester, 1969) and catalogues of malign counter-intuitive effects were common (Rattray-Taylor, 1970; Harper, 1971; Farvar and Milton, 1972; Davis and Pedler, 1974). And of course, the process had hardly begun. If the root of such effects was indeed technology and innovation, evidently a completely different approach to technology was required to safeguard the future.

At the same time, from the social and cultural perspective, it was thought that deliberate changes in technology could also help escape the sense of alienation widely experienced by younger people at the time (Roszak, 1970). A contemporary text sums it up:

> We have to break through the political, economic, social and psychological forces that constrain and oppress us. The trouble is these forces hold one another together in a web of reinforcement so consistent that it's hard to know where to begin loosening their grip: patterns of ownership, status-games, the way you work, what you learned at school, what the neighbours think, who gives the orders, what turns you on, what you see on TV, what you can or cannot buy … . Technology is one of these also, but we think it's a good place to get your fingers in the crack. (Boyle and Harper, 1976, p. 6)

The net result was a militantly precautionary anti-modernism, favouring simple, locally generated craft-based technologies, often of a deliberately archaic kind. This approach contrasted sharply with that of moderate critics such as Beck, Giddens and Lash (1994), but it represented a serious attempt to follow through

the implications of the theoretical and empirical critiques. And of course it remained at odds with the prevailing culture, with extremely limited take-up, as observed by Seyfang and Smith (2007).

Essential were special places where the prevailing rules were different and a new 'socio-technical culture' could be developed in what would be later termed a 'protected niche' (Smith, 2000). There it would be possible to explore the expected synergies between all the technologies working together, and their inter-actions with appropriate skills and lifestyles. Hence the rise of institutions in specific locations dedicated to the development of AT, for which a satisfactory generic label has never been agreed, although 'ecocentres' is often used by default (Harper, 2002; Ecolink, 2003). Several such foci had emerged in the USA in the early 1970s, and one in the Netherlands. These inspired the foundation of the National Centre for the Development of Alternative Technology, UK in 1974, later simply the Centre for Alternative Technology or CAT. In what follows I shall describe some ways in which CAT pursued a changing vision of an alternative socio-technical culture in the subsequent decades.

AT practice at the Centre for Alternative Technology (CAT)

I should declare my own involvement in CAT. I worked there from 1983 to 2013 in various roles, latterly as Head of Research. I was an early theorist of AT (Harper and Eriksson, 1972; Harper, 1973; Boyle and Harper, 1976) and my work was part of a large corpus initially drawn on by CAT's founders to define its terms of reference. While at CAT I had frequent occasion to analyse and comment on its activities, successes and failures (e.g. Harper, 1995, 2002).

True to its founding spirit, CAT attempted to combine both political and environmental critiques of modern technology, and to pursue its technological agenda in a socially 'alternative' manner. That is, it tried to create a sustainable system for providing essential needs within a collectivist living-and-working organisation, along with classic radical features such as consensus decision-making, needs-based wages and rotation of tasks. Much of spirit is captured in Allan Shepherd's recent work on CAT's oral history (Shepherd, 2015).

I want to illustrate the nature and evolution of CAT's socio-technical culture in two areas: electricity supply and research. These demonstrate distinctive features that might be difficult to achieve outside this special context. They also illustrate conflicts, both internal and in terms of deviations from conventional norms. Over time we can observe a gradual pattern of reconciliation with mainstream technology and indeed a retreat from many of the more radical social practices. Nevertheless, a reasoned critical stance was maintained, and arguably became more cogent as the organisation becomes recognisably aligned with mainstream institutional structures.