Junk, Pretty Junk, and 'Other Directed Design'*

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Often touted as a modern marvel, the increasingly rapid pace of technological innovation in our day might alternatively be interpreted as a sign of imminent crisis. The urgent need for attention to 'design' (to use the current term), however, remains. Sustainability, satisfying work, preservation of the rudiments of human community—even concern with a basic sense of meaning and engagement with the world—all present urgent calls for redesign, not just at the level of individual devices, but at the level of systems and interrelated and mutually dependent ensembles of technology. 'Other directed design' will then be in order. Profit and efficiency will not vanish, but they will need to serve rather than lead or dictate.

INTRODUCTION

'DESIGN' has clearly arrived, center stage, as one of the latest loci of 'success' (i.e., power, profit, prestige, and publicity) [1, 2]. Unfortunately, this fact in itself is indicative of yet another compromise likely to subvert the real needs to which the rise of design might have responded. In a pattern now familiar from earlier times of 'environmental,' 'energy,' 'technology assessment' and other fundamental challenges to Western culture's careless faith in the 'promise of technology' [3], much of the success of design rests on its unique service in *appearing* to respond to genuine concerns while actually only *deflecting* and *diffusing* those concerns by prettying up the same old thing. As it has become increasingly difficult to market the next generation of technological 'junk' (i.e., 'advances' in technology that are ever farther removed from any critical path toward a better life), design now proffers 'pretty junk' in an ever more desperate effort to keep consumers in the game. (This pattern is explicitly recognized and resisted by some practitioners (e.g., Dr. Elizabeth Sanders, President, SonicRim, Columbus Ohio).

Herculean efforts will be required if anything of genuine value is to be extracted from the new focus on design. We will need to step away from considerations limited to marginal adjustments in what is assumed to be an already near-optimal life, to consider the redesign of whole ensembles of technologies (technological systems). We will need to engage in the messy inefficiencies of political dialogue ('political talk' [4] or 'deictic discourse' [5]) in a re-examination of individual and collective ends; and we will need to give these ends at least equal billing with the means afforded by science and technology (embracing Langdon Winner's maxim, 'No means without ends') [6]. 'Other directed' design and design for multiple models of success will, in short, need to take priority over short-term, 'marketing led' [7] design.

Each of these themes, first a diagnosis of sorts, then a prescription, is further developed below.

DIAGNOSIS: DEFLECTED CHALLENGE

Often touted as a modern marvel, the increasingly rapid pace of technological innovation in our day might alternatively be interpreted as a sign of imminent crisis. An automobile engine spins faster and faster as it approaches its 'red line,' then it literally flies apart. And a society that can no longer be sold 'junk' that is profoundly unresponsive to real need or desire may not long sustain interest even in the 'pretty junk' afforded by intensified design efforts. If we accept Albert Borgmann's [8] notions of 'sullenness' and 'hyperactivity' as the defining mood and response of our times (ever intensified effort fails ever more obviously to deliver, as advertised, its promised satisfactions), we may begin to wonder how long present patterns may be sustained. Lewis Mumford's image of the fall of Rome not as a simple product of barbarian invasions from the north, but more as the product of a steady withdrawal of interest in what empire, itself, had to offer [9], begins to raise unsettling questions for our own future.

At their roots, genuine calls for attention to design in engineering education (e.g., by ABET) and elsewhere can be seen as only the latest in an extended series of broadly ranging challenges to prevailing practice. In the past, these have been largely deflected. The environmental movement, for example, has been diverted into the byways of

band aids for exhaust pipes and other marginal adjustments in traditional patterns of life, deflecting more fundamental challenges, for example, to reliance on the automobile itself. Limiting us to the environmental symptoms only, of the more fundamental problem of how we today take up with the world through technology, this deflection diverts us from a consideration of mass transit, living in (and making more livable) the areas in which we work (reducing the need for commuting), and other, more far-reaching redesign efforts. Nearly thirty years after the 'energy crisis,' as well, our dependence on foreign oil imports has only grown and the occasional distractions of both public and private thumb twirling are now enough to astonish any observer with an attention span exceeding that of the popular media; as one thoughtful observer has put it, 'Clearly . . . we are not going to be forced to do the right thing in time' [10]. In a third recent round of deflections, the fundamental challenges of 'technology assessment' dating back at least to the 1960s, also, seem to have slipped through our fingers. The Congressional Office of Technology Assessment has simply been abolished [11]. And Science and Technology Studies, as an academic pursuit, now drifts more and more into the safe 'normal science ' of 'social construction' as it has occurred in the past, or in its ever more abstract theoretical refinements; initial engagement with real and current issues of choice in the ongoing political shaping of technology now falls more and more by the wayside [12] as official concerns are occasionally even explicitly recognized as mere salves to short-term political pressures [13].

PRESCRIPTION: 'OTHER DIRECTED' DESIGN

The urgent need for attention to 'design' (to use the current term), however, remains. Sustainability, satisfying work, preservation of the rudiments of human community—even concern with a basic sense of meaning and engagement with the world—all present urgent calls for redesign, not just at the level of individual devices, but at the level of systems and interrelated and mutually dependent ensembles of technology. The deflections of an ever-narrowing design 'for myself and others like me' must, moreover, be resisted, in favor of design for *multiple* models of success. The single mother with children, the blue collar worker, the couple that does not embrace the day-care-two-career life, the vestigial Vermont dairy farmer or independent mechanic, all are different and deserving of the facilitations of design: we are not all, nor do we all wish to be cell phone toting, palm-piloted drivers of sport utility vehicles.

A greater emphasis on *ends* is among the first orders of business. Not that these can be defined in the abstract, but they must receive a greater emphasis relative both to narrow business *profit*,

and to the raw *means* ever expanding at the 'cutting (bleeding?) edge' of scientific and technological development. With Albert Borgmannm [14], we must question our all too automatic embrace of the disburdenment offered by technological 'devices,' and consider the attractions of an engagement with 'focal things and practices.' Any sportsman recognizes that the perfection of a machine that would place and return a tennis ball, routinely sink a basket or make the putt in golf, or hit a home run from any pitch, would entirely vitiate the satisfactions of social and bodily engagement, skill, and a sense of orientation in the world. We must take the time to be more attentive to our purpose. We must recognize that our decisions and actions may be exploratory and constitutive [15], as much as they are instrumental. And, recognizing that we are not all alike, we must take the time to *listen* and to *hear* each other. The acceleration of design cycles that becomes ever more detached from common experience and fails to permit the kind of political dialogue [16], 'political talk' [17] or 'deictic discourse' [18] essential to the evolution and expression of ends is the very essence of distraction.

'Other directed design' will then be in order. Profit and efficiency will not vanish, but they will need to serve rather than lead or dictate. Community, sustainability, satisfying work, and other ends may come to the fore. And we will need to think beyond marginal changes in accepted patterns of life. As we 'think outside the box', we will need to start with a *bigger box*. We need to look beyond the automobile (as suggested above). We need to look beyond fossil fuels. We need to consider *not* simply improvements in industrial work (like the celebrated Volvo team assembly approach), but facilitation even of vestigial work patterns that may have hung on beyond their supposed technological relegation to the ash heap, specifically because of the deep satisfactions they still may offer. How might we pursue developing models of 'community supported agriculture' (CSA), for example? (Classically, CSA members pay a fixed annual fee and take a share of whatever a local farmer produces, shifting weather-related risks to consumers, eliminating market middlemen, and sustaining small-scale agriculture in a community setting.) Innovations of a social/organizational nature (e.g., the kinds of property tax abatements and 'purchased development rights' approaches already making some headway), as well as material-technological innovations (e.g., scaled-down versions of 'modern' farm machinery) would need to be pursued as we attend to technological *systems* and not just individual technologies.

As part of our redirection, we must also think in terms of *multiple models of success*. Design that attends exclusively to the patterns of the relatively affluent (e.g., the suburban commuter) subverts or neglects too much that might be done to counter the alienation and disfunction-by-design of much of the world's population. It routinely sabotages

potentially satisfying, less frenetic, and materially more successful (e.g., lower consumption, lower impact) patterns of life. And it perpetuates patterns of colonization [19] and exploitation that are profoundly undemocratic [20]. Where designers act as facilitators rather than creators, even modest efforts can bring substantial returns, as work in places like the Center for Neighborhood Technology has clearly demonstrated. (As one illustration, the Center's simple suggestion that morning commuter trains begin stopping not only on the way into Chicago but on the way *out* as well, led to substantial commuter use by inner city poor people to get to previously inaccessible jobs in the suburbs [21].) Other alternatives to the suburban/urban commuter pattern have, in fact, gained some attention with investigations of co-located work and residence, for example [22]. More of this kind of design around a range of different models of success is very much in order.

THE DEMANDS OF INTEGRITY

People are not stupid. At some level, they are fully aware that their institutions are not serving them well, that technology has come in some sense unhinged, and that a better life will not flow from 'more of the same.' In particular instances like the 'home power movement' (home owners putting in their own photovoltaic, micro hydroelectric and small wind electric systems in spite of their supposed cost penalties), they have moved impressively on their own behalf, essentially ignoring increasingly irrelevant mainstream institutions and proceeding with changes at a whole systems level (appliances, energy sources, energy storage and delivery, etc. [23]) rather than constraining themselves to marginal shifts, often in no more than the *packaging* of particular technologies. This very awareness forms half the foundation for the kind of 'deflection and betrayal of trust' implicit in the so-called success of design today. (Langdon Winner uses this term in a similar way in Engineering Ethics and Political Imagination, in *Ethical Issues in Engineering*, Deborah Johnson, editor, Prentice-Hall, Englewood Cliffs, NJ, 1991.)

But a simple sense of integrity demands a great deal more than a 'pretty junk' response. These are admittedly old-fashioned words: 'betrayal' and 'integrity.' Integrity has been defined as 'a kind of reliability in the accounts we are prepared to give, act by, and stand by' [24]. Old fashioned, perhaps. It is time to dust such terms off and bring them back into play.

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