

objects, it is necessary to go beyond forms of estrangement grounded in the visual and instead explore the aesthetics of use grounded in functionality, turning to a form of strangeness that lends the object a purposefulness. This engages the viewer or user very differently than the relatively arbitrary results of Irie or Fujihata, the crude interpretations and explanations offered through the well-mannered and facile metaphors of mainstream design, or the soft cybernetics of the human factors community. This strangeness is found in the category of "gadget" that includes antique scientific instruments and philosophical toys, objects that self-consciously embody theories and ideas.

The fit between ideas and things, particularly where an abstract idea dominates practicality, allows design to be a form of discourse, resulting in poetic inventions that, by challenging laws (physical, social, or political) rather than affirming them, take on a critical function. Such electronic objects would be conceptual tools operating through a language of functionality that is entangled in a web of cultural and social systems that go beyond appearance.

Although transparency might improve efficiency and performance, it limits the potential richness of our engagement with the emerging electronic environment and encourages unthinking assimilation of the ideologies embedded in electronic objects. Instead, the distance between ourselves and the environment of electronic objects might be "poeticized" to encourage skeptical sensitivity to the values and ideas this environment embodies. This could be done in a number of ways, of which the most promising is a form of functional estrangement: "para-functionality." This quality, common to certain types of gadget, is the subject of the next chapter, which reviews projects and objects that work in this way and explores how para-functionality could be applied to electronic objects.

Para-functionality: The Aesthetics of Use

This chapter reviews projects from art, architecture, and design that exemplify the functional estrangement I call "para-functionality." The term means here a form of design where function is used to encourage reflection on how electronic products condition our behavior. The prefix "para-" suggests that such design is within the realms of utility but attempts to go beyond conventional definitions of functionalism to include the poetic.

Eccentric Objects: Para-functionality and Non-design

Some naive, curious, or eccentric objects, outside the world of conventional design, unintentionally embody provocative or poetic qualities that most product designs, even those intended to provoke, seldom achieve. Although industrial designers play a part in designing instruments of death (weapons) and pleasure (sex aids) these extreme areas of material culture rarely enter design discourse. Yet Jack Kevorkian's *Suicide Machine*, a powerful "unofficial" design that materializes complex issues of law, ethics, and self-determination, shows how an industrial invention can be a form of criticism (figure 3.1). Critical of a legal system that outlaws euthanasia, Kevorkian has his machine to overcome this. Its ambiguous status between prototype and product makes it more disturbing than pure artworks by blurring boundaries between the everydayness of industrial production and the fictional world of ideas. It suggests a role for design objects as discourse where functionality can be used to criticize the limits that products impose on our actions.

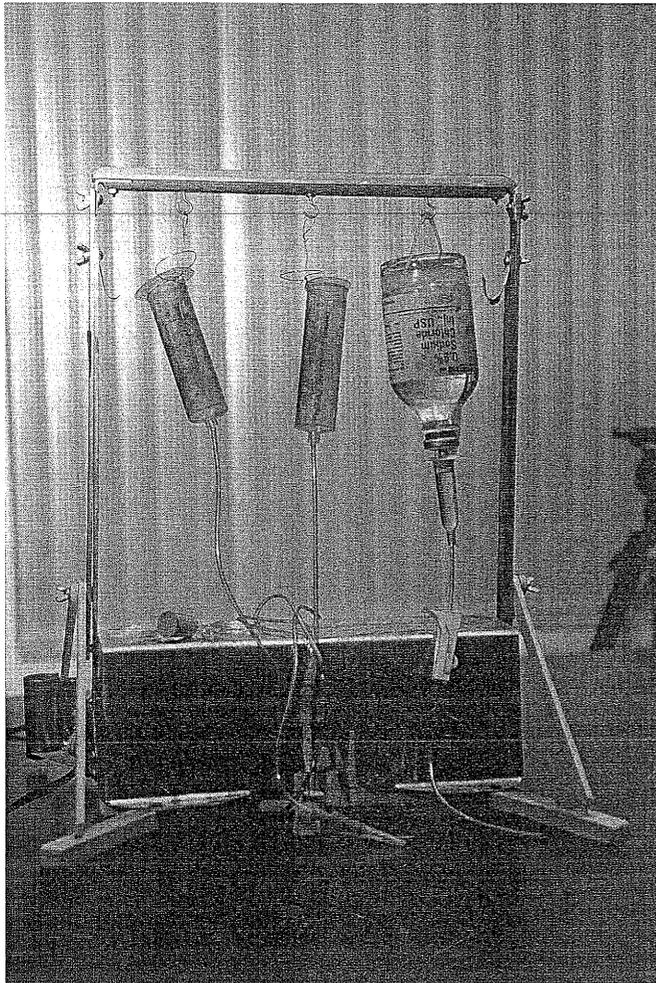


Figure 3.1 Jack Kevorkian's *Suicide Machine* is a powerful piece of "unofficial" design and shows how an industrial object can embody complex ideas through invention as a form of social criticism.

At the other extreme is the world of antique walking sticks. A drinking cane, designed for an alcohol merchant who must spend much of his time visiting the bars of his customers, discretely siphons off his drink while his host is not looking; a trigger later releases the drink into a gutter (figure 3.2). It satisfies etiquette and exploits the walking stick's inherent potential for connection to other objects and contexts: hand, bar, glass, and gutter.

Walking sticks that become a card table or seat (figures 3.3–3.4) show how simple portable props can transform architectural spaces. They conceptually colonize the functional possibilities of preexisting spaces. The user becomes a protagonist in a new narrative where a lobby or park becomes a casino.¹

A third device, used by detectives in the 1940s for protecting fingerprints on a steering wheel, is beautifully absurd and surreal (figure 3.5). Sigmund Freud (1996, 13) cites G. Heymans's explanation that a joke works through bewilderment succeeded by illumination. The word that is the vehicle of a joke often appears at first to be wrongly constructed, unintelligible, incomprehensible, or puzzling. In this double steering wheel a similar unintelligibility is evident: its comic effect is produced by solving this bewilderment by understanding its function. This is also the case with "Chindogu" (figure 3.6). Their individual elements are recognizable, but the reason for combining them is at first bewildering. The meaning behind the object is derived from "sense-fiction": the objects make functional sense, but are still useless.²

Forbidden Emotions: Para-functionality and Design

In a review of an exhibition of work by Intermediate Unit 3, *Objects in the Landscape*, at London's Architectural Association, Irie (1993) contrasts the "electronic devices essential to contemporary urban existence," the means whereby "information, entertainment and fantasy are promoted—and controlled," with the unit's "virus-like prototypes" that "invade and disrupt such networks, and propel minds and bodies into a hectically deregulated world of fragments—fragments of ideals, of illusions, of sensory impressions." The use of strange inventions by architects is not uncommon and, although they have lost much of their potency through overuse, their deployment in this instance as "bizarre monsters," designed to challenge the banal reality supported by consumer durables, emphasizes the need to identify how electronic products can offer alternative expressions of their own functional logic. In a field where "product design is thoroughly integrated in capitalist production, [and] bereft

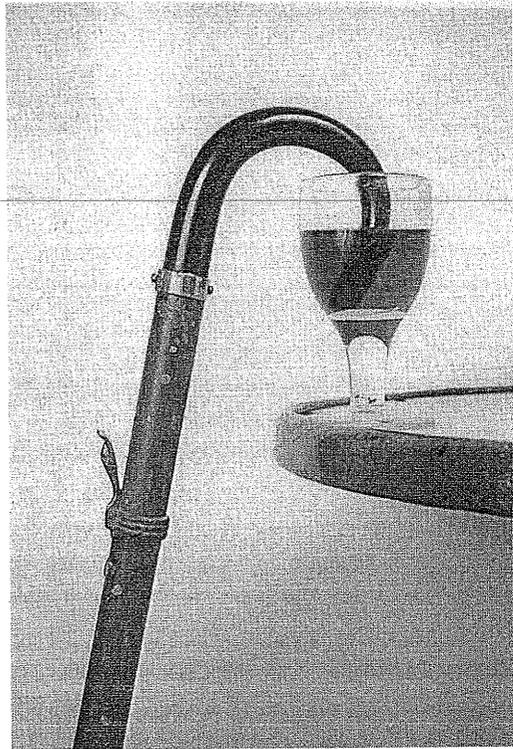
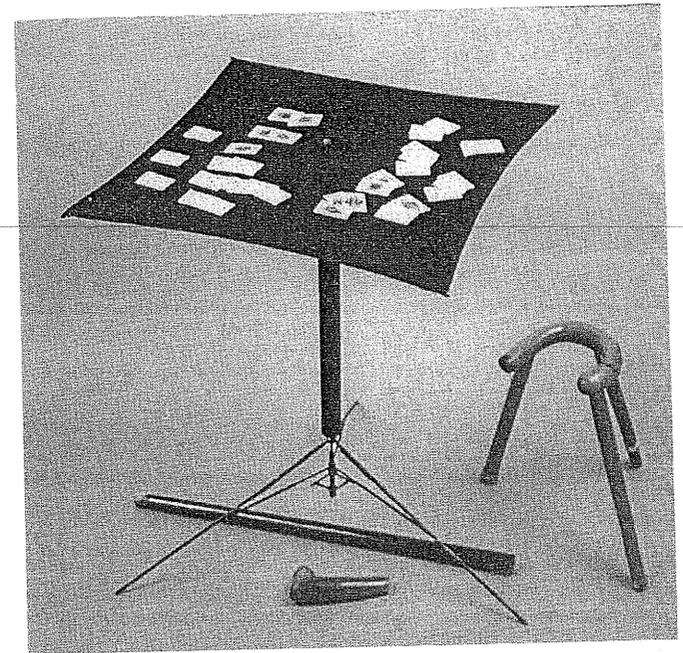


Figure 3.2 This drinking cane from the Saint-Etienne mail-order catalogue of 1910 operates in a context where etiquette assumes such importance that the object must be made to maintain it in a "socially dangerous" situation.



Figures 3.3–3.4 The table cane, patented in England in 1891, and the "low seat cane" are examples of how simple portable props can transform an architectural space.

of an independent critical tradition on which to base an alternative,³ only a few designers use the function of products as criticism.

For example, Penny Sparke (1982) cites Gaetano Pesce: his "use of distortion and exaggeration [are] 'absurd' devices for commenting upon his observations. Rather than turning to alternative media, Pesce uses the language of design to make its own self-commentary" (52), but his objects do not incorporate functionality as a primary component (figure 3.7). When functionality does enter, it is often jokey and closer to the playful one-off multiples created by Fluxus. During the 1980s Denis Santachiara and Philip Garner developed approaches that merit a closer look. Santachiara, who developed a distinctive approach over many years, aims to raise the aesthetic quality of mass-produced everyday objects such

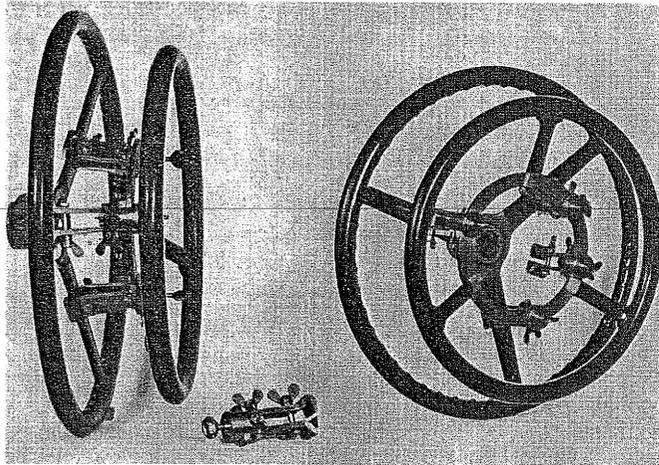


Figure 3.5 A steering wheel, used by detectives during the 1940s to drive recovered vehicles back to the police station without smudging the thief's fingerprints.

as domestic appliances by developing their possibilities of animation. This could be seen as little more than a desire to use technology to give objects a personality by making them more expressive and quirky (figure 3.8). But his concern is with an aesthetics of use which give objects a distinctive identity from the linguistics of construction and manufacture. Santachiara subverts technical knowledge, redirects it towards provocative ends, provides more than enriched interactivity, and raises the complex issues of what Baudrillard has called the "crisis of functionalism."

Baudrillard (1981) argues that the acceptance of functionalism as an arbitrary but dominant rationality gave rise to an irrational counter-discourse that moves between the two poles of kitsch and surrealism:

The surrealist object emerges at the same epoch as the functional object, as its derision and transgression. Although they are overtly dys- or para-functional, these phantasmic objects nevertheless presuppose—albeit in a contradictory sense—the advent of functionality as the universal moral law of the object, and the advent of this object itself, separated, autonomous and dedicated to the transparency of its function. When one ponders

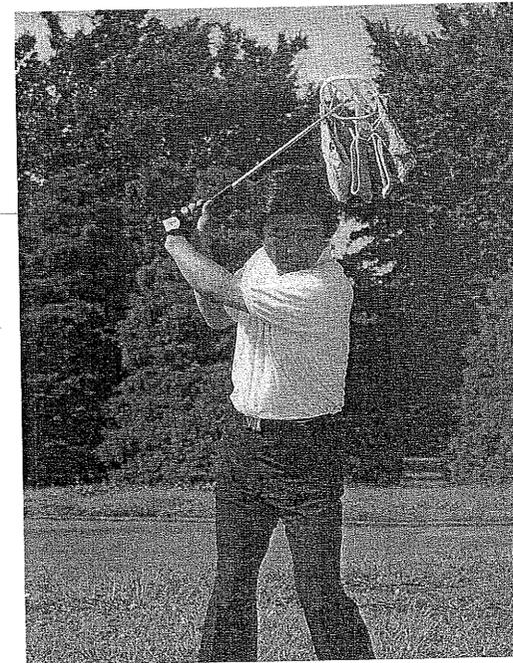


Figure 3.6 The individual elements of a "chindogu" are recognizable—in this case, a clothes dryer and golf club, but the reason for their combination is at first bewildering.

it, there is something unreal and almost surreal in the fact of reducing an object to its function: and it suffices to push this principle of functionality to the limit to make its absurdity emerge. This is evident in the case of the toaster, iron or "undiscoverable objects" of Carelman. (192–193)

Santachiara's work is often closer to kitsch than that of Garner, whose is closer to surrealism and the absurd. Garner's proposals for products are a form of industrial design that taps into the strange psychological and social narratives arising from the objects themselves and interaction with and through them in a consumer-oriented society. Although their overtly satirical and whimsical

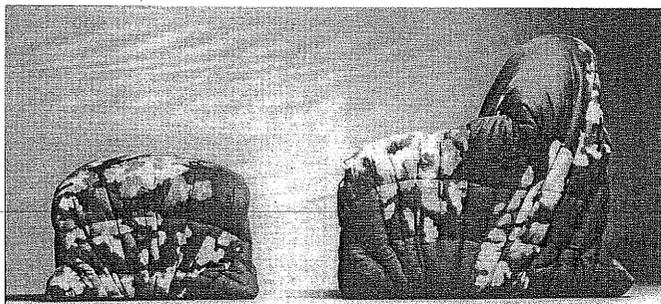


Figure 3.7 Gaetano Pesce's furniture for Cassina during the early 1960s uses the language of design to communicate his observation that people will always be alienated from objects as long as consumption is the primary reason for an object's existence.

character, often simply visual puns or jokes, undermines the viewer's suspension of disbelief (figure 3.9), they demonstrate the power of mock-ups, scenarios, and fictitious narrative over working prototypes as a way of presenting this kind of fiction. The success of both his books confirms that people understand and relate to the narrative behind the work without having to use the objects.

Santachiara and Garner operate within the realm of the gadget, the opposite of the well-designed object. The term "gadget" here denotes a curious, original and witty accessory of no real use, as opposed to the "gimmick," which is too transparent in its effort to impress and attract attention. Giulio Ceppi remarks that "probably the gadget has never been considered, by official design culture, as the result of a design effort, an industrial product capable of revealing interesting technical features or of influencing peoples behaviour" and that "the most important phenomenon caused by the gadget is, however, a psycho-behavioural factor: wonder. . . . The fact that wonder and surprise are two variables that rarely enter into the design of industrial objects has induced the development of a clandestine niche in which such forbidden emotions can be found" (Ceppi 1991, 15).

Heterotopian Gadgets: Para-functionality and Art Objects

For examples that explore the aesthetics of this "clandestine niche" of forbidden emotions it is necessary again to move away from industrial design, and begin

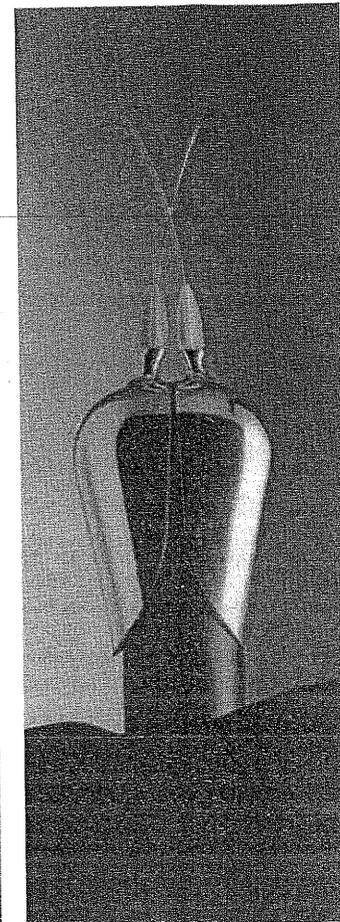
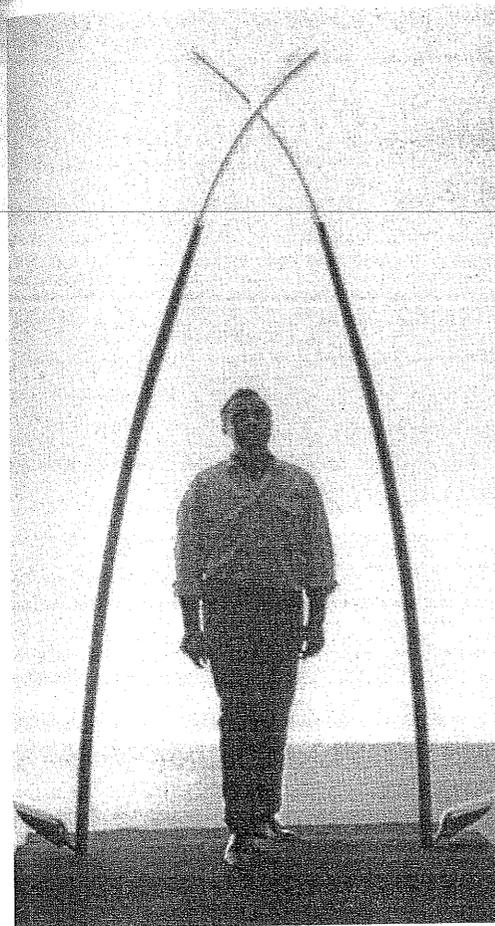


Figure 3.8 Denis Santachiara's *Portale* (1989), which sparks when it is passed through, is an example of his concern with an aesthetics of use where invention is used to give objects a distinctive identity that moves away from the linguistics of construction and manufacture.



Figure 3.9 Philip Garner's *Alienature* (1985) demonstrates the power of mock-ups, scenarios, and fictitious narrative over working prototypes as a way of presenting this kind of fiction.

with literature: not the gadget-ridden world of science fiction but a world where writing itself is a gadget in that it celebrates the workings of language. The heterotopia described by Michel Foucault (1970) illustrates what a literary gadget might be like:

Utopias afford consolation: although they have no real locality there is nevertheless a fantastic, untroubled region in which they are able to unfold; they open up cities with vast avenues, superbly planted gardens, countries where life is easy, even though the road to them is chimerical. Heterotopias are disturbing, probably because they destroy "syntax" in advance, and not only the syntax which causes words and things (next to and also one another) to "hold together." This is why utopias permit fables and discourse: they run with the very grain of language and are part of the fundamental dimension of the fabulous; heterotopias (such as those found so often in Borges) desiccate speech, stop words in their tracks, contest the very possibility of grammar at its source; they dissolve our myths and sterilise the lyricism of our sentences. (xv–xvii)

David Porush (1985) uses terminology that invites comparison between the poetics of real machines and strange inventions, and literary gadgets: "[Samuel Beckett's] *Lost Ones* is a palpable fiction which, even as its inventor attempts to complete the blueprint, collapses into impossible meaninglessness, self-contradiction, and absurdity. The fallibility of the cylinder machine lies in the fact it is constructed in words; the author's attempt to describe it precisely becomes an exercise in the futility of trying to describe anything using language" (161).

Beckett uses two kinds of language, a precise technical/mathematical one, and a language of "failure, probability and doubt." These two rhetorics are at odds with each other and their weaving together provides the qualities of this text, "an allegorical world of pure fiction" about the "perception of the mute resistance of worldly objects to our vain and inappropriate attempts to attach names to them." Paul Klee seems to have incorporated this sensibility into his drawings: for example, *The Twittering Machine* (figure 3.10), where a strange device hovers in the imaginary space of the drawing, suggests a realm where machines do not simply mirror rationality through nonsensical functions but embody alternative physical laws to ours, like Marcel Duchamp's "Large Glass" and the "Pataphysics" of Alfred Jarry.

What happens when this sensibility moves from the page and canvas to become part of everyday space? The sculptor Panamarenko is interesting in this respect as his machines embody the same ambiguity as the literary and painterly gadgets of Beckett and Klee. Whereas artists like Jean Tinguely have constructed useless machines that comically mirror rationality, Panamarenko's objects rarely work (figure 3.11), provoking the viewer to think about the nature of invention and the desires that motivate it. They are about flight, desire, the limits of knowledge, and the transition from wondering and dreaming to the dull reality of realization. By denying that last step and conventional practice, they hover successfully between the imaginary and the real. His scientific theories on flight also highlight the fictional nature of scientific knowledge and blur the boundaries between words and things.

The inventor-artist Steven Pippin meditates on photography. He coats with photographic chemicals the interior surfaces of everyday objects like washing machines, toilets, and bath tubs, turning them into cameras. His ingenious experiments interweave the host object's original functionality with that of a camera, resulting in objects that occupy a difficult conceptual space outside the usual polarization of functionalism and surrealism. They do produce sense, and we understand them, but it is hard to say what exactly we understand about them.

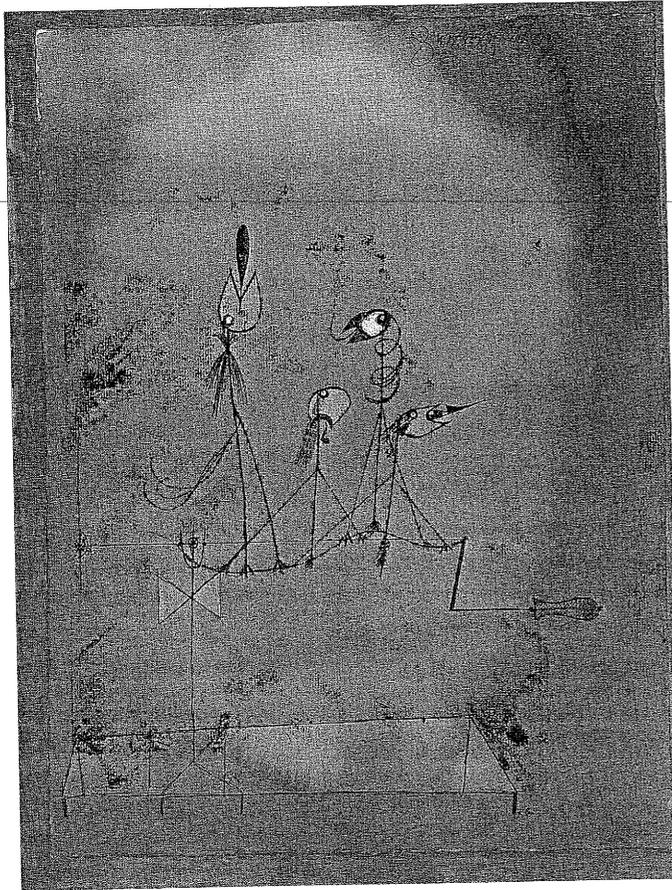


Figure 3.10 Paul Klee's *The Twittering Machine* (1922) shows a strange device hovering in the imaginary space of the drawing, suggesting a realm where machines do not simply mirror rationality through nonsensical functions. Paul Klee, *The Twittering Machine* (1922). Copyright DACS 1999.

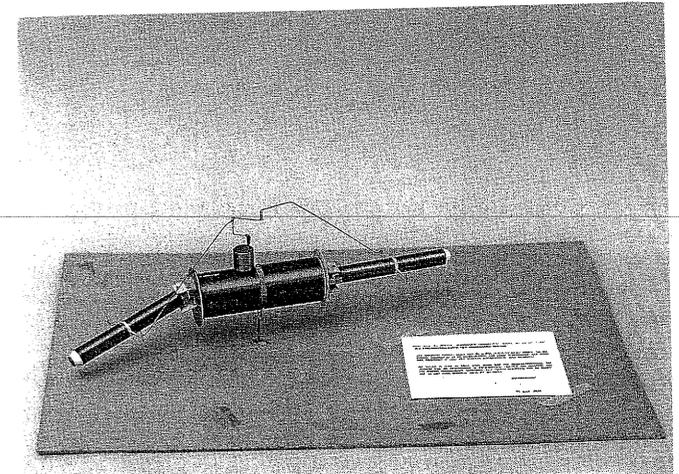


Figure 3.11 Panamarenko's *Voyage to the Stars* (1979), like many of his other pieces, does not actually work. This provokes the viewer to think about the nature of invention and the desires that motivate it.

They differ from the symbolic machines and devices of Rebecca Horn, where things do what we expect but the company they keep surprises. Pippin creates conceptual gadgets that render useless our expectation of what things ought to do; they turn knowledge itself into a gadget and allow us to catch glimpses of how knowledge works and wonder at its beautiful but useless mechanisms.

The objects produced by the inventor-artist Philippe Ramette occupy a different part of the space between ideas and things. They resemble in atmosphere the design proposals of Philip Garner but are less ironical in their straightforward presentation of function through the nostalgic language of antique scientific instruments. Meyer Rubinstein (1993) describes them as "prostheses of the spirit" (100), aids to thought and contemplation. As with many of the objects described in this chapter, the emphasis on functionality focuses the viewer's attention on the space between the experience of looking at the work and the prospect of using it. Here the emphasis is on the body and its relationship through the senses to the space that contains it. Although fully working, many of Ramette's objects cannot be used because they can hurt or worse: for example,

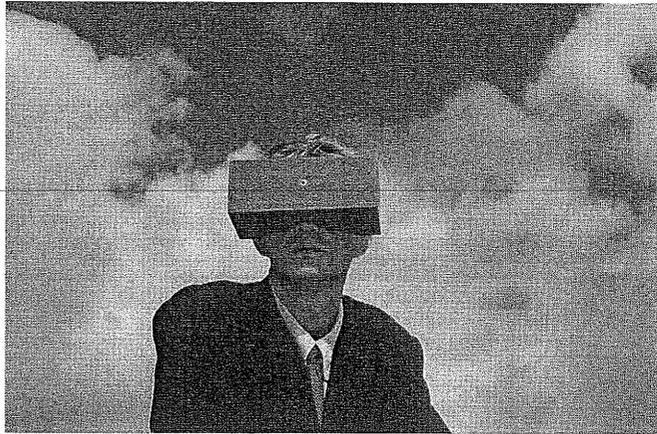


Figure 3.12 The emphasis placed on functionality in Philippe Ramette's *Object with Which to See the World in Detail* (1990) focuses the viewer's attention on the space between the experience of looking at the work and the prospect of using it.

Object to Make Yourself Be Struck by Lightning, or *Intolerable Object* whose lens focuses sunlight onto the top of the head. But not all his objects are threatening. In a world of artificial objects shaped almost entirely by functionalism, devices like an *Object with Which to See the World in Detail* do not attempt to escape the dictates of functionalism but instead work from within, extending it to include the poetic and playfully subversive (figure 3.12).

Social Fictions: Para-functionality and Criticism

Although often threatening, Ramette's objects do not shock. Their critical content is hidden beneath the poetry of construction and the humorous appreciation of their function. But the work of the artist Andrea Zittel shocks by using the familiar contexts of the home, and of the system of production and consumption, to concretize alternative values that are outside notions of the future or past but sit uncomfortably alongside "now." They suggest that the way things are may not be the only possibility. They initiate a questioning and awareness that helps unravel the "one-dimensionality" that characterizes present times and maintains "the impossibility of the possible."⁴ Zittel's *Comfort Units* suggests an



Figure 3.13 Andrea Zittel's *Comfort Units* (1994) suggests an unusual way of thinking about the role of furniture. Her emphasis shifts from issues of style and image to their psychological use as tools for inhabitation.

unusual way of thinking about the role of furniture (figure 3.13). Her emphasis shifts from style and image to their psychological use as tools for inhabitation. By clearly favoring the manifestation and fusion of particular functional possibilities over others they remind us, through an extreme but credible form of functional reductionism, of our dependence on objects for developing new behaviors. In her work it is never quite clear whether her positive-reinforcement prototypes reflect a genuine belief that this is what we need, or are an ironical play on modernism.

The architects Kenneth Kaplan and Ted Krueger (K/K Research and Development) leave no doubt about the status of their assemblages of found machine parts (figure 3.14) as ironic "analogues" for architectural ideas. Although their writing is polemical their use of objects to attract the attention of the audience,

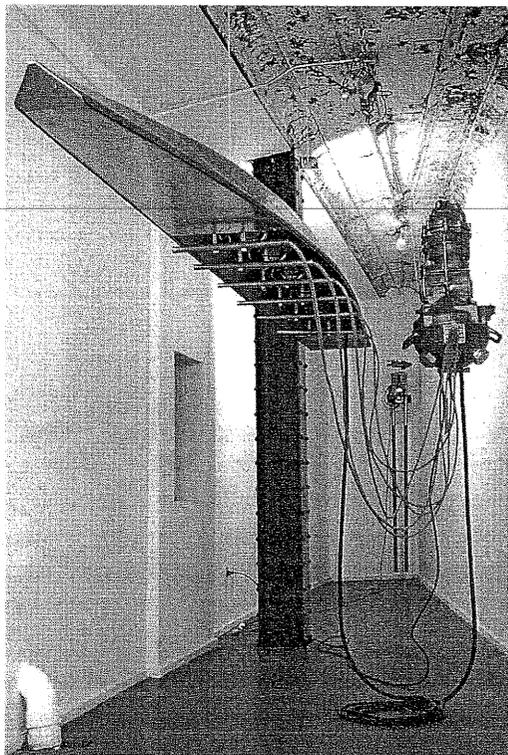


Figure 3.14 K/K Research and Development's *Bureau-dicto* (1989) is an ironic "analogue" for architectural ideas consisting of an assemblage of found machine parts.

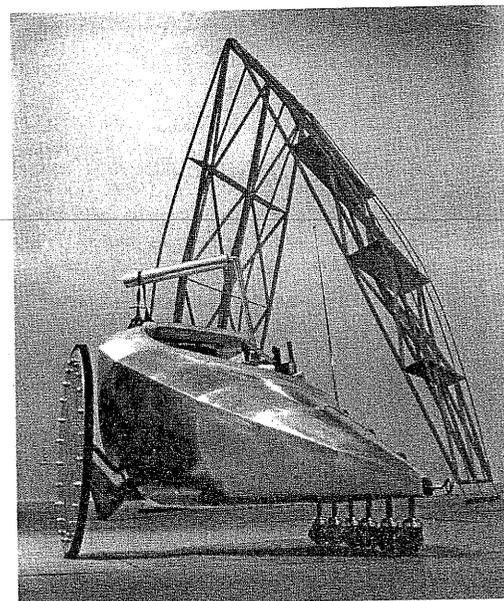


Figure 3.15 K/K Research and Development's *Crib-batic* (1986) is a prototype for a push-chair made from steel (they felt children needed to be exposed to hard materials from an early age). It was equipped with measuring equipment so that the child might interact with the environment on the go.

before it is seduced by their usually written political narrative, reduces the objects to dumb props. Their *Crib-batic* project (with Christopher Scholz), however, is an exception (figure 3.15). A prototype for a child's push-chair made from steel (they felt children needed to be exposed to hard materials from an early age), it was equipped with measuring equipment so that the child might interact with the environment on the go. This piece is more powerful than their more obtuse architectural analogues, because it is possible to imagine what it would mean for such thinking to enter everyday life through similar objects. It moves beyond implied functionality and appearances to use function to draw attention to the role objects play in conditioning our responses to the environment.

Another architectural practice, Diller + Scofidio, designs and builds architectural gadgets that work on a critical level. *Para-Site*, an architectural exploration of the impact of electronic media on architectural space, is relevant here because of the equal importance it gives to electronic and conventional media. Electronic objects such as televisions and video cameras are not repackaged or redesigned but integrated into new hybrid objects (figure 3.16), transforming these boring and familiar devices into an architectural intervention. Diller + Scofidio deploy technology intelligently, using it to reveal, enable, and criticize, intervening in not only the abstract space of the building but also its social and practical use.

Para-Site is one of many critical interventions in public spaces by architects and artists. One of the best known is Krzysztof Wodiczko's large-scale projections onto public buildings. He has written: "My socio-aesthetic research and experiences deal with 'strategies' for making public art critical, non-official art." He studied in the graduate program of industrial design at the Akademia Sztuk Pięknych in Warsaw under a former collaborator of Le Corbusier, Jerzy Soltan, who advocated a "(post)-avant-garde" strategy of critical engagement with and infiltration of, the institutional structures of industry and culture. After graduating he worked in Warsaw as an industrial designer for UNITRA, a manufacturer of electronic products. One of his first pieces of art was done in 1969 while still an industrial designer there: *Personal Instrument*³ (figure 3.17). He was assisted in this by technicians from the Experimental Music Studio in Warsaw:

- The instrument transforms the sounds of the environment.
- The instrument functions in response to hand movements.
- The instrument reacts to sunlight.
- The instrument is portable.
- The instrument can be used any place and any time.
- The instrument is for the exclusive use of the artist who created it.
- The instrument permits him to attain virtuosity. (Wodiczko 1992, 76)

Wodiczko has said that "the instrument's magic silence is its socio-political message." Although private, it depends on a public space as a source of sound, and so that others can gaze at it and imagine how it works. According to Wodiczko, "It was a way to shape a metaphor for the limits to the freedom of the individual Pole, to the ways he could exercise this freedom, and to his power in

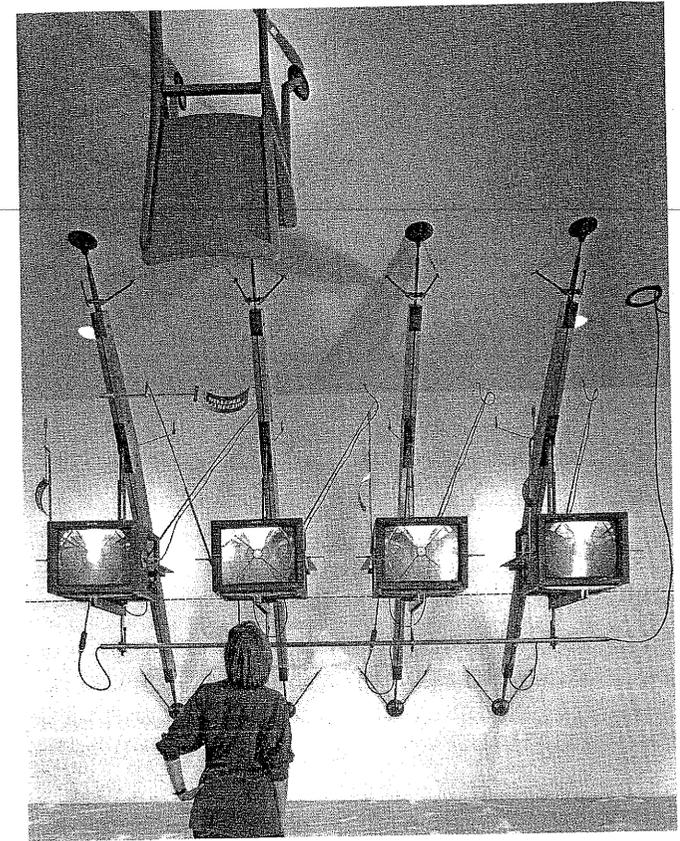


Figure 3.16 Diller + Scofidio's *Para-Site* (1989), an architectural exploration of the impact of electronic media on architectural space, gives equal importance to electronic and conventional media. Electronic objects such as TVs and video cameras are not repackaged or redesigned, but are integrated into new hybrid objects.

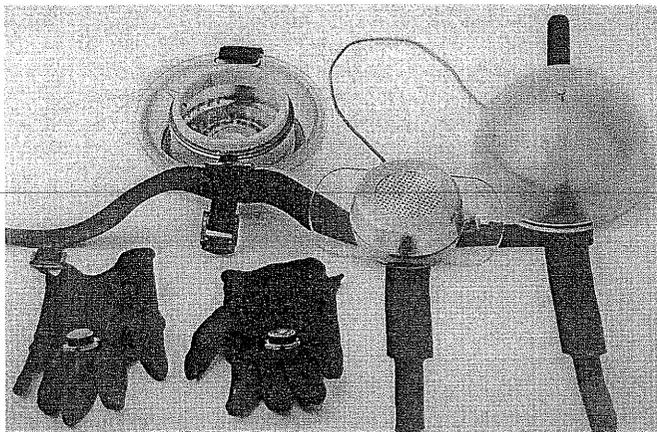


Figure 3.17 Krzysztof Wodiczko's *Personal Instrument* (1969), although private, depends on a public space as a source of sound, and so that others can gaze at it and imagine how it works.

relation to public spaces." It was not designed for mass production nor even for a limited edition "and yet it was intended for the whole world as a metaphor for community life and the nature of public spaces in Poland":

My personal instrument proved to be the point of departure for all my public works. It was my first attempt to provide a metaphorical definition of man's position as a "citizen" of a dominated public space. It was also the first time I attempted to hint at the "strategy" of taking words and using space as medium in which to speak them, even though the right to use a private voice in space that was totally "socialized" (politicized) by the government was utterly nonexistent. I proposed the technique of speaking silently, reticently or by grotesquely exhalting silence." (Wodiczko 1992, 71)

Wodiczko's public projections and homeless vehicles continue this research (figure 3.18). A lesser-known object, *Alien Staff*, shows how industrial design, through conceiving new functions and their configuration as "accessible" products, can function critically. The staff houses a small LCD television, while a small video player, a CB radio or walkie-talkie, and batteries are in a shoulder

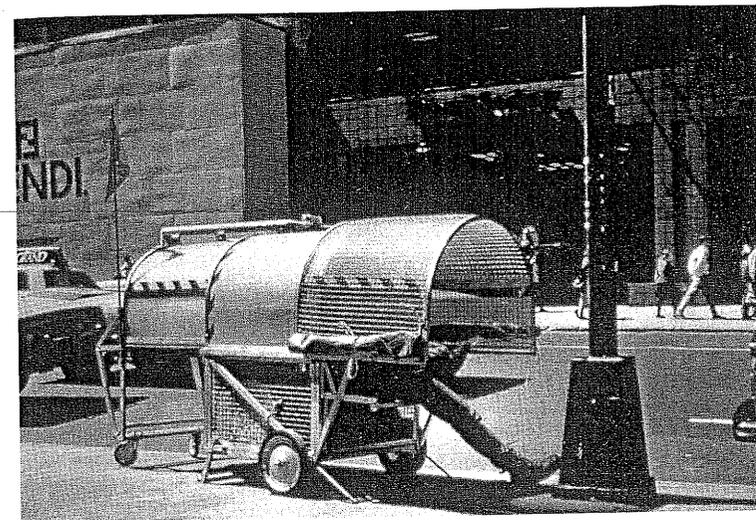


Figure 3.18 One of Krzysztof Wodiczko's *Homeless Vehicles* (1988-1989).

bag. The small size of the display, its position at eye level, and its proximity to the alien's face are all important. Once somebody has been attracted, a relationship is perceived between the face within the screen and the actual face of the alien, conceptual barriers are destabilized, and real communication may begin: "It is an instrument that gives the individual immigrant a chance to 'address' directly anyone in the city who may be attracted by the symbolic form of the equipment and the character of the 'broadcast' program" (Wodiczko 1992, 303).

Wodiczko's designs show how simple electronic technologies can challenge preconceptions, but are at the margins of design. Although I see them as design proposals not artworks it seems that, to hold a design view where electronic objects function as criticism, one must move closer to the world of fine art because the design profession finds it difficult to accommodate such research. Objects such as *Personal Instrument* and *Alien Staff*, with their use of simple electronics and their emphasis on invention and social and cultural content, are rare examples of how product design and the electronic object can fuse into critical design.

Hertzian Pathologies: Para-functionality and Electronic Objects

People like to play lotto and people like to use the ATM. Why don't you make it an option in the ATM to say put your money in and say, I'll bet a little bit and see if I can get a little more out, so you ask for twenty dollars, and you push the button, and you could get twenty-five or you could get fifteen.

—JEFF KIPNIS, "ATM COMPETITION"

Another zone of activity outside that of even the exiled designer is "anonymous design," where alternative conceptual models already find expression through electronic artifacts. "Pathological" gadgets are examples of life outside the normal conception of reality; they are design fictions, deviations, and failures and help to maintain the "impossibility of the possible."

Many of these devices concern communication. Most communication technology is oriented toward the individual; it cannot yet support or even encourage more complex social situations. It is point-to-point, one-to-one, not place-to-place. Yet most of this narrow form of communication takes place within that vast field of telematic possibility, the electromagnetic spectrum. The tools and devices limit the possibilities, not the medium. Ironically, many of the more interesting possibilities can be found in "pathological" products based on paranoia and suspicion. Many are designed to "open up" one-to-one channels, transforming private situations into public ones. Scanners, bugs, and detectors illegally "socialize" the world of private telematics. For example, scanners have tuned into wireless baby intercoms enabling "recreational voyeurs" to listen into intimate bedroom conversation.

The radio scanner⁶ hovers at the limits of legality (figure 3.19). In the United Kingdom it is legal to make and sell it but, like many pieces of surveillance equipment, not to use it for eavesdropping. It draws attention to what DeLanda has termed the "policing of the spectrum," not a public space but a highly policed and militarized state space. It is one thing to be prosecuted for eavesdropping but, if the information is passed on to a third party and worse, sold, it becomes a serious offense. If sensitive frequencies are found stored in the memory, the owner is likely to be prosecuted. That the radio scanner is a powerful object, entangled with the social and legal systems of society, has been recognized by the artist and musician Robin Rimbaud, alias Scanner: "To Scanner, the world of the personal phone call—an easily tapped medium, especially if you've been building your own radio sets since your teens—represents a far more honest



Figure 3.19 The scanner is an example of a "pathological product" based on suspicion and paranoia designed to open up one-to-one channels, transforming private situations into public ones.

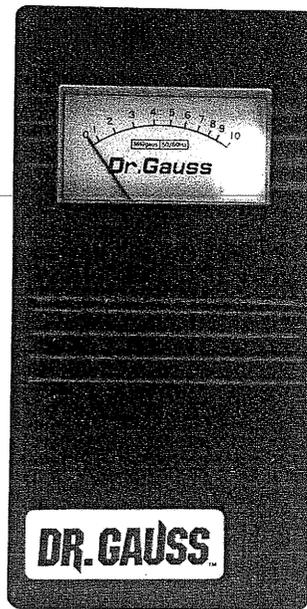


Figure 3.20 The Dr. Gauss EMF detector allows the owner to gather information about the presence of harmful electromagnetic fields so that a complaint can be made.

depiction of the world than the outpourings of televisual reality. And Scanner's records, packed with a huge collection of telephone 'normality,' are, in turn, far more real and disturbing than any arty fabrication of reality" (King, n.d., 136). The radio scanner enables new urban maps to be made, revealing normally hidden structures of the visible and conventional. The scanner is a meta-radio: it transcends the many categories of radio incorporated into commodities, highlighting their commonality as parts of an electromagnetic spectrum.

The Dr. Gauss EMF detector is one step further up the evolutionary ladder of gadgets (figure 3.20), a low-cost version of a usually expensive piece of equipment, used to measure the magnetic component of possibly harmful electromagnetic fields in the home. The device is simply a black box, but the act of using it reveals its conceptual power: when it picks up a field it screams, rising in pitch with the strength of the field.

Objects like this allow us to develop new conceptual models about our environment, helping us to see invisible structures and patterns. They often occupy the cultural wasteland of in-flight magazines, Sunday supplements and specialist shops, where alternative world views embodied as material reality exist as a nonserious and marginal phenomena. But in showrooms they become vital alternatives to art works and galleries. Whereas people step out of ordinary life into an art gallery, the contents of showrooms relate directly to everyday life in the mind of the window shopper.

Between Rationality and Reality

The most effective examples in this chapter function as test pieces that, through their marginalization, make visible the barriers limiting poetic experience in everyday life. The apparent unusability of many of these objects creates a heightened sense of "distance." This can be because the objects do not work technically or, because they are conceptually difficult to assimilate. To see that they are usable is to acknowledge that existing notions of functionality have been extended, a result of imagining uses for these objects. They challenge the impossibility of the possible. It is not enough to look and decode their visual iconography: they must be used. Through use, or at least by modeling a scenario of use in the mind, the observer discovers new ways of conceptualizing reality. They dismantle conceptual models that limit the way we use artifactual reality to extend our scope for action. They challenge how we think about extensions to our "selves" in ways that do not simply magnify but, rather, transform our perception and consciousness of our relation to our environment.

They share no coherent theory. They are simply stories, but stories that allow complex interactions between reality and imagination. Driven by poetry, imagination, and intuition rather than reason and logic, they have their own rationality, an alternative to our everyday scientific-industrial rationality. These are stories about the space between rationality and reality, which in an industrial society have come to be synonymous. When these props are introduced into everyday life as a "virus," subverting it, people can participate in the story, exploring the boundaries between what is and what might be. This is the role of the para-functional as criticism.

By imagining the object in use, we become lost in a space between desire and determinism. Within this space lies the bizarre world of the "infra-ordinary," the subject of the next chapter, which reviews a number of projects in relation to behavior and narrative.

Psychosocial Narratives

“Psychosocial narratives” refers to the unique narrative potential of electronic products, the world of desire and fiction that embraces consumer goods, the socialization that the use of electronic products encourages, and the idea that behavior is a narrative experience arising from the interaction between our desire to act through products and the social and behavioral limitations imposed on us through the conceptual models they impose. For instance, although an essential part of everyday life, the telephone embodies crude concepts of social etiquette compared to furniture and architectural space.

This chapter looks at the following ideas: the user as a protagonist and co-producer of narrative experience rather than a passive consumer of a product's meaning; how the psychological dimensions of experiences offered through electronic products can be expanded to include darker conceptual models of need—usually limited to cinema and literature—by referring to the world of product misuse and abuse; the lack of work by authors and filmmakers exploring this area, despite its prevalence in everyday life; the idea that the designer, in their role as a provider of new behavioral opportunities, becomes an “author” working in a medium that can present experiences rather than represent them; and how the electronic product becomes a “role model” bringing about transformations of perception (and conception) in the user as a protagonist by embodying unusual psychological needs and desires in “pathological” electronic objects.

User as Protagonist

The phone and the film projector surely need us to bring them to life, to dial the number or to flick the switch, yet when these machines take us to places, people, and ideas otherwise forbidden, so they flick the switch on us. The beauty of new technology is that by engaging our imaginative co-operation it moves a flat two-dimensional relationship of subject/object, man/machine through a magical door into new mental territory.

—C. BEEVOR, "BETWEEN HERE AND NOW"

The narrative possibilities suggested in this quotation differ from the conventional narrative dimensions created for the electronic product by applying semiotics. Examples of the latter are the Sports Walkman produced by Sony in the mid-1980s, which referred to imagined contexts of use, and the O-Product camera designed by Water Studio for Olympus—in both of which form and texture are manipulated to evoke a world of fantasy and fiction, blurring distinctions between everyday life and the hyperreality of advertising and soap opera.

One way of viewing this difference can be found in *The Meaning of Things*, which outlines an approach to aesthetic experience developed by Rochberg-Halton and based on Dewey's 1934 distinction between perception and recognition:

For Dewey, recognition describes a falling back on some previously formed interpretative schema or stereotype when confronted with an object, whereas perception involves an active receptivity to the object so that its qualities may modify previously formed habits or schemes. Although the explicit purpose of art is to evoke aesthetic experience, Dewey does not limit aesthetic experience to art alone but considers it a potential element of all experience. Perception is essential to aesthetic experience and leads to psychological growth and learning. Recognition, or the interpretation of an object or experience solely on the basis of already existing habits, only serves to condition a person further to a life of convention. If culture were simply a symbol system of convention, as some cognitive anthropologists argue, then aesthetic experience would only consist of recognition in Dewey's sense, because the object of that experience 'contains' meaning only as an arbitrary sign endowed with meaning by cultural convention and not because of unique qualities of its own. (Csikszentmihalyi and Rochberg-Halton 1981, 176–177)

The narrative possibilities offered by the conventional semiotic-based approach depend on "recognition," whereas the more dynamic form of narrative suggested by Beevor could open the way for the active critical receptivity of an experience that "perception" involves.

In the case of electronic products, the "unique qualities" of the object of interaction is their potential as an electronic product to persuade the users as protagonists, through the user's use of the object, to generate a narrative space where the understanding of the experience is changed or enlarged. By using the object, the protagonist enters a space between desire and determinism, a bizarre world of the "infra-ordinary," where strange stories show that truth is indeed stranger than fiction, and that our conventional experience of everyday day life through electronic products is aesthetically impoverished.

The Infra-ordinary

The machine does what the human wants it to do, but by the same token the human puts into execution only what the machine has been programmed to do. The operator is working with virtuality: only apparently is the aim to obtain information or to communicate; the real purpose is to explore all the possibilities of a program, rather as a gambler seeks to exhaust the permutations in a game of chance. Consider the way the camera is used now. Its possibilities are no longer those of a subject who "reflects" the world according to his personal vision; rather, they are the possibilities of the lens, as exploited by the object.

—J. BAUDRILLARD, "XEROX AND INFINITY"

In 1994 the British mobile phone company Cellnet produced a booklet, *Mobile Moments: A Collection of Tales for the '90s*, a chronicle of events that, it felt, demonstrated the crucial part the mobile phone has come to play in our lives. The tales are arranged under headings such as "Mating by Mobile," "Mobile Heroes," "Mobile Marvels" and, most interesting for this chapter, "Mobile Mishaps." Each story is an example of the narrative space entered by using and misusing a simple electronic product, of how interaction with everyday electronic technologies can generate rich narratives that challenge the conformity of everyday life by short-circuiting our emotions and states of mind. I am recommending, not that designers try to predict misuses of products, but rather that they refer to as a context of use this rich narrative space instead of the models of normality usually referred to when new functional possibilities are being developed. As Baudrillard (1990) writes:

In my opinion, the really interesting relations between people don't occur in the form of communication. Something else happens: a form of challenge, seduction, or play which brings more intense things into being. By definition, communication simply brings about a relationship between things already in existence. It doesn't make things appear.

And what is more, it tries to establish an equilibrium—the message and all that. Yet it seems to me that there is a more exciting way of making things appear: not exactly communication, but something more of the order of challenge. I'm not sure that this would invite an aesthetic of communication strictly speaking.

Some people already exploit the potentially subversive possibilities of this parallel world of illicit pleasures stolen from commodified experience. They seek out (ab)user-friendly products that lend themselves to imaginative possibilities for short-circuiting the combinatorial limits suggested by electronic products. In "Fexy Facts," Alfred Birnbaum (1991) writes about the abuse of handheld scanners/fax machines (figure 4.1) by perverts to scan parts of their bodies through sheets of clear plastic and fax the resulting distorted images to lone women. Another example is Douglas Gordon, who appeared on television and used two telephones to call two galleries, fixing the phones together and recording the resulting surreal conversation.

These stories form part of a pathology of material culture that includes aberrations, transgressions and obsessions, the consequences of and motivations for the misuse of objects, and object malfunctions. This is related to the conceptual strategy explored by John Cage in "Radio Music" (1974) and his many pieces for prepared pianos, and by Nam June Paik in his *Magnetic TV* (sculpture) and *Random Access* audiotape wall (installation). Both artists show behaviors toward technology that invite others to follow. Concerned with software not hardware, they invent new uses for existing technologies and promote interaction with "designed" objects that subvert their anticipated uses. In doing so, they challenge the mechanisms that legitimise the conceptual models embodied in the design of the product or system (piano, television, or tape machine). In his video *Making Do and Getting By* (1995), sculptor Richard Wentworth documents our natural ability to subvert object types and act in new ways on our environment. Often, as a by-product of trying to solve a practical problem, a poetic result is achieved, as different ideas, embodied in objects but usually kept apart, come together to reveal hidden similarities. Cartoons and comedies also present a world where the conventional use of everyday objects is turned on its head, leading to surreal and of course humorous situations.

One of the Frankfurt School's arguments was that pleasure has been de-sublimated and is only available through buying consumer goods. When an object's use is subverted, it is as though the protagonist is cheating the system and deriving more pleasure than is his or her due. The subversion of function relates



Figure 4.1 This handheld scanner/fax is an example of an (ab)user-friendly product used to exploit the potentially subversive possibilities of the parallel world of illicit pleasures stolen from commodified experience.

to a breakdown of order; something else becomes visible, unnameable, unable to find a correspondence in the material world. This subversion of function is related to not being able to find the right word, creating neologisms that bend language to accommodate something new. Desire leads to a subversion of the environment creating an opportunity to reconfigure it to suit our "illegitimate" needs, establishing new and unofficial narratives.

Although the misuse and abuse of everyday objects is related to the anthropological study of material culture there is little literature on its surreal aspects. Occasional overlaps with urban legends¹ establish connections with anthropology proper, and offer at least some analysis of this subject, although emphasis is on collating, and discussing the truthfulness of, the legends themselves. In *Mythologies*, Barthes famously introduced the role played by commodities in the formation and consumption of popular culture, but predates the explosion of electronic products which shape nearly every aspect of modern life.

The almost unbelievable stories reported in tabloid newspapers testify to the unpredictable potential of humans to establish new situations despite the constraints on everyday life imposed through electronic objects. A mother shoots her son after an argument over which television channel to watch; the police set a trap for scanner snoopers by broadcasting a message that an UFO has landed in a local forest (within minutes several cars arrive and their scanners are confiscated); a parent is outraged by a speaking doll, made in China, that appears to swear.

A Pathology of Material Culture

The aesthetic potential of the narrative space centered on the consumer product has received surprisingly little attention from artists and writers and even less from designers. Few films or stories acknowledge how our lives and identities are intertwined with machines and artifacts, particularly everyday electronic products. Though we inhabit an environment of electronic gadgets and gizmos, little effort is turned toward exploring what this means. The film *Family Viewing* (1987) by the director Atom Egoyan studies the relationships between members of a family mediated through everyday technologies such as the telephone and the video recorder. Their sometimes unconventional use of these banal technologies is seamlessly integrated into their lives. This encouraging vision of technology, where new media allow additional forms of expression for everyday desires, offers an alternative to Hollywood's sci-fi and shock/horror visions of technology.

Whereas *Family Viewing* focuses on technologically mediated relationships between people, Nicholson Baker's novels *The Mezzanine* (1986), *Vox* (1992), and *Room Temperature* (1990) richly exemplify how product-centered narratives can evolve from interactions with everyday objects. Deploying a refined appreciation of mass-produced material culture, he weaves playful narratives around psychological and physical interactions with and through the most banal artifacts, laying bare the usually hidden mechanisms of everyday material pleasures. In *Room Temperature*, for example, he writes about how as a child, by repeatedly cycling over an electronic-traffic counting cable, he might have influenced the future traffic system of his city. At the same time he exposes the failings of an over-scientific traffic-planning method based on mathematical models rather than "non-mathematical acts of judgement based simply on years of driving indignantly around."

Dumb Type, a group of artists, writers, and architects based in Kyoto, have developed performances about the cultural and behavioral aspects of consumer technology, and commodification's impact on our lives. *The Performance pH*, staged in a pit below the audience, involves visual projections, sound, and dance. A special piece of stage machinery continuously "scans" the stage floor forcing the performers to either jump or dive to the floor as it passes. The event is a multi-layered dense montage, whereas in most techno-art performances technology is used mainly to create spectacle. In *Performance pH*, it felt as though the viewer were exposed directly to the affects of technological consumerism.

Although the work of Scanner is usually discussed in relation to surveillance, another aspect of his work draws attention to the psychological space of the airwaves. Telephone conversations represent for him a more honest depiction of the world than the outpourings of televisual reality. Long samples of telephone "normality" "contain more soap opera in the 54 and a bit minutes of Scanner . . . than there is in a month of Eastenders" (King, n.d., 134–138).

In *Crash* the psychopathological nature of everyday technology is explored through a consumer product, the car. Ballard's provocative introductory essay paints a dark picture of the writer's imagination as an "'inner space,' that psychological domain (manifest for example, in surrealist painting) where the inner world of the mind and the outer world of reality meet and fuse." In a world "ruled by fictions," the writer's task is to invent the reality (Ballard 1990, 5).

Designer as Author

When we talk about what goes on in a computer, we're talking about an entire complex of relations, assumptions, actions, intentions, design, error, too, as well as the results, and so on. A computer is a device that allows us to put cognitive models into operational form. But cognitive models are fictions, artificial constructs that correspond more or less to what happens in the world.

—G. CHAPMAN, "MAKING SENSE OUT OF NONSENSE"

Conventional roles for design include addressing problems set by industry, designing interfaces that seduce the user into cybernetic communication with the corporate cultural values embodied in the emerging environment of digital objects, and finding novel applications for new technologies. But design could also develop new attitudes to electronic technology. To do this, designers could become more like authors, drawing from the narrative space of electronic object misuse and abuse to create alternative contexts of use and need.

Design could explore the fluid interface between "cognitive models [as] fictions, artificial constructs" and new electronic technologies. Designers could create new critical artifacts that help consumers, as protagonists rather than users, to navigate through the "communications landscape" we share with "the spectres of sinister technologies and the dreams that money can buy" (Ballard 1990, 5).

To explore this new role for designers, it is necessary to turn first to architecture. Although the relation of narrative to space has been thoroughly theorized

by architects such as Tschumi, and explored through design proposals by Nigel Coates and *Narrative Architecture Today* (NATO),² few architects have considered narrative space within the context of an electronic consumer-driven society and even fewer in a way that specifically addresses experiences centered on electronic products. Michael Sorkin (1992) comes close on an urban scale, and Catrina Beevor (1983) evokes consumer electronics as a potentially liberating force for narrative architecture.³ But only a handful of projects have developed actual architectural proposals, usually through the ploy of designing “a house for . . .”

One such project is an early exploration of the poetics of electronically mediated architectural space, in this case urban space, by Architekturbüro Bolles + Wilson. This competition entry uses architectural function to respond lyrically to electronic media through the design of a retreat from the “electronic glare” of Tokyo, an electronic shadow (figure 4.2): “Encompassed in the concepts of ‘electronic glare’ and ‘electronic shadows’ is Ninja Architecture. Devised by Architekturbüro Bolles + Wilson Ninja Architecture describes the function and meaning of projects developed in response to an electronically-dependent consumer society . . . an architecture in search of method and meaning” (Dollens 1991, 123).

Appliance House, a project in the form of a book by Ben Nicholson, is another architectural fiction dealing with imaginary psychological narratives, derived on one level in this case from the products in a Sears catalog and on another from the imagined structures built by a kleptomaniac (figure 4.3). The development of the project through collage means that the reality of a built project is unlikely to match the richness of the book and, when we do see glimpses of realized pieces of furniture, only the figurative elements make the transition from book to object.

Toyo Ito’s interest in an architectural response to consumerism sets his work apart from most other architects, including those who address technological issues. He deals with fiction, packaging and the private/public experiences of the city. For example, his proposal for a *Dwelling for Tokyo Nomad Woman* (figure 4.4) is very different from the 1966–1968 visions of Mike Webb’s *Cusbicle and Suitaloon*. While Webb’s nomads carry all their belongings with them, Ito’s office girl lives in the city, and her home is merely a floating canister for housing the most basic activities, not belongings. Her life revolves around shopping, and her consumerism generates an architecture that offers a fresh alternative to obsessions with the imagery of consumption. In this architectural fiction,

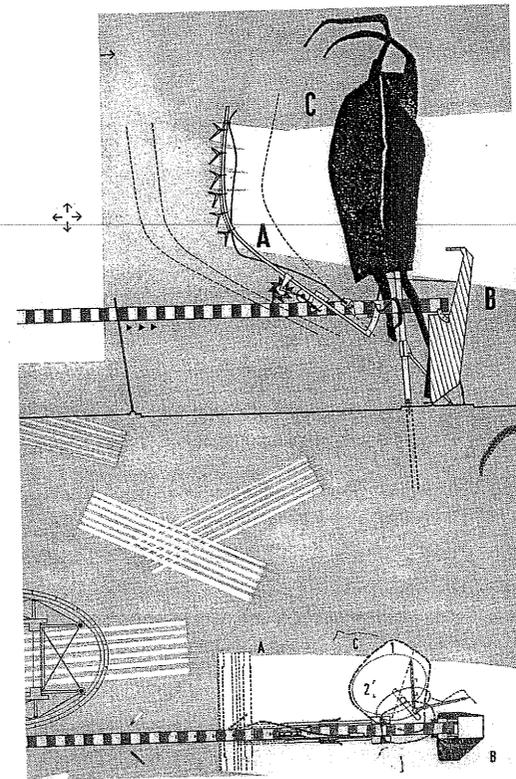


Figure 4.2 This project by Architekturbüro Bolles + Wilson (1988) is an architectural exploration of the poetics of electronically mediated architectural space, in this case urban space.

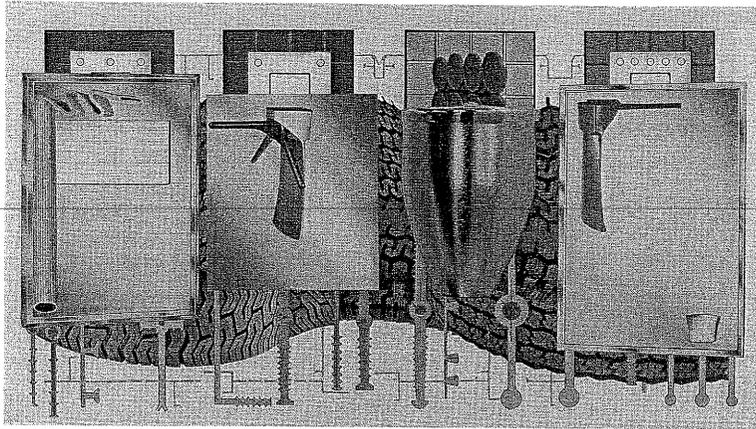


Figure 4.3 Ben Nicholson's book *Appliance House* (1990) is an architectural fiction dealing with imaginary psychological narratives derived on one level from the products offered in a Sears catalogue and on another from the imagined structures built by a kleptomaniac.

conveyed through photographs she drinks tea, reads magazines, and applies makeup—hardly utopia. Through projects like these, architects explore the psychological and behavioral dimensions of consumer culture rather than the technical, formal, or structural possibilities of consumer technologies.

Product as Role Model

Examples of how design responds to the psychological and behavioral dimensions of electronics can be found at the edges of anonymous design. Obscure marketing and novel technical possibilities lead unintentionally to objects that, although sometimes gimmicky, offer unusual narrative possibilities. A remote-control watch, addressing an unlikely psychological obsession, speaks of a sad need to control the plethora of domestic gadgetry in not only one's own home but also those of others.

*Truth Phone*TM (figure 4.5), a relatively straightforward example of an object embodying a pathological model of behavior, paranoid suspicion, combines voice stress analyzer and telephone, allowing the user to tell whether the person at the other end is lying. Although it resembles the absurdist gadgets of Garner,

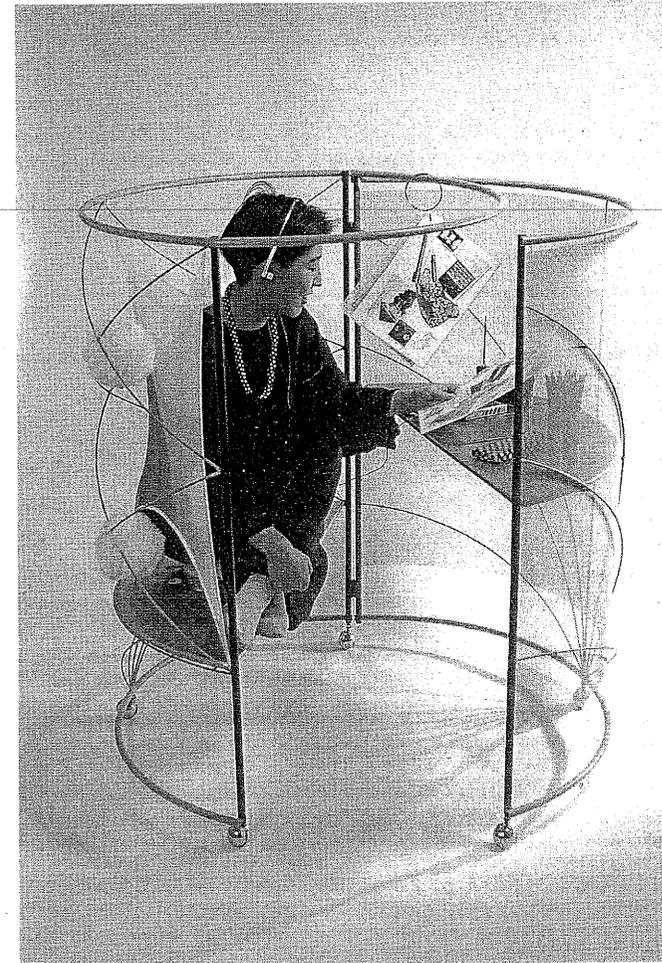


Figure 4.4 Toyo Ito's *Dwelling for Tokyo Nomad Woman* (1985) is an architectural response to consumerism that sets his work apart from many other architects, including those who address technological issues.



Figure 4.5 *Truth Phone*TM, by the Counter Spy Shop, is an example of an object embodying a pathological model of behavior. It combines a voice-stress analyzer and telephone, allowing the user to tell whether the person at the other end is lying.

its functional restraint and sober appearance help suspend one's disbelief, something not achieved by many gadgets. *Truth Phone* illustrates how an electronic product can transform the perception (and conception) of the user as a protagonist, in this case by embodying unusual psychological needs and desires in pathological objects. When one imagines using this object to talk to lovers or family members, its critical function becomes clear. By imagining living with it, the owner explores boundaries between himself or herself and the paranoid user-model embodied in the product.

Truth Phone is a "role model" in the sense meant by George Herbert Mead.⁴ Through the conceptual model of behavior embodied in its functionality and

operation, it allows the user to participate in situations that encourage critical reflection on the socializing effect of our encounters with everyday electronic products. It does this not didactically but in a more ambiguous and indirect way. This and similar electronic objects generate a conceptual space where interactivity can challenge and enlarge the scheme through which we interpret our experiences of using everyday electronic objects and the social experiences they mediate.

Real Fiction

Considered as an operator acting in relation to the daily environment, the designer's ultimate responsibility can only be to contribute to the production of a habitable world, a world in which human beings do not merely survive but also express and expand their cultural and spiritual possibilities. The term habitable, referring to the environment, indicates a complex existential condition that cannot be reduced to its functional component. It is a condition arising from the intersection of a multiplicity of questions rooted in the anthropological and social nature of the human race.

—E. MANZINI, "PROMETHEUS OF THE EVERYDAY: THE ECOLOGY OF THE ARTIFICIAL AND THE DESIGNER'S RESPONSIBILITY"

To "contribute to the production of a habitable world," design needs to be transformed, expanding its scope to include speculation on how best to provide the conditions for inhabitation. It must not just visualize a "better world" but arouse in the public the desire for one. Design approaches are needed that focus on the interaction between the portrayed reality of alternative scenarios, which so often appear didactic or utopian, and the everyday reality in which they are encountered.

Many issues touched on here, such as art's relation to everyday life, and the need for art to resist easy assimilation, overlap with those already addressed by the Frankfurt School and others in relation to disciplines such as music (Adorno), painting (Marcuse), art (Benjamin), and drama (Brecht). The similarities between these issues and those addressed by Marxist approaches to aesthetics do not imply an identification with Marxism but are the result of seeing design as having value outside the marketplace—an alternative to fine art.

This kind of design can only exist outside a commercial context and indeed operates as a critique of it. It is a form of “conceptual design”—meaning not the conceptual stage of a design project, but a product intended to challenge preconceptions about how electronic products shape our lives. This chapter discusses how such design thinking might reenter everyday life in ways that maintain the design proposal’s critical integrity and effectiveness while facing criticism of escapism, utopianism, or fantasy. The challenge is to blur the boundaries between the real and the fictional, so that the visionary becomes more real and the real is seen as just one limited possibility, a product of ideology maintained through the uncritical design of a surfeit of consumer goods.

The fact that this form of conceptual design need not conform to the conventions that shape the design process in relation to the marketplace does not mean it has to be utopian. It can use its independent position to provide conditions that encourage more reflective and challenging design ideas than are possible in commercial design. But if it is to avoid accusations of escapism this design thinking must also develop strategies for linking itself to everyday life that complement those of the marketplace. This chapter focuses on the problem of “crossing over” and discusses how conceptual design intentions and formats of work, differ from those of commercial design, and require different contexts in which the design thinking can be encountered by the public. It is concerned with representation and contexts of presentation for ideas about everyday life in the form of conceptual design objects.

The Design Object as Prototype

There is a danger that if design is not oriented to the marketplace it is seen as invalid, irrelevant, or self-indulgent, especially if displayed in a gallery. But what if the gallery were viewed as a test-site for designs unlikely to enter everyday life? What would be the most effective format for a design object designed to be shown in a gallery?

The most obvious would be fully working prototypes that can be “tested out” on the public in the gallery and, if the reaction is good, later mass-produced. But fully working prototypes displayed in galleries rarely challenge viewer’s assumptions about the role of products in their lives. For example, many visitors to my contribution to the Monitor as Material exhibition at the RCA in 1996 (figure 5.1) said they found the work interesting as spectacle, but had missed concerns with the more fictive, social, and aesthetic aspects that linked it to everyday life, even if only conceptual. Its strangeness and apparent interactivity

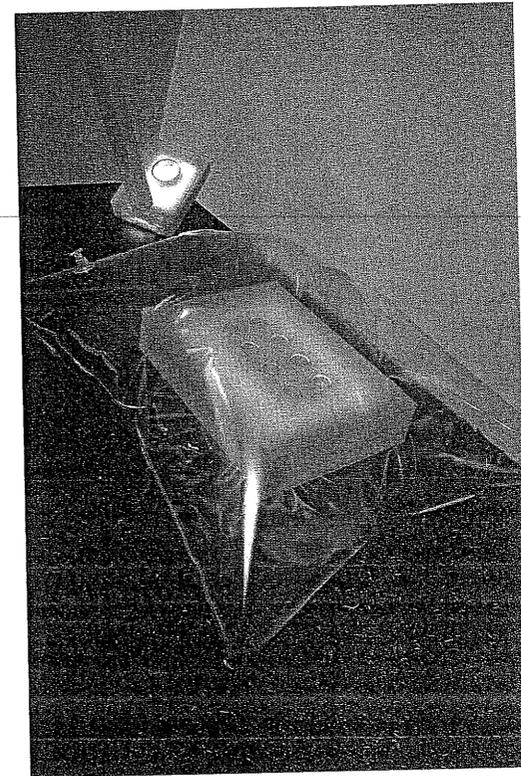


Figure 5.1 In my contribution to the Monitor as Material exhibition at the RCA in 1996, many visitors to the space found the work itself interesting as spectacle, but concerns with the more fictive, social, and aesthetic aspects that linked the work to everyday life, even if only through the imaginary, were lost.

emphasized the here and now. The gallery became a “bracketed space,” an abstract setting, disconnecting the experience of engaging with the work from everyday life. Displaying a fully working prototype in a gallery context invites people to marvel at the ingenuity of the designer, and the fact it works, but overlook the challenge to the status quo its insertion into everyday life might bring about.¹ Following this route, the gallery becomes a “freak show” of objects of wonder and amusement. The electronic objects of Weil, reinterpretations of existing products such as radios, digital clocks, and calculators, focus on the conceptual relationship between the person and the electronic object. Displayed in the gallery as one-offs, as objets d’art, they achieve little. But if the prototypes are batch-produced (which Weil’s objects were), the gallery becomes a “show-room,” allowing them to enter everyday life through the marketplace: a specialist shop selling state-of-the-art material culture, trading in shock-of-the-new reinterpretations of familiar objects.

The Design Object as Installation

For the designer who regards the electronic object as an embodiment of potential patterns of behavior and ideology, careful consideration of the relationship between the gallery and the conceptual design object is essential if the object is to connect with everyday life.

Electronic objects that use the gallery to demonstrate their interactive aesthetic or experiential aspects can be subsumed by kinetic art culture whose focus is on the here and now and providing an escape from everyday life. An installation by Fiona Raby for Electra 96 highlights this problem. The installation was intended to be a test-site for a design proposal linking two locations by open telephone lines. Ultrasonic sensors registered approaching people and allowed sounds from the other location to filter through, distorted at first they cleared as the person moved closer to the installation so that spoken communication could take place. As a design proposal it would be experienced by a building’s inhabitants over several years, and the aesthetic experience would have to be very subtle. As an exhibit in an electronic event the installation was expected to provide immediate feedback in an entertaining way. It might have been better to exhibit a film that used nonworking props to explore how the proposal might impact over time on the day-to-day experiences of fictional users.

One of James Turrell’s projects, *Perceptual Cells*, offers an interesting solution to this problem. Once inside a booth-like structure, a bit like a telephone box in a gallery, visitors are presented with controls to vary the color of light in a

hemisphere surrounding their heads. Humorous and quirky, it invites comparison with street furniture and public utilities, and their association with mass consumption, state ownership, and industrial production. The visitor imagines, perhaps, using one of these machines on the street, so a strong link with the world outside is established. It successfully combines the best qualities of prototypes and installations: it can be used in the gallery rather than just contemplated, and at the same time establishes links with life beyond the gallery.

The Alien Staff by Wodiczko demonstrates another approach—intervention. Wodiczko’s project shows how industrial design, by imagining new functions and configuring them as usable prototypes, can function critically outside the gallery. Wodiczko has deployed teams of “aliens” in various cities armed with his *Alien Staff* and studied the resulting interactions between them and the public (figure 5.2).

Such objects, using simple electronic technologies and emphasizing invention and social and cultural content, are rare examples of how product design and the electronic object can fuse into design as criticism. The prototype draws attention to the boundaries of normal behavior and thought by intervening in everyday social situations outside the gallery. That they are deemed problematic by the design world draws attention to other boundaries of categories of practice and ideas:

Asked how the design world has responded to his various Homeless Vehicle [sic] Wodiczko throws back his head and laughs at the pretensions of the so-called “designer decade.” . . . “The minute you present a proposal, people think you must be offering a grand vision for a better future.” They can’t see a thing like the Homeless Vehicle or the Poliscar as the “concretisation” of a present problem, a makeshift transitional device, or an aesthetic experiment. Instead, “they think it must be designed for mass production, and instantly imagine 100,000 Poliscars taking over the cities.” (Wright 1992, 272–273)

The Design Object as Model

What is the potential of nonworking design models as opposed to prototypes? The preoccupation with product semantics, that dominated design in relation to electronic objects for most of the 1980s, focused attention on the object itself, particularly its visual meaning. The concept model functioned as a didactic design object; it was not something to challenge the way we lived our lives, but a meta-design challenging only design itself.



Figure 5.2 Krzysztof Wodiczko's *Alien Staff* (1992) houses a small LCD television. The small size of the display, its position at eye level, and its proximity to the alien's face are all important.

The nonworking model is the conventional physical representation of conceptual design proposals: naturalistic, nonworking mock-ups simulating the appearance of a mass-produced object. Yet this freedom from technical functionality could be better used. If the design model was viewed as a medium in its own right, it could exploit its nonworking status to address issues beyond the scope of the technically functional prototype. But to achieve this it needs to be considered as a model in the same sense as a mathematical or cognitive model. This enlarged view of the model is already accepted in architecture and fine art:

The space of the model lies on the border between representation and actuality. Like the frame of a painting, it demarcates a limit between the work and what lies beyond. And like the frame, the model is neither wholly inside nor wholly outside, neither pure representation nor transcendent object. It claims a certain autonomous objecthood, yet this condition is always incomplete. The model is always a model of. The desire of the model is to act as a simulacrum of another object, as a surrogate which allows for imaginative occupation. (Hubert 1981, 17)

In the art world, a huge range of conceptual roles for the model has been explored. Particularly relevant, because it comes close to that of product designers, is the work of Gregory Green who builds models of bombs (figure 5.3), technological objects that look as though they work but do not. Although they could be made to work, their interest stems from the fact that the knowledge embodied in them is widely available and very destructive. The integration of the "bombs" as booby traps into familiar objects like suitcases links them to the world outside the gallery. Their technical uselessness becomes part of their value, shifting attention to their role as conceptual machines that engage the imagination and draw the viewer into a reflective and critical space.

These devices look similar to K/K Research and Development's analogs assembled from found machine parts. But these only work in relation to a narrative, usually social and political, in an accompanying text. They engage the viewer but are not powerful in themselves.

Crib-batic, another project by K/K Research and Development, in collaboration with Scholz, is a model for a push-chair, an existing object type. We know these objects exist in everyday life, how they are used, and by whom. So we can imagine what it would mean for their proposal to enter everyday life. It is not necessary to see the *Crib-batic* "working" for it to be effective, but rather to sense how it might cross over into everyday life. An imaginative alternative, it is

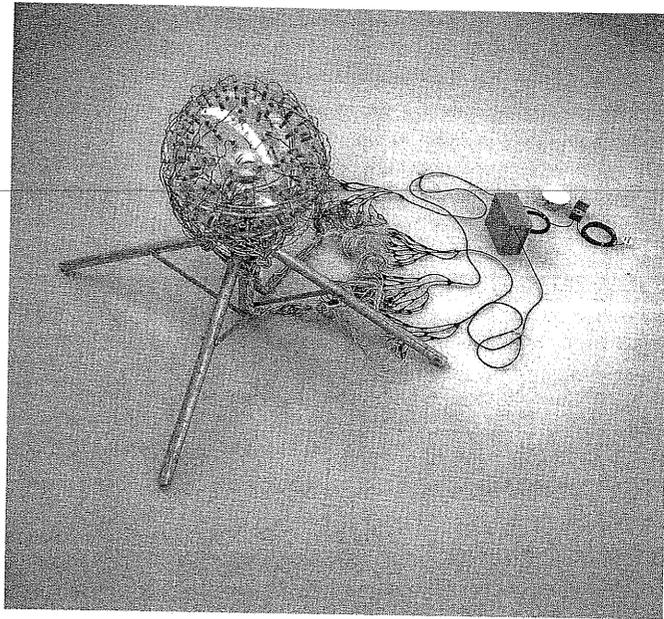


Figure 5.3 *Nuclear Device #2. 15 kilotons, plutonium 239* (1995) is a model, a technological object that looks as though it works but does not. Although it could be made to work, its interest stems from the fact that the knowledge embodied in these objects is widely available and very destructive.

“fact” in that it could be built, but fiction in that it is unlikely to be built. This fictiveness enables it to function critically, by highlighting the boundaries that limit everyday experience. It celebrates the complex ambiguity of the object, as both part and not part of the society from which it emerged. It has not acceded to the demands of “miserable reality” but remains defiantly conceptual.

From a product design point of view these models lack industrial realism; they look like craft objects, hand-made and probably one-off. But an expanded view of the conceptual design model might regard it as embodying the essence of a design idea, a “genotype”² rather than prototype, constructed from the materials at hand. If taken up for mass manufacture its construction and struc-

ture would undoubtedly change. The object’s “content” or “genes” are important, not its appearance. In the context of design, the conceptual model as genotype rather than prototype could allow it to function more abstractly by deflecting attention from an aesthetics of construction to an aesthetics of use. The genotype depends on the view that a design idea can transcend its material and structural reality and function critically, in relation to social systems for example, rather than visual culture. Andrea Branzi (1984, 141) suggests this as a possible role for craft in late-twentieth-century industrialized production. Experimental furniture such as Studio Alchymia’s 1980 *Baubaus 2* range (figure 5.4) do not simulate how they would be if mass-produced, but take a form appropriate for exhibition and consumption as one- or two-offs. Rather than an

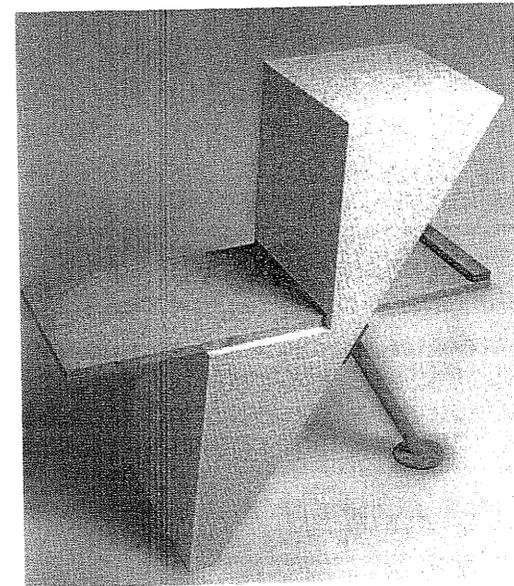


Figure 5.4 Andrea Branzi’s *Ginger* (1980) for Studio Alchymia does not simulate how it would be if mass-produced, but takes a form appropriate for exhibition and consumption as one- or two-offs. The craft object is seen as a stage in the development of an idea that might eventually be mass-produced.

autonomous form of design, the craft object is seen as one stage in developing a design idea that might eventually be mass-produced.

Michele De Lucchi presented design studies for small domestic electric appliances (figure 5.5) at the 1979 Milan Triennale. They echoed a contemporary concern to challenge prevailing images of domestic technology. They are interesting because they do not mimic reality; they are clearly representations, "models" comfortable with their unreality. They are things in themselves rather than shadows of yet to be realized products. They offer real experiences of ideas rather than unreal experiences of unrealized products, and accept that these ideas will be consumed through books and exhibitions not in the marketplace.

The Design Object as Prop

By abandoning the technical realism of the prototype and the visual realism of the traditional industrial design model, conceptual models in combination with other media, can refer to broader contexts of use and inhabitation. For instance, by using conceptual models as film props the viewer can be drawn into the conceptual space of the object in use rather than an appreciation of the thing in itself.

Branzi suggests the age of the "Historical Avant-Garde" is ending. Large corporations work with small experimental design centers to develop new scenarios within which the corporations develop new products. He calls this a period of "Permanent Avant-Garde," the aim of which is "to restructure the market, to develop a new ecology of the natural and artificial environment, and to create islands of meaning that define consumption not as a category of the ephemeral and provisional, but as a solid culture for a democratic and reformed society, one in which a new generation of tools will be able to liberate people from uninspiring work, encouraging mass creativity and individual freedom" (Branzi 1995, 152).

A key tool in this process is the scenario, both to generate design ideas and communicate the results. Large corporations employ scenarios of use to anticipate how people will interact with the complex environments of which technological products are a part. Usually scenarios have a conservative role, predicting patterns of behavior in relation to technological developments. They draw from what we already know about people, and so weave new ideas into existing realities. These scenarios extend preexistent reality into the future and so reinforce the status quo rather than challenging it. For example, "Workshop" by Philips in collaboration with Olivetti explores the new office landscape to formulate a new vision of the workplace and propose new tools to support it. But the way it

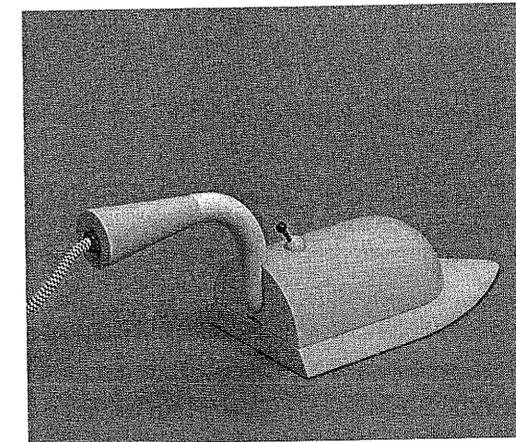
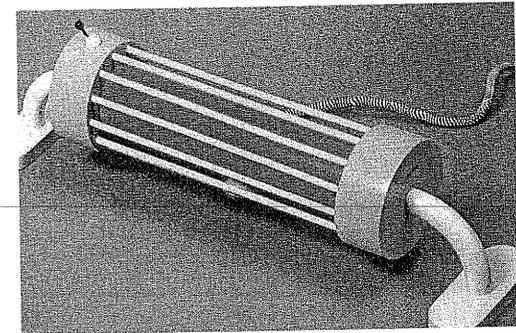


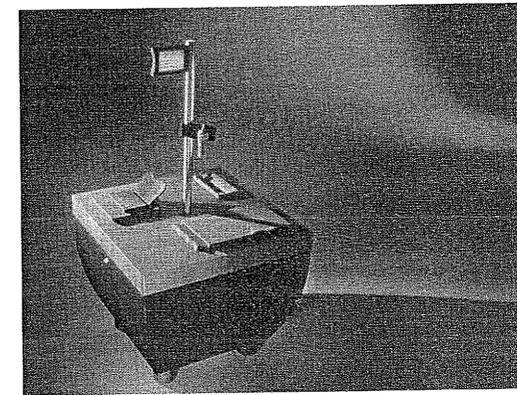
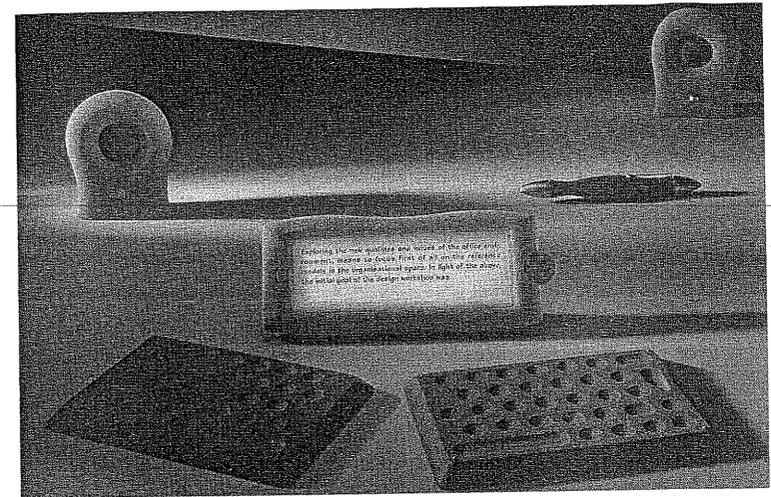
Figure 5.5 Michele De Lucchi's *Appliances* for the 1979 Milan Triennale do not mimic reality; they are clearly representations, "models" comfortable with their unreality.

was conceived only reinforced stereotypes of the future office. *Communicator* (figure 5.6) for “anywhere anytime” multi-media computing, the group tool (figure 5.7) that encourages office workers to mix fundamental tasks such as photocopying and faxing with socializing, and the fetishistic arrangement of tools that can be interconnected to meet specific functional requirements propose no innovative vision of changing patterns of work. Corporations need to ensure a continued need for physical products in a world where many products are being replaced by software (e.g., phone and fax software for computers). But as a tool for presenting design ideas, the scenario is very powerful. It can draw the viewer into a narrative that goes beyond the object to reveal more complex issues.

Manzini (1994) argues that, although design can neither change the world nor create lifestyles that enforce patterns of behavior onto society, the designer is not simply a problem solver but an intellectual able to link “the possible with the hoped-for in visible form.” Manzini’s emphasis is less on interaction with discrete objects than on systems of objects. He suggests designers as independent agents use their imaginative skills to propagandize socially and politically desirable situations. In Manzini’s view, part of the designer’s role is democratically to discover what is “desirable” rather than imposing their own or another minority vision onto society. But Manzini’s approach, although critical in that it rejects prevailing conditions and proposes an alternative, runs the risk of being either too didactic or utopian.

The sci-fi genre offers a third possibility. Susani, noting how what was once called “concept design” has now become the design of entire scenarios of objects, refers to Apple’s 1987 “Knowledge Navigator” project as probably the first use of video narration to present a “cultural project” (Apple Computer, 1992). Susani claims it was neither a promotional tool, nor simply a projection of technological evolution, but a study of how we could coexist with new technological artifacts. He suggests that Wim Wenders’ film *Until the End of the World* is a more stimulating and useful project for a “telephone scenario” than many mainstream design projects for telephones of the future. The use of scenarios in *Until the End of the World* comes close to being critical because it achieves a degree of estrangement through the behavior of fictional characters who do not have to conform to existing personality types, occupations, or motivations.

But this approach falls foul of a central contradiction of radical work, as Adorno demonstrated in his contrasting of modern classical music and popular jazz. Because a mainstream film has to be immediately graspable by a broad audience, the fact of achieving this diminishes its critical potential. Transformations of



Figures 5.6–5.7 Philips and Olivetti’s *Communicator* (1994) and *Group Tool* (1994) set out to explore the new office landscape, to formulate a new vision of the workplace, and propose new tools to support it.

consciousness are more likely through struggling to understand ideas: simplification dilutes the power to challenge established values:

According to Marcuse, the strength of art lies in its Otherness, its incapacity for ready assimilation. If art comes too close to reality, if it strives too hard to be comprehensible, accessible across all boundaries, it then runs the risk of becoming mundane. And if this occurs, its function as negation to the existing world is abandoned. To be effective art must exert the capacity for estrangement . . . it must dislocate the viewer, reader, audience, by its refusal and inability to become part of the reality principle. (Becker 1994, 119)

If the conceptual design object is to be used as a prop in a scenario that works in a critical, transformative way, other possibilities must be developed. Although a critical approach might alienate some, it might also more effectively transform the consciousness of those whom it does engage. The task is to embody content in an aesthetically challenging form that would “push the viewer towards a more complex, emotional, or revolutionary understanding of the problems posed by the work” (Becker 1994, 122).

Some artists and sculptors have achieved this in films they have made about their work (e.g., Philippe Ramette, or Rebecca Horn), and filmmakers such as David Lynch have developed strategies for applying this to television (e.g., Lynch’s *Twin Peaks*). But there are few examples (one being Atom Egoyan’s *Family Viewing*) where electronic products play a significant role.

Cindy Sherman’s photographs from her *Untitled Film Stills* series portray banal moments of apparently little significance. As the viewer tries to imagine what happened before and after, he or she is drawn into speculation on the psychology of the protagonists and their state of mind. These photos show the surprising power of stills, compared to video or film, to engage the viewer. They shift the viewer’s imagination toward the fictional possibilities of the portrayed moment. The furnishings and incidental objects in these photographs encourage an allegorical reading that further engages the viewer. Most of the images look as though they were taken in the 1950s or 1960s which adds to the distance they create.

The work of Garner (1983, 1985) also uses a sense of the recent past to engage audiences. His two books consist of photographs (figure 5.8) of conceptual design objects, and of scenes reflecting the strange psychological and social narratives that arise from interaction with and through the objects portrayed. The books could be seen as a critique of consumer society, but their dependence on comic absurdity distracts attention from any serious criticisms that might be

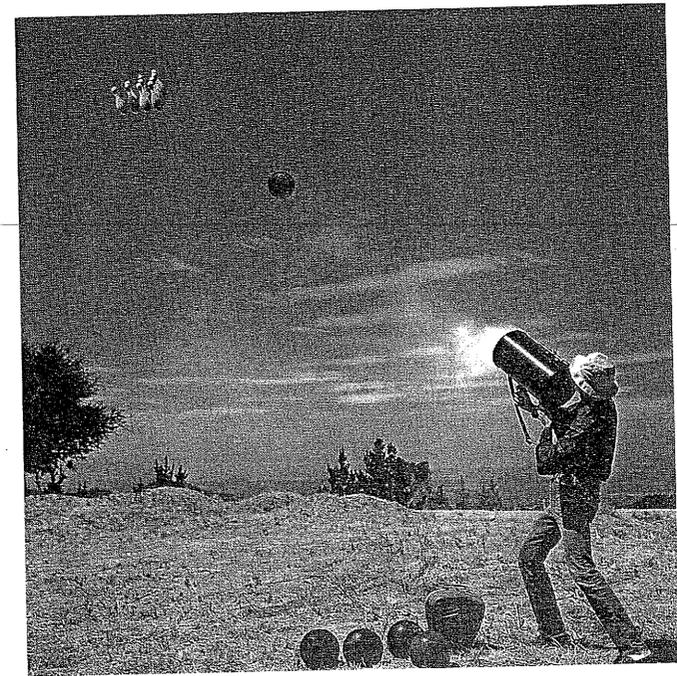


Figure 5.8 Philip Garner’s *Utopia or Bust* (1985) consists of photographs of conceptual design objects and of scenes that present unusual narratives that arise from interaction with and through the objects portrayed.

read into the project. This ironic approach offers no constructive suggestions. In comparison, Ito’s *Dwelling for a Tokyo Nomad Woman*, an architectural fiction conveyed through photographs, portrays a system of behavior and consumption to make familiar but exaggerated consumer values real and concrete, values that are neither futuristic nor utopian, but uncomfortably close to our own. The nomad woman’s only furniture is designed to support intelligence gathering on new trends, eating snack food, and styling one’s image. Ito’s photographs conjure up an “elsewhere,” familiar but different. Rather than offering another option, or parodying what exists, they suggest that the way things are is not the only possibility.

Although far more nostalgic and romantic, the images produced by Ramette, of himself using his inventions, work in a similar way (figure 5.9). The style of his images is deliberately straightforward, and the use of his devices, which usually resemble nineteenth-century scientific instruments, is easy to understand. The viewer wonders at the strangeness of Ramette's behavior, trying to imagine why somebody would behave like this, what pleasure they have, and what prevents such objects from being widely disseminated and the values they embody gaining general acceptance.

In Horn's films, *Der Eintanzter* (1978) and *La Ferdinanda: Sonata for a Medici Villa* (1981), her sculptures appear in the background of several scenes. They are never explained, but the viewer is drawn into a strange world that objects such as these seem to inhabit nonchalantly. The films seem set in the present, but the integration of such strange objects into everyday settings implies a completely different set of cultural and aesthetic values highlighted by their familiar settings. This technique is reminiscent of Brechtian alienation, in this case drawing our attention to the role of objects in defining and realizing everyday space and rituals. Horn's films are neither didactic nor utopian, nor are they parodies. They seem closer to heterotopias. They portray situations different from our own where enchanted objects have a place in daily life and a different "sense" prevails, a sense interwoven with our own rather than completely alternative or nonsensical. Norman Daly's *The Lost Civilisation of Llbuuros* is an exhibition of artifacts from a fictional culture, each of which is accompanied by a caption explaining what is supposedly known about it. The exhibition blurs the boundaries between imaginary spaces and the here-and-now of the gallery. It is as though a film has reentered everyday life through its props. It invites the visitor to speculate, as an anthropologist of material culture might, on how values come to be embodied in artifacts.

Conceptual Consumerism

For Marcuse, art is a location—a designated imaginative space where freedom is experienced. At times, it is a physical entity, a site—a painting on the wall, an installation on the floor, an event chiselled in space and/or time, a performance, a dance, a video, a film. But it is also a psychic location—a place in the mind where one allows a recombination of experiences, a suspension of the rules that govern daily life, a denial of gravity. It "challenges the monopoly of the established reality" by creating "fictitious worlds" in which one can see mirrored that range of human emotion and experience that does not



Figure 5.9 The style of Philippe Ramette's images is deliberately straightforward, and the use of his devices, which usually resemble nineteenth-century scientific instruments, is easy to understand.

find an outlet in the present reality. In this sense the fabricated world becomes "more real than reality itself." Art presents the possibility of a fulfilment, which only a transformed society could offer."

—C. BECKER, "HERBERT MARCUSE AND THE SUBVERSIVE POTENTIAL OF ART"

This chapter has discussed where this space might lie in relation to the electronic as conceptual design object, and how we might encounter it. As a route for developing critical electronic objects within a design context, it has rejected the prototype in favor of combining nonworking models with film, video or photography to establish scenarios that are neither didactic nor utopian but heterotopian. Were the props from a scenario physically displayed with the film, video, or photograph, more subtle interactions might develop between the space of the here and now, where the viewer is, and the fictional space portrayed in the image. The physical presence of the artifacts encourages additional interplay between reality and fiction, between what is and what might be. By themselves the artifacts would be mentally assimilated into known patterns of behavior, "explained away." But shown as part of an alien culture with different aesthetic values and a different "sense," they require viewers to accommodate the unusual role of the artifacts in an everyday life like their own.

The space in which the artifacts are shown becomes a "showroom" rather than a gallery, encouraging a form of conceptual consumerism via critical "advertisements" and "products." New ideas are tried out in the imagination of visitors, who are encouraged to draw on their already well-developed skills as window shopper and high-street showroom frequenter. The designer becomes an applied conceptual artist, socializing art practice by moving it into a larger and more accessible context while retaining its potential to provoke people to reflect on the way electronic products shape their experience of everyday life.

Hertzian Space

The rapid expansion of knowledge and technical development has swept us into a world beyond our grasp; the face of nature is alien once again. Like the forest and the mountains of medieval times, our new environment harbours strange menacing beasts, invisible viruses, atoms, mesons, protons, cosmic rays, supersonic waves.

—GYORGY KEPES

It might seem strange to write about radio,¹ a long-established medium, when discussion today centers on cyberspace, virtual reality, networks, smart materials and other electronic technologies. But radio, meaning part of the electromagnetic spectrum (figure 6.1), is fundamental to electronics. Objects not only "dematerialize" into software in response to miniaturization and replacement by services, but literally dematerialize into radiation. All electronic products are hybrids of radiation and matter. This chapter does not discuss making the invisible visible, or visualizing radio, but explores the links between the material and immaterial that lead to new aesthetic possibilities for life in an electromagnetic environment. Whereas cyberspace is a metaphor that spatializes what happens in computers distributed around the world, radio space is actual and physical, even though our senses detect only a tiny part of it.

It is just over one hundred years since electricity generation started, seventy since radio transmissions began, and fifty since radar and telecommunications entered our environment. The twentieth century has seen space evolve into a complex soup of electromagnetic radiation. The extrasensory parts of the electromagnetic spectrum form more and more of our artifactual environment, yet