The Tuning of Place

Sociable Spaces and Pervasive Digital Media

Richard Coyne

The MIT Press
Cambridge, Massachusetts
London, England

For information about special quantity discounts, please e-mail special_sales @mitpress.mit.edu

This book was set in Stone Sans and Stone Serif by Toppan Best-set Premedia Limited. Printed and bound in the United States of America.

Library of Congress Cataloging-in-Publication Data

Coyne, Richard.
The tuning of place : sociable spaces and pervasive digital media / Richard Coyne.
p. cm.
Includes bibliographical references and index.
ISBN 978-0-262-01391-8 (hardcover : alk. paper)
1. Ubiquitous computing. 2. Mobile computing. 3. Online social networks.
I. Title.

QA76.5915.C695 2010
006.7'54—dc22

2009033440

10 9 8 7 6 5 4 3 2 1

1 Intervention

Whereas a sociologist or ethnographer might examine how people use ubiquitous technologies and how they relate to one another as they do so, a designer actively invents, creates, deploys, and otherwise intervenes with a technology not only to create something useful but also to advance understanding. The outcome hopefully will be better design, technique, or even better products, but also improved understanding, irrespective of the quality, functionality, or marketability of the design product. There is a place for standing back and observing ubiquitous technologies, as if from a distance, but there is also scope for engaging with the technologies under study: making, building, and tuning in order to learn. Design deploys tactics for both making and understanding the environment.

There is an argument to be made that space is "created" by such interventions in any case. From an architectural perspective it is common to think of the character of a space as determined by the elements that contain it (walls, ceilings, floor surfaces) and the elements it contains (columns, pipes, furniture). According to the philosopher Gottfried Leibniz (1646–1716), space would not exist were it not for the relationships between things.[1] Space is relational in this tradition. Space is revealed by the placement of objects, events, and people; such interventions constitute space. So a design, whether or not it contributes to comfort, safety, communication, or sociability is an intervention that not only has spatial consequences but also contributes to the making of a space. This space-making function can occur by way of setting up contrasts as well as by making the occupants comfortable. To place a forklift truck in a coffee shop would reveal something about the size, sociability, and robustness of the space. It could disclose the space to the occupants in a new way. In subtler ways, the introduction of cell phones into coffee shops and railroad

compartments contributes to the definition of those spaces, and for the theoretically reflective may reveal something about the public-private characteristics of leisure and transportation spaces in general. By this reading, devices are disclosive, which can lead to particular understandings, which in turn suggest further interventions.[2]

Technologies do not conform politely to predetermined or intended functions. Philosopher of technology Don Ihde notes how a hammer may be designed to drive nails into floorboards, or remove them, but this functionality does not prevent a hammer being used as an art object, a murder weapon, or a paperweight.[3] Designers and product developers cannot anticipate easily such incidental uses, especially when dealing with innovations in dynamic contexts of use. Strategies of rapid prototyping, in concert with "agile" and "extreme" computer programming or product development, recognize that it is only when a product is placed into a context of use that many of its functions come to light.

So a carefully designed product, improvised design or combination of resources and streams from various digital sources (a mashup) is not the end of the development process, assessable only in terms of success or failure. A design can be part of an extended process that leads further. Hence my conviction that designed devices already contribute to place, space, spatiality, and spatial understanding, irrespective of their suitability for purpose. This is not to advocate populating the world with clumsy, inappropriate, and unusable products, but to recognize that devices are already constitutive of space. To enter a room is to encounter a field of complex and varying relationships that distort and inflect people's experiences in ways that many observers describe as spatial. To introduce a new intervention further tweaks, ruptures, or tunes the spatial field.

In this book I draw on intervention as a means of understanding. I endorse not only well-designed products, but also those myriad experiments, both naïve and profound, the descriptions of which populate conferences, teaching programs, blogs, and reports, both in and out of company time. They are the ordered or improvised, successful and failed products and by-products of institutional, corporate, amateur, and everyday technical practices, the configurations of hardware, software, web pages, media mixes, user innovations, and experiments in ad hoc practices that celebrate the insights that emerge simply from trying things out.[4] The concept of hacking captures aspects of this milieu as a variant of tuning practices.[5]

Hardware hacking,[6] modding, and circuit bending are practices that adapt or recycle ubiquitous electronic and mechanical components and scrap, in and out of warranty, to some experimental end, an activity that captures the opportunism of much design. As hacker, the digital *bricoleur* uses a game joystick as a musical instrument interface, deploys pressure pads from a disco mat as a movement sensor, overclocks (speeds up the central processing unit of) a computer, and turns a computer case into an aquarium. To hack is to use what is to hand when the purpose-made component is unavailable or unaffordable. As I will explore in the next chapter, tuning suggests bringing things into alignment, as if closer to an ideal state, but can also be characterized as a hack, the fine adjustment of parameters, a compensation for a condition where an ideal can never be met.

Accountable Design

Some design follows the trajectory of the improvised hack, but is there not also well-ordered design that methodically and systematically ascertains what needs to be done, counts the cost, charts and plans, integrates with other team members, delivers on time according to a program, and is accountable? After all, most hardware and software configurations alluded to in this book constitute extremely sophisticated, well-planned and well-marketed designs. My argument, pushed to its extreme, is that all design has the character of a hack, or a provisional microdesign. In so far as it can be said to exist at all, the whole, the big picture, resides with the complexities of human practices in contexts. Human practices are not planned, organized, controlled, or designed, but emerge in intricate and ad hoc ways, as so many interactive alignments and realignments. Architects and the users of spaces commonly suppose that plans, blueprints, drawings, and texts constitute expressions of some idea, and in turn represent instructions for others to follow. But another way to look at such objects is as interventions into a series of processes that are already in play, and that have to be in place before those plans have any effect.

Design as intervention can be illustrated with the idea of a master plan for a big city, such as Georges-Eugène Haussmann's plan for the boulevards of Paris, designed in 1852.[7] This was certainly a grand plan, but it was also a set of drawings, conversations with Napoleon III and the city fathers, specifications, contracts, letters, and other documents. These documents

had to be interpreted, and were drawn up to be interpreted in certain ways. Haussmann was already working in a context of mutual understanding and shared practices, not least in the practices of road builders, gardeners, masons, financiers, and the imperial court.[8] Without this body of practice, many of the legacies of which are shared by twenty-first century cities, the plans would be incomplete.

Cities seem to grow incrementally and opportunistically, and plans are often overridden by changes in political circumstances.[9] But where plans exist, they also undergo similar processes. I argue here against "ideas,"[10] those supposedly transcendent visions that constitute the essence of a project, and exceed their mere implementation. I maintain that designs are objects, artifacts of incremental processes, featuring in ad hoc human practices, open to multiple interpretations, and often contested, modified, paid lip service to, and used to political ends. Designs are drawings, conversations, texts, specifications, contracts, and instructions. As such designs intervene in myriad human practices. This is not to diminish their importance, but to acknowledge the character of designs in the cultural currency of materially situated documents and practices. Similarly, the design of sophisticated digital devices and services involves sketches, drawings, CAD (computer-aided design) models, specifications, and contracts subject to the vicissitudes of human practices, supply, manufacturing, production, distribution, regulation, codes, and markets.

A design philosophy of the increment does not exclude and in fact affirms the possibility of designing for a "total user experience," encouraging designers to think creatively and expansively about how products, services, brands, websites, user support, regulations, and the whole "user experience" fit, or don't fit, together. As indicated in the UK Designing for the Twenty-first Century initiative,[11] many fields benefit from an expansion of the design orientation—for example, in thinking of health care as a design issue, and formulating strategies to promote "wellness," preparing and presenting food in ways that enhance the conviviality of the meal; ideas related to hospitality, tourism, and travel as gratifying experiences.

The design of a pay-as-you-go curbside car-sharing service illustrates the operations of such an expansive orientation to design. Investors and developers might be encouraged to think of the design of the vehicles, the profile of the fleet, the website, payment processes, forms, branding, inter-

face with local authorities, road markings, customer support, backup, user feedback, user experience, and interfacing with other services, as well as management, business, and investment planning, all processes permeated by design and subject to contingencies. To advocate design as an incremental process is to introduce into the mix a consideration of the processes by which such a scheme might be rolled out and how designers, developers, and managers learn from mistakes before overinvesting in decisions from which it is difficult to withdraw. Advocates of the "total design" view would probably, rightly point to the need to conduct the necessary background research before embarking on serious investment. I would simply add the necessity to design in the capacity to change and adapt the design and development process, as well as the design of the products and services, taking into account their complex interrelationships.

Of course incremental development features in the discourses of biology. Charles Darwin maintained that the maxim "the law is not concerned with trifles" does not apply to science.[12] The trifles under consideration include not only the momentous consequences of the actions of the lowly earthworm in activating the earth's nutrients, but also the small and subtle incremental shifts in environments and behavior patterns that bring some species into being and extinguishes others. Small increments can have large effects. A small shift can move a big object beyond its tipping point and over a cliff.

Historian Jonathan Sterne provides a telling history of audio devices that illustrates the contingencies of product design and the nature of incremental and opportunistic development, starting with Alexander Graham Bell and Clarence Blake's "ear phonautograph" and the litany of weird, failed, and partially successful devices for the transmission of sounds to the masses.[13] It seems that, as for the urban environment, incremental and contingent processes are at work in the design of sensory apparatus.

It is a simple matter to identify the role of the increment in the long-term evolution of products. One of the justifications for the development of rigorous design methods in the 1960s was that there is now insufficient time to let designs evolve incrementally over successive generations.[14] Tools and technologies may improve the efficiency of design, but there is no escaping the increment.

Design Increments

Ubiquitous devices operate as machines for tuning the environment. Drawings, specifications, computer models, spreadsheets, lists of milestones, PowerPoint presentations, and emails likewise are tuning devices, as are the documents that purport to bring them all together. In architecture, operations with such devices constitute microdesign practices that intervene into existing practices of manufacturing and building. So too in the case of software design, or the design of computer interfaces (interaction design)—charts, tables, timelines, and specifications do not so much dictate how the project will progress but intervene into the existing practices of the programmer, designer, and project manager. Seen in this light, even supposed grand designs or policies are interventions into the environment at the microscale.

To stress the role of the incremental I therefore emphasize equipment and devices rather than systems. In their day-to-day dealings people interact with devices not systems. On a day-to-day basis people look at the subway map to find their way around, not the subway system. When travelers do refer to the system it is often to draw attention to some hegemonic condition, that of a thinly specified sense of unease, a symptom of some socially shared "attunement" to a condition of dissatisfaction with "the system." In avoiding talk of systems I prefer to think of diagrams, plans, tables, networks, and other structures deployed to give an account in some professional context or other—very often an account of failure when no particular device can be identified. In any case, sociologists of technology have expanded the concept of technical systems as socially situated, asserting that in so far as they conceive of systems at all then all technical systems are sociotechnical.[15] The representation of what constitutes the system in any particular case is already an artifact contingently embedded in human practices.

These themes approving the value of the incremental have found their way into the popular business literature,[16] according to which there is always something going on socially and culturally that can be tipped into another condition by the passing of a law, the presentation of a blueprint, a key meeting between individuals, a clip on YouTube, a well-timed or judicious wink. This tipping point is elusive, and may involve a lot of events working in tandem. A plan is a document, sequence of spoken

words, or a diagram that is produced to tip one mode of practice into another, or to suppress one practice (smoking in bars) and elevate another (socializing on the street). The plan or policy assumes authority by virtue of the practices that already exist, and brings certain of those practices into sharp relief. It also tunes practices, sometimes unpredictably. The tuning of place suggests that the hard graft occurs within extant complex, pervasive, and tacit human practices. Like the rudder on a ship, a slight movement exploits the momentum of other motions to steer the vessel in a new direction.

The Agony of the Senses

Architectural and product design are commonly associated with the workshop and the studio as the loci of invention. Designers and makers of physical artifacts commonly associate workshops and studios with materials undergoing transformation: wood being cut, paint splashed about, casts molded, kilns fired up, glass blown, drum kits tested, dance moves exercised, and scenery arranged. They are richly material and therefore sensual environments, hands-on, tactile, embodied, and risky. In addition, as confirmed by the experiments of the Surrealists and the Situationists, the workshop spills into the street, the home and the office, the everyday realms of sensation.[17] Attention to such design environments promotes the role of the senses.

Ubiquitous technologies have obvious contact with the senses that are not so apparent in the world of desktop and fixed communication systems. "Handheld," "wearable," "touch sensitive," "personal," "context aware," "ambient," and "sonic" are the adjectives of contemporary interaction design, and ubiquitous devices are out there in the world of the senses. Many devices have built-in sensors, picking up vibrations of various kinds, electromagnetic signals, sounds, movement, light, heat, touch, and scent. Ubiquitous technologies and the creative environments in which they are conceived, developed, and tested constitute sensory studios, wired workshops, and living labs.[18]

So places and the devices in them implicate the senses, with the sense of hearing as a major instrument. Think of the early Sony Walkman, the cell phone, and the MP3 player or iPod, as underlined by the research of sociologist Michael Bull.[19] Ubiquitous portable electronic media found

their foothold through a capacity to deliver sounds. Sound theorist Murray Schafer's identification of the occupants of space as composers and performers suggests that sound provides a potent means of understanding pervasive digital media and place. Sound implicates atmosphere, ambience,[20] and ambient computing. Concepts of tuning obviously draw from a consideration of the auditory sense.

Attention to sound, sense, body, place, and increment might imply a return to a more sympathetic and organic order of being, where creatures adapt to their environments and each other, there is harmony between part and whole, and integration between human and machine, apparently important in a world otherwise dominated by impersonal machines, ceaseless communications, and digital surveillance. To follow this line of inquiry would be to tread the well-worn path of romantic organicism.[21] Along with several theorists of the senses I conjecture an opposite trajectory, and affirm the *agony of the senses*.[22] After all, according to Aristotle sound is produced by one object striking another.[23] Cultural theorist Steven Connor makes the case well: "This notion of adversity—the *agon* of the blow or smiting—has predominated in definitions of sound."[24] The workshop is a place of noise, dust, fumes, and blisters as much as immersion in the sensuality of materials. Streets as studios harbor dirt, uneasy transitions and profane interactions. So my investigation into pervasive devices inevitably draws attention to how all the senses and the conflicts between them can enliven spatial design in architecture, digital interaction, and ubiquitous computing, as an alternative to smooth neo-organicism. Contrary to cyborg naturalism, humans need not expect to be one with their machines,[25] nor can they. For Matthew Chalmers and other proponents of a "seamful" computing, interaction designers need to be reminded of "the finite and physical nature" of digital media.[26]

In what ways are the senses agonistic? According to theorists of the senses, for much of the time the human animal is simply immersed in a sensory field.[27] Certain events momentarily bring a single sense into awareness: the unpleasant sound of a power saw working its way through stone paving, the shift in visual awareness as someone turns on the light, the aroma as one lifts the lid on a jar of coffee. The identification of any particular sense is contingent and of the moment. The individual's senses are also brought into relief in the event of conflicts or breakdowns[28] within perceptual experience. Even the identification and numbering of the senses

is shown to be the site of conflict.[29] The art of *agon*, adopted by Roger Caillois as a category of game play, simply means *competition*, but as an interplay that is not always hostile or destructive.[30]

In terms of the history of media and culture, the main protagonists in this play are the senses of sight and hearing. Architectural historians remind us that design for space, as developed within the classical tradition, privileges the visual,[31] and the first theorist of space known to architecture was Marcus Vitruvius Pollio (ca. 80 BC–ca. 15 BC) who coupled design closely with vision.[32] Design suggests control, overseeing, and fixing things in place, reaching a high point with the application of perspective geometry to painting in the sixteenth century.[33]

Where sound and the other senses are mentioned in the classical architectural treatise it is frequently related to music, which translates to a concern with harmony and proportion,[34] and the potent conjunction suggested by architecture as "frozen music."[35] The classical tradition, which still pervades much thinking about technologies, promotes this harmony and unity, and decries the fragmentation perpetrated by the apparent primacy accorded to instrumental scientific knowledge, factory production, and raw calculation. The classical legacy elevates order, the harmony of the spheres, and unity, and draws architecture and music within the same orbit. But there is ample evidence of scarcely hidden conflicts between the cultures of vision and sound, between the visual arts and music, the priority given to seeing as opposed to hearing. The ancient myth of Echo and Narcissus indicates such a tension: a story of a nymph constrained to repeat only what is heard and unable to demonstrate her affections to a youth who wastes away under the thrall of his own visual reflection. Media and literary theorists Marshall McLuhan, E. A. Havelock, and Walter Ong in different ways give contemporary expression to the conflicts between the cultures of sound and vision: the former pertaining to aural culture, the latter to the visual authority of the written word.[36] The conflict implicates rival authorities, technologies, and cultures.

Vision and sound are in conflict, but sound can be construed as agonistic in any case. Sound is often emblematic of conflict. In their experience of the everyday, people often think of sound as a source of noise and annoyance. They seek visual confirmation of sounds as if to settle the matter of their source, as though sound is never enough, or complete in itself, and sounds suggest disconnection.[37] Sounds emanate from bodies

that otherwise appear intact, and yet the bodies' sounds are separate from them, as are other emanations, such as vapors and scents. The agonistics of sound are obvious in the case of electronic transmission. As further evidence of the tensions within sonic experience, Murray Schafer coined the term *schizophonia*, suggestive of a pathology to describe the "split between an original sound and its electro acoustical transmission or reproduction."[38]

The agonistics of sounds are brought into relief in contemporary society when, for example, passengers encounter the disruptive effects of someone in a neighboring seat on the bus talking on a cell phone. For some this intrusion points to the need to calm things down, to put sound in its place. On the one hand sound can be invoked to placate restive spirits, for example, by chants, waves drumming the shore, humming, soft music. But sound also provides the most potent means of protesting against quietude. If you want to disrupt then you instinctively make a noise if you can.

As confirmed by the everyday experience of sound, music or ambient interventions can have opposite effects to those presumed, depending on circumstance, highlighting the problems with a formulaic approach to sound's placatory potential. In certain circumstances, sad songs can invoke happy memories; romantic ballads can switch off the desire for intimacy; and jaunty melodies can be deployed by composers and producers to heighten terror, drawing from the classical canon of gentle musical taste to invoke menace (as in *A Clockwork Orange* or *Reservoir Dogs*). Of all the arts, music lays the strongest claim to favorably influencing the emotions,[39] but neighbors will as readily voice complaint over Sibelius as Spineshank, and soothing ballads rapidly turn into grating sentiment in certain circumstances. Sound, noise, and even music are imbued with an unsettling, restive character that denies the traditional prominence accorded to concepts of harmonious unity.

Sound Gaps

Certain contemporary spatial theorists seek to break with traditions of tranquility and politeness, readily equated with vision, and characterize places as more restive. In so doing they adopt a vocabulary of gaps, fragments, and dislocated "junk spaces." Such terms are also enlisted within

contemporary architecture and urbanisms as describing symptoms of spatial fragmentation.[40] As well as bringing people together, cell phones are complicit in a desire to be disconnected. Phone users may seek out social contact, but also disconnection from sociability.[41] Just as the telephone can put people in touch with one another, it is also a means to break away from the sociability of one's present company.

Sound provides an obvious foil to the dominance of the visual, and arguably encourages a more active vocabulary. The mobile phone ringtone lures its owner and its insistence repels bystanders. Sound pervades the ambient field, but it also requires attention, it modulates and distorts space as an inflection in a sentence alters meaning. Sound can assume the role of an irritant or a point source of pain. As if to abrogate any claim to completeness and unity, Schafer suggests that sound "samples details."[42] Sonic repetition and inflection provide further metaphors for the agony of the senses, and accentuate the small change, the increment, the catalytic moment, tuning and detuning. The staccato intervention of a rogue sound bite (e.g., the slamming of a car door in the middle of the night, a plate smashed in the kitchen, a glitch in the sound track) provides a metaphor for aspects of spatiality that are local, transient, contingent, and transforming, concepts that resonate with the disruptive characteristics of pervasive media.

Sounds and even smells can tip the sensually aware into a new mode of action. In their book *Nudge*, Thaller and Sunstein note that the smell of cleaning fluids in a cafeteria nudges (some) people to keep the place tidy, and warm drinks increase the incidence of a sense of bonhomie.[43] Rather than think of human behavior as conditioned by sense experiences (stimulus–response), it seems designers might think of smells, tastes, and sounds as offering the potential to amplify the tendency to exercise complex predispositions. Sudden sense impressions can tip people into a new mode of practice, a new state of awareness.

Insofar as they implicate the senses, ubiquitous digital devices may provide a local effect, but their influence extends to the scale of the domestic, the urban, and the contemporary places of transportation interchanges and transitional zones.[44] The personal stereo, digital camera, and smartphone of the urban nomad aggravate the flow, and configure space in the process, with subtlety, and incrementally.

Organisms that Think

This agonistic approach to devices and senses intersects with certain theories about thought. Theories of "situated cognition" advance instrumental explanations of how space is involved in thought processes.[45] The theories draw on concepts of timing and subtle inflection. A fish flicks against rocks and exploits the eddies in the water, some generated by its own movements, to swim faster than it could by brute strength. By this reading thought has a similar character, as opportunistic, making the most of the environment in which it takes place. Such theories deprecate the agency of the brain as master controller and instead develop notions of embodied, situated, and distributed agency in which neurons act as "tunable and modulable filters."[46] Spatiality embeds the capacity for quick cognitive responses. Such models have greater resonances with ideas about disruption, breaks, glitches, and opportunistic hacks than do well-ordered plans, the pursuit of a seamless melding of tools and bodies, or the assertion that differences between organism and machine are somehow dissolved by digital technologies.

My emphasis on tuning and the incremental hack is a variation on the theme of cooperation prevalent in studies into complexity,[47] where large numbers of independent agents each responding to their immediate environment are presumed to constitute a meta-organism that demonstrates complex and even intelligent behavior. The obvious example is a colony of termites where each creature responds to local stimuli and the colony is thereby able to build complex structures, an emergent outcome for which there is no apparent representation, plan, or program.[48] This grassroots, unmanaged self-organization suggests a unity and harmony in small responses leading to something greater than the sum of the parts, an insight that spills into concepts of "smart mobs," interconnected mobile phone users who end up meeting in a certain place through apparently spontaneous and effortlessly negotiated agreement, and without any individual taking charge.[49] The idea of such cooperating agents also informs the ambitions for the next generation of web development, the so-called semantic web, where it is thought that computers will communicate with each other and cooperate to provide the information people need.[50]

Irrespective of the utility of complexity theory to computational and machine operations, the realms of human culture and society seem also

to give prominence to concepts of the aberrant shift, the gap in the matrix, and the rogue agent. In so far as there is complex interaction within human agency I prefer to think of complicity as much as cooperation, as a series of opportunistic confederations that seeks to break its own and other webs of connection.[51] Gaps, boundaries, ruses, resistances, and inflections provide metaphors for understanding the cues, hedges, and instantaneous gambits by which people construct, move, and think their way through their social interactions and social places, using whatever media they have at their disposal. Sociologist Bruno Latour elaborates this understanding through the theatrical metaphors of actor-network theory (ANT), in which: "the very word *actor* directs our attention to a complete dislocation of the action, warning us that it is not a coherent, controlled, well-rounded, and clean-edged affair. By definition, action is *dislocated*."[52]

Agon ex Machina

Machine operations that draw on the vicissitudes of the small change and agonistics suggest indeterminacy and play. But my strategy resists tendencies toward organicism and a trend within interaction design research toward a rhetoric of fun and *friendliness*, as exemplified by Donald Norman's influential book titled *Emotional Design*.[53]

Computing has long been a hostile medium for some, and digital devices have been difficult to use. Little thought was given to the human context of their use. Convivial design rightly presents a trend in the opposite direction, toward emotion, play, creativity, and sociability.[54] But pleasure is a complex construct, and is not always usefully equated with having fun. Pleasure can rely on exertion, pain, challenge, competition, a break in tedium, reward after tedious repetitive practice, and being left alone. My strategy is to look past the supposed potential for comfort, pleasure, friendliness, and fun in interaction design. As with cheerful music, pleasure for some can be a misery for others—mobility-impaired individuals can trip over familiar things, pretty objects can invoke sad memories, and many adults are averse to cute playthings. So-called *kawaii*—or cute culture—of Japan, Korea, and China[55] apparently gives pleasure, but stylized doe-eyed depictions of smiling animals, children, and vegetables are repugnant to many. The psychologist Freud indicated the seriousness of the "pleasure principle."[56] Furthermore, serious research into fun is subject to

the agonistics of commercial competition and academic tenure. Exhortations to have fun pall in political contexts of potential or actual inequality. Not least, invisible ubiquitous devices that purport to automate user pleasure, by anticipating mood, are in the company of animated dolls, puppets, ventriloquial mannequins, and pleasure devices (the "orgasmatron" in *Barbarella*). It is only too easy to see such gadgets running out of control, and as invocations of the uncanny and of darkness.[57]

Art and architecture generally resist the language of fun, which transports the Taj Mahal and the Palace of Versailles to Las Vegas, making the sublime appear ridiculous, a process that cultural theorists treat seriously.[58] Architecture abandoned the swing toward fun and emotion purveyed in some quarters in the 1960s by the provocative and ironical proposals of the Archigram movement,[59] and the dark pleasures of the erotic city of Sogo in *Barbarella*. The influential apologist of modernism Sigfried Giedion decried an architecture that is "treated as playboys treated life, jumping from one sensation to another and quickly bored with everything."[60] Where architecture and the arts generally purvey enjoyment it is in the realm of meta-pleasure, as in irony, the wry smile that comes from seeing ourselves taken in by overstatement and subterfuge. Irony cuts through the grand plan, the master design, and totalizing ideologies, and it acknowledges its own contradictions in doing so.[61] A problem with interaction design driven by conviviality is that it eschews politics, or at least politics is not easily integrated into its discourse. Ironic design leaves space for the questions "friendly for whom?" and "comfortable for whom?" My investigation into pervasive media attempts therefore to work through the spaces between populist and commercial aesthetic categories.

As I have explored elsewhere, irony is closely associated with the function of the cynic, the character who apparently eschews the grand plan and unsettles pretensions. This is also a function of the trickster, the uncomfortable entity that may be funny, but is mostly an irritant.[62] The tuning of place is an invitation to occupy the interstitial condition of the ironist, the detuner, the occupier and worrier of the gap.

In this brief survey of the role of design in understanding pervasive media, I explored designed devices as interventions that both create spaces and reveal something about the places they occupy. Design is less about abstract

ideas and plans than adjustments and tunings to the environment, social relations, blueprints, models, and schedules. Effective design is also a richly sensual activity involving vision and sound, which are in many respects in conflict with one another. The senses are agonistic. Design is well understood through concepts of the hack, the opportunistic adjustment, the negotiation of rifts and gaps—themes explored in chapter 2 on calibration.