

DESIGNING FOR HOMO LUDENS

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'All work and no play makes Jack a dull boy'
– popular saying

The advent of graphical interfaces, more than fifteen years ago, revolutionised the way we think about computers. The desktop metaphor had such a complete inner logic that it seemed to dismiss offhand the tedious call-and-response interfaces that had prevailed. The computer as concept expanded from a tool to a virtual environment, from a clumsy machine to a place for exploration and experimentation. Research on interaction also expanded, as people sought new perspectives from which to understand this newly-discovered territory – from cognition, to perceptual, to ethnographic and anthropological. As our appreciation of computing's potential grew, so did our appreciation of the aspects of humanity it mirrors.

Now we are on the brink of another revolution, as computers invade our everyday lives. The point is not that computers are becoming ubiquitous or ambient or disappearing altogether. Nor am I saying that interaction will be tangible, or that the virtual will merge with the physical. These things may happen, but they're symptoms — attempts to shortcut technologically the challenges we face. The real revolution is that computing is leaving the confines of task-oriented, rational, 'left-brain' work, and is set to join us in our homes, on the street, at parties, on lonely mountaintops – everywhere, in short, where 'work' is the stuff we want to get done so we can do what we really want to do.

The effects of this new revolution will, I believe, be as radical as the move to graphical interfaces, causing us to rethink computers, research, and even ourselves. However, we have been slow to appreciate the implications of technology's incursion into our everyday lives. As computing has emerged from the office and laboratory, it seems to have brought along values of the workplace: concerns for clarity, efficiency and productivity; a preoccupation with finding solutions to problems. If, as ethnographers suggest, it takes a lot of work to achieve an ordinary life, then new technologies will help us take care of it. In this vision, internet-enabled refrigerators will automatically update our shopping lists. We will use our microwave ovens to do our banking as well as to heat ready-made meals. Mobile devices will allow us to coordinate our schedules, download information, update records on the move. We will be surrounded by technology devoted to taking care of our everyday chores, giving us the leisure to pursue whatever activities we really value.

But what if technologies helped us pursue those activities now, directly, rather than merely helping us get the chores done? What if computing helped us pursue our lives, not just our work?

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'We are here on Earth to fart around.'
– Kurt Vonnegut

The idea of Homo Ludens – humans defined as playful creatures (Huizinga, J., 1950) – is an antidote to assumptions that technology should provide clear, efficient solutions to practical problems. From this perspective, we are characterised not just by our thinking or achievements, but by our playfulness: our curiosity, our love of diversion, our explorations, inventions and wonder. An aimless walk in the city centre, a moment of awe, a short-lived obsession, a joke – all are defining and valuable facets of our humanity, as worthy of respect as planning, logic or study. Play is not just mindless entertainment, but an essential way of engaging with and learning about our world and ourselves — for adults as well as children. As we toy with things and ideas, as we chat and daydream, we find new perspectives and new ways to create, new ambitions, relationships, and ideals. Play goes well beyond entertainment: it's a serious business.

What sorts of computational device might appeal to Homo Ludens?

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The Pillow, by Tony Dunne (Dunne, 1999; Gaver & Dunne, 1996; see Figure 1) might be an example. This is a clear inflatable pillow, enclosing a translucent plastic block with holes cut in it, exposing patterns of colour as they play over an LCD screen. As the light suffuses the object, it creates a much softer, more imprecise display than we usually associate with computers. But the Pillow isn't just an aesthetic object; it is a strange form of radio in which lighting reflects bits of electromagnetic information from radio stations, passing taxis or nearby baby alarms. And more than a radio, it is a poser of socio-cultural questions, pointing out the degree to which our homes and even our bodies are permeated by wireless communications. It casts its viewers as meditative voyeurs, providing them with a gentle electronic experience while subtly eliciting unease about the communications that feed it. It is an object which invites a relationship, not as a pet, but perhaps as a sort of computational alien sharing one's home (Dunne, 1999).



Figure 1: *The Pillow* suggests a kind of ambient voyeurism.

Some of the designs developed in the I3 Presence Project, too, might speak to *Homo Ludens* (see Gaver & Hooker, 2001). At the RCA, Tony Dunne, Ben Hooker, Shona Kitchen, Brendan Walker and I explored ways that technology might increase the presence of older people in three communities: a hilltop village in Tuscany, an affluent district of Oslo, and a huge housing estate in the Netherlands. Our designs took a wide and playful view of 'presence'. In Italy, we proposed a 'radioscape' that would transmit sounds from the countryside to the village, encouraging the older people to enjoy their pastoral landscape in new ways (Figure 2). In Oslo, we suggested that the older people might use a 'digital boudoir' to craft questions for their fellow citizens, to be displayed on trams or in cafés, or relayed to public phones (Figure 3). In the Netherlands, we proposed and built the Projected Realities system, which disseminated people's attitudes from their private flats, through local neighbourhoods, to the roads and railways surrounding this notorious area. With visible elements including 'slogan-benches' (Figure 4a) and an 'imagebank' (Figure 4b), the Projected Realities system allowed passers-by to encounter the words and images of their older neighbours in a way that was not didactic or demanding, but quietly suggestive.

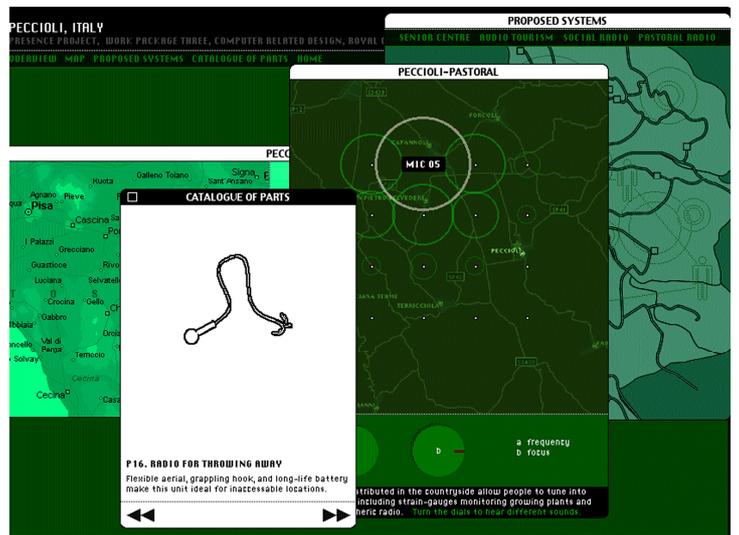


Figure 2: *Peccioli's Radioscape* would bring the countryside into a Tuscan village.

Ludic appeal might also be found in the proposals that Heather Martin and I developed for the Alternatives project (Gaver & Martin, 1999). Funded by Hewlett Packard, the Alternatives project was part of the Appliance Design Studio, a collaborative investigation of information appliances. In investigating the field, Heather and I found ourselves uninspired by current examples, and developed a series of sketch proposals to expand the group's thinking. For instance, the Dawn Chorus (Figure 5a) was a birdfeeder that would use operant conditioning principles to teach local songbirds new tunes. The (De)tour Guide would be an audio-only device using GPS and an electronic compass to lead people through the city – and to support them in getting lost for a predeter-

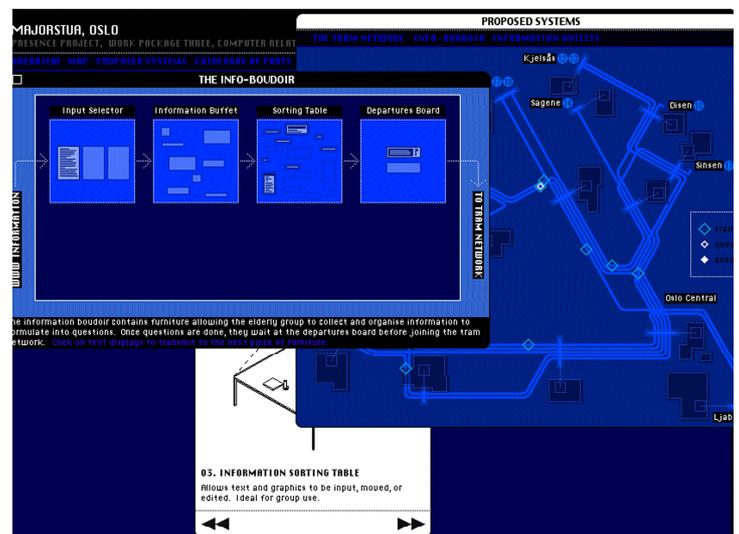


Figure 3: *The Digital Boudoir* suggested that older people could lead a political conversation distributed through Oslo.

mined interval. The Intimate View camera (Figure 5b), later developed as a prototype, linked separated lovers by allowing them to capture and transmit small, highly magnified pictures to encourage moments of intensely shared focus. The Dream Communicator allowed distant lovers to use sounds or speech to influence one another's dreams. Finally, the Telegotchi was an electronic pet with no buttons that relied on psionic communication for happiness (Figure 5c), and the Prayer Device (Figure 5d) would be found on streets, like a new sort of telephone booth, waiting to transmit one's voice to the sky. The appeal of many of these proposals, in particular, was that they didn't demand belief so much as a suspension of disbelief. They encouraged an attitude of speculation that in itself might be enjoyable.

The examples described here may be pleasurable to experience, but it should be clear that they go beyond mere entertainment. Each raises issues and asks questions, ranging from the effects of pervasive electromagnetic communication, to possibilities for inter-generational communication, to the ethics of taming nature, the value of getting lost, or the status of psychic or spiritual experiences. They raise these issues, but don't provide answers. Instead, they offer ways for people to experience life from new perspectives, thereby testing hypotheses about who we might be or what we might care about. They hint at possibilities for technologies that we could use in our everyday life, not to accomplish well-defined tasks, but to expand in undefined directions. Open-ended and personal, they encourage us to play – seriously – with experiences, ideas and other people.

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'...work is play for mortal stakes...'
- Robert Frost

What does designing for Homo Ludens imply for our methodologies? How can we invent and develop systems that legitimise wonder, even encourage it? How do we encourage people to meander, rather than to accomplish tasks with speed?

First, scientific approaches to design need to be complemented by more subjective, idiosyncratic ones. It is difficult to conceive of a task analysis for goofing around, or to think of exploration as a problem to be solved, or to determine usability requirements for systems meant to spark new perceptions. Instead, designers need to use their personal experiences as sounding boards for the systems they create. Balancing this, they need to engage in, and often lead, a conversation with the people for whom they are developing, lest their designs become purely self-indulgent. Traditional requirements capture or ethnographic methods may be useful in this, but more ambiguous, open-ended forms of engagement can also produce inspiring results. For instance, the Cultural Probes developed for Presence (Gaver et al., 1999; see Figure 6) used provocative questions and



Figure 4. Slaganbenches and an Imagebank expressed older people's attitudes in a notorious Dutch housing estate.

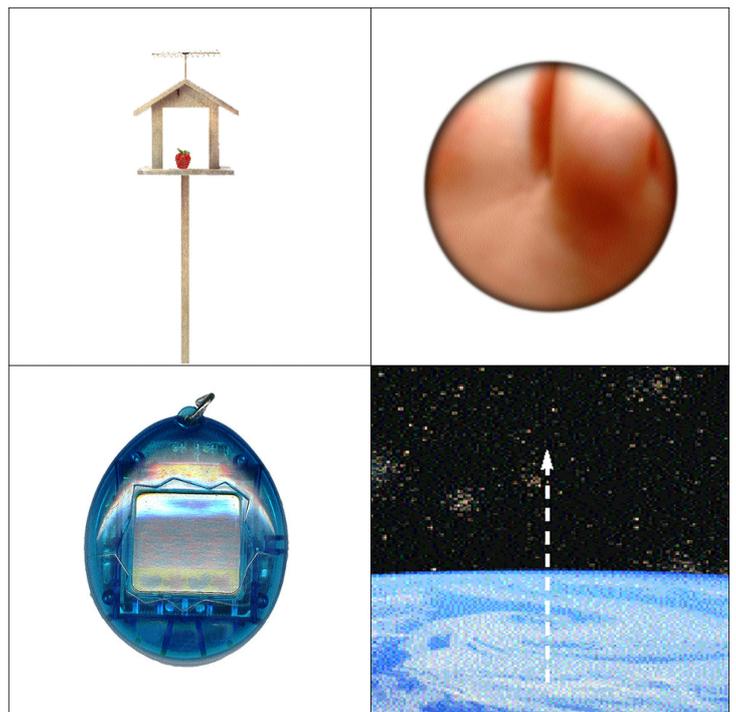


Figure 5. Concept proposals from the Alternatives project.

tasks to elicit informative materials from volunteers. The returns were never definitive, but they were evocative, allowing us to create semi-factual narratives about the communities for whom we were designing, and to develop design ideas that furthered these stories.

Second, designing for *Homo Ludens* means allowing room for people to appropriate technologies. Playing involves pursuing one's inner narratives in safe situations, through perceptual projection or, ideally, action. If computational devices channel people's activities and perceptions too closely, then people have to live out somebody else's story, not their own (c.f. Wejchert, 2001). This might be an interesting possibility – as Dunne (1999) suggests, people might approach computational devices the way they do cinema, borrowing the identities and values they suggest for a short period of time – but in general we should give people the ability to own technology, to bring it into their own complex life stories. I know two primary tactics for doing this. The first is to create 'suggestive media' – suggestive in that they are

designed to encourage or impel ludic activity, and media in that they are tools through which people experience, create, or communicate freely. The second is to employ ambiguity at all phases of design. Contrary to traditional thinking about interaction, ambiguity is an invaluable tool because it allows people to find their own meaning in uncertain situations. Used in design processes, concepts and products, ambiguity gives space for people to intermesh their own stories with those hinted at by technologies.

Third, and most important, pleasure comes before performance, and engagement before clarity. Designing for *Homo Ludens* requires a new focus that seeks intrigue and delight at all levels of design, from the aesthetics of form and interaction, to functionality, to conceptual implications at psychological, social and cultural levels. Not only should technologies reinforce pleasures that people know, but they should suggest new ones. The designer's role in this is not like that of a doctor, prescribing cures for people's ills; nor is the designer a kind of servant, developing technologies that people know they want. Instead, designers should be provocateurs, seeking out new possibilities for play and crafting technologies that entice people to explore them. In the end, designers themselves need to be *Homo Ludens*. They need to recognise that they are playful creatures, and that their work depends on their play.

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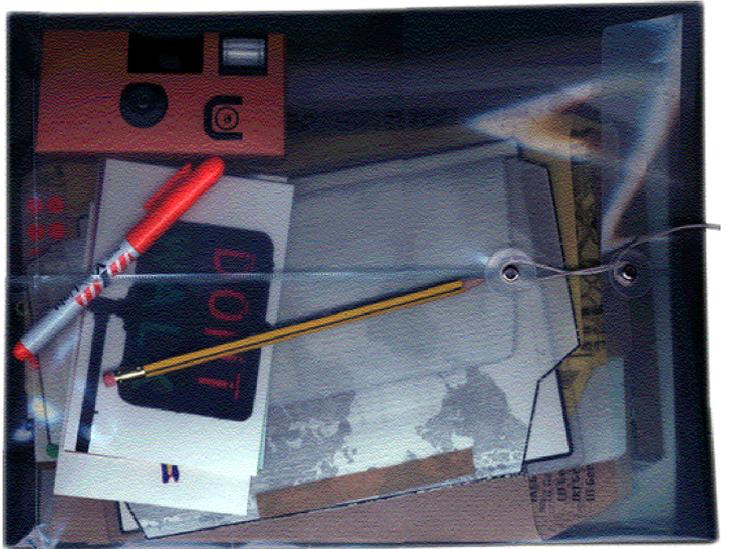


Figure 6: Cultural probes are provocative materials eliciting inspiring responses.