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# The Battle for the Living Room

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Designing the Experience

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# THE BATTLE FOR THE LIVING ROOM

WHERE MANY SEE EXCITEMENT and promise, James Woudhuysen observes confusion and lack of focus. In this commentary on the marketplace for high-tech consumer experiences, he points to a collection of problems, among them competing product platforms, contradictory and unanticipated behavior, and innovations that follow one another so quickly no one buys for fear of being left behind. As he sees it, designers are challenged to avoid rosy preconceptions and start instead with these complex, often bewildering realities.

*by James Woudhuysen*

**Every year**, about 10 million new electronic games find their way into American living rooms. Game software and hardware sell to the tune of \$5 billion a year. It is big business. Recently, an industry survey identified the following game platforms, in descending importance, as most likely to be dominant in the coming three to five years:

1. Dedicated 32-bit CD consoles (e.g., Sega Saturn, Sony Playstation)
2. On-line games for networked PCs
3. Off-line games played on PCs
4. 64-bit cartridge (e.g., Nintendo 64)
5. Broadband fiber for TV
6. Handheld (e.g., GameBoy)
7. Wireless/satellite.<sup>1</sup>

Game machines amount to only one kind of digital medium in the living room. But even on its own, the multiplicity of game platforms gives a hint that the convergence of different digitally based technologies remains a mirage.



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A decade and a half ago, the American pop futurologist John Naisbitt held that convergence between the computer and telecommunications industries had already taken place.<sup>2</sup> Yet the example of games shows that the consumer of digital media meets convergence only in the same way that, when you are in a blizzard, the snow seems to converge upon you. We all may hope that everything that is done digitally in the home will one day be controlled by a single submissive black box below the stairs. But in the new technology standards vary, and systems are more prone to being incompatible than to matching up. Equally, game users themselves make up a pretty heterogeneous species, just in terms of the platforms they prefer.

1. *Interactive Electronic Entertainment in the Home, Today-2001: an Industry Discussion*. Infotainment Inc., San Mateo, California, May 1996.

2. See John Naisbitt, *Megatrends* (London: New Era, 1982).

To design the digital experience successfully, companies must recognize that users of digital media are variegated, protean beasts. Many professionals have already commented on the obvious problems of getting consumers to talk about the digital products and services of the future. These problems become most difficult when surveys are made of that great mass of consumers who do *not* own a PC. Indeed, as major players in the world of computers and telecommunications try to open up technologies like the Internet to first-time users, major challenges have emerged for the market research industry.<sup>3</sup>

**There have been many promises; but there have been many false dawns in spheres as varied as multimedia, teleshopping, and personal digital assistants**

**Moving Targets, Capricious Claims, Complex Uses of Time and Space**

Users, like human beings in general, are creative beings. Users *change the meaning* of many of the technologies that big companies introduce. We see this with VCRs, which are widely used by mothers as a device to keep children amused while other duties are

discharged. Similarly, billboard advertising in London for AT&T has made a Green interpretation of telecommunications in asking: Is your journey really necessary? Last, if electronic banking ever does complete a migration from Main Street and the study or bedroom to the living room, the public display of such activities will, one can fairly guess, be more acceptable, in terms of etiquette, than it is at the moment. The meaning of on-line personal financial services will not be what it is now. In short, asking questions about how much consumers will enjoy armchair banking begs still more questions about the future social significance of that activity.

There is a second sense in which tracking consumers of the new digital media is a challenge for market intelligence. For 30 years, Western populations have heard about flat-screen TVs, in-car navigation, and on-line recipes at a screen by the kitchen sink. TV programs and mass consumer hopes about these things continue. Yet oddly enough, the scenarios companies paint of future gadgets in the home do not always find a ready popular understanding. Sometimes, indeed, such scenarios meet with a decidedly dusty answer. The result is that the traditional market research gap between the *claims* of respondents about their future preferences and their *subsequent real behavior* is, with digital media, widened still further.

There have been many promises; but there have been many false dawns in spheres as varied as

multimedia, teleshopping, and personal digital assistants. And while neither companies nor market researchers have taken too much trouble to explain the precise nature and benefits of new technologies to the consumer, he or she can easily guess that the world's consumer electronics and information technology industries are profoundly unclear about their future direction. There is thus immense consumer uncertainty about which, if any, digital media to purchase. Anything that a respondent says today could be reversed tomorrow by a fresh piece of news about digital media.

Consumers of the new digital media are, then, moving targets in the sense that they constantly put media to qualitatively new uses. Indeed, this phenomenon is more interesting, in many ways, than the absolute quantitative expansion in media use. At the same time, consumers have perceptions of risk that extend to the risks of making the wrong decisions in media purchases. Their stated claims are thus quite likely to prove, in practice, rather capricious.

There is a third challenge that the new digital media set for specialists in market intelligence. In terms of internationally comparable data, we have only very primitive evidence, in the simple dimensions of time and space, about the complex uses to which digital media are put by those using it at home. Despite all the work and leisure that goes on in the home, we still know relatively little about it.

True, some international data exists about *how much time* people spend watching TV. But the *qualitative activities* that consumers pursue *at the same time* as they watch TV, or at least have the TV on, we know little about. There is much to suggest that, under the twin pressures of long working hours and diversified leisure options, consumers *multitask*—do two or more things at the same time—more than they ever have done. Yet little data is around on how much homework, telephoning, or music goes on while digital media are in use.

We also have little information about the *spatial* side of media use. Many of the new digital media of the living room—videoconferencing, music over the Internet, high-speed 3-D graphics—depend for their success on the interior design and human factors of that room: lighting, acoustics, viewing distances, the mounting of a screen, the possibilities for home theater. Yet the extensive multimedia trials conducted in America seem to have yielded little insight on these matters. Market research, which

3. On the general problem of opening up IT-related markets to many pragmatists, not just a few visionaries, see Geoff Moore, *Crossing the Chasm* (New York: HarperBusiness, 1991), and Moore, *Inside the Tornado* (New York: HarperBusiness, 1995).

has never felt much affinity with design thinking and still less with the disciplines of residential architecture, ergonomics, and home economics, has still to issue a comprehensive report on the all-important physical context of media use.

There are real riddles here. A study of international housing conditions since the Second World War reveals that although Japanese homes have enjoyed the fastest rates of growth in domestic living space per inhabitant, the Japanese home remains small by international standards. Why then do the Japanese show such interest in (relatively small) wide-screen (16" x 9") TVs—when they have so little room to spare and when so little of Japanese television is broadcast in wide-screen format?

Altogether, the user and potential user of digital media appear to be a bit of an affront to the cozy norms of conventional market research. Of course, much discussion has focused on how the interactive nature of digital media makes the direct detection of consumer preference available to researchers at the click of a household's mouse.<sup>4</sup> However, there are signs that users themselves will resist and, at the very least, outwit many of the attempts made to exploit the digital channel to check up on their behavior.

Why is the person or the family in the living room such an elusive creature? To answer this, we must put ourselves in their shoes.

### Digital Consumers, Part 1: Information Overload and the Technology Underclass

In recent years, the mainstream Western media's *fin de siècle* fascination with the phenomenon of victimhood has led to an unprecedented culture of complaint. In common with broader feelings of injury and helplessness, the sensation of being exposed to a bewildering and risk-laden overload of information has grown. Society's defenses against information glut, the New York communications theorist Neil Postman believes, have broken down.<sup>5</sup> In the same vein, the American designer Richard Saul Wurman crusades against what he describes as information anxiety—by publishing a book that is itself a monument to poor information design.<sup>6</sup> Amid a fair amount of handwringing, the point is now widely made that masses of information are no substitute for knowledge or for wisdom.

Of course, fears of information overload are, like more general panics about plagues and infections nowadays, often overdone. But boosters of digital media are none too convincing when they turn to the much-noised software agent (once delightfully termed a *knowbot*) as a means of overcoming overload. As a collaborator of Marvin Minsky at MIT acknowledged in 1995, those intelligent agents that have reached the market "are not very intelligent;

typically, they just follow a set of rules that a user specifies." On the other hand, research in the field of artificial intelligence has, after 40 years, "not yet resulted in any commercially available agents."<sup>7</sup>

Agents have provided no answers. Today's perceptions of overload are undiminished. Concern is not so much with what the individual can do with the new digital media, but rather what he or she might suffer at its hands.

With apprehensions about overload have come other fears: of exposure to viruses, violence, pornography, and abuse by E-mail. There is anxiety that we our children will become TV addicts, game fanatics, or computer nerds. On the other hand, there is nervousness about being ignorant of the new media. Ethnic minorities, in particular, worry about being left behind as members of the notorious technological underclass in a world in which knowledge of matters digital is held to be a key to educational opportunity and reasonable job prospects.

Popular scares about over- or underindulgence in digital media may, in fact, say more about our current hopes and fears than they do about the likely course of events. What the discussion reveals is that the category of social class has been reinterpreted, like nearly everything else, within a new framework of information technology. Ever since Marshall McLuhan won over millions to the idea that electric technology would be the prime mover of social change, just like the Gutenberg printing press, the view has grown that it is the more or less sophisticated consumption of media which, more than anything else, defines power, identity, and status.<sup>8</sup> With the demise of the Soviet Union and the gradual consumerization of the PC, it could only be a matter of time before this doctrine triumphs.

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4. See, for example, Don Peppers and Martha Rogers, *The One-to-One Future* (New York: Doubleday, 1993).

5. Neil Postman, *Technopoly: the Surrender of Culture to Technology* (New York: Vintage, 1993).

6. Richard Saul Wurman, *Information Anxiety* (New York: Doubleday), 1989. For an earlier treatment of the same problem, see Alvin Toffler, *Future Shock* (New York: Bantam Books, 1991).

7. See Pattie Maes, "Intelligent Software," *Scientific American*, September 1995.

8. See Marshall McLuhan and Quentin Fiore, *The Medium is the Massage* (New York: Penguin Books, 1968).

Whether it deserves to is another matter. As the science fiction writer William Gibson has wryly observed, the rioters in Los Angeles in 1994 eschewed the looting of Apple laptop computers because these machines meant nothing to them. More fundamentally, survey after survey has found that *employment* and, in particular, exposure to digital media at work to a large extent determines familiarity with and thus the take-up of digital media in the home. We live in a work-orientated society. The sense of disorientation that consumers feel about digital media is only, we may surmise, a symptom of insecurity about the future in general and insecurity about jobs in particular.

To buy the wrong kind of digital media can prove an expensive business. A mistake need not cost a consumer his or her livelihood, but it can prove costly in terms of time and money. Worse, making a choice in digital media nowadays confers upon the purchaser certain *moral responsibilities*.

### Digital Consumers, Part 2: a Proliferation of Choices

With the new media, the mainstream, non-specialist purchaser can feel overwhelmed by an unprecedented range of:

- suppliers
- distribution channels and means of payment
  - technological platforms, software standards, user interface formats
  - products, features, and services.

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Should you browse the Internet with the help of software made by Netscape, or with Microsoft's Explorer system? Should you use a \$2,000 PC, a \$500 network computer, a TV, a fixed-line telephone, a mobile phone, a game machine, or a personal digital assistant to browse? Will your supplier still be in business in a few years? How

vulnerable to technological change is your system likely to be? Where should you buy it and how should you pay for it?

In financial terms the dilemmas are clear enough. In America, we should not forget, the average baby-boom household has debts of about \$10,000: So even there, many potential first-time users believe that it might be wise to hold back until horizons personal, employment-related, and digital sort themselves out.

In the late 1990s there is more to consider.

Particularly in relation to children, many household heads find themselves confronting *choices that appear to be not just financial, but ethical*. The choice between educational games and shoot-'em-up diversions is just one of these. So is the rationing and moral policing of game, telephone, computer, television, and VCR use. Indeed, even the selection of a basic technological platform in the home seems to contain serious implications for how the future of the family will develop.

It is not just around children, however, that decisions appear tense. In South Korea and other parts of Asia, governments urge citizens to cut down on "greedy" purchases of foreign imports. Buying locally made digital hardware has become a sensitive matter.

What we see with digital media is of a piece with the manner in which grave decisions on environmental matters have bludgeoned their way into everyday consumer life in large parts of Europe. The obsessive, sometimes Pavlovian sorting of rubbish into different ecological piles is paralleled by a great deal of soul-searching in the digital domain.

### Digital Consumers, Part 3: Soon-Obsolete Institutions Reinforce Purchase Postponement

The final factor that gives users pause for thought about digital media is the speed with which new digital practices are encouraged, come into vogue, and then become redundant. This is a very different phenomenon from Vance Packard's famous "planned obsolescence" of 40 years ago.

Today public loss of confidence in major Western institutions has encouraged a burst of experimentation with new ones. In order to produce a more coherent society, new, often voluntaristic forms of association have been promoted by commentators such as Francis Fukayama and Amitai Etzioni. In the digital arena, the American radical writer Howard Rheingold suggested something similar.<sup>9</sup> In 1994 he argued that digital networks could lay the basis for communities of users, joined together out of common interests rather than locality. Loose but democratic, such communities could and should act as a counterweight to the top-down corporate mentality.

Ironically, Rheingold has proved an inspiration to the business world. Finding the habits of consumers harder to relate to, business has, in its enthusiasm for relationship marketing, tried to establish new points of contact with its audience. That is why so many businesses have established Web sites for themselves in the past couple of years.

9. Howard Rheingold, *The Virtual Community: Finding Connection in a Computerized World* (Boston: Addison-Wesley, 1993).

The snag is that, for many firms, building a Web site soon elicits the perplexed question: Why did we ever spend all that time and money doing that, given the returns it is bringing us? While post-modern sociologists celebrate the Web as a global means of managing ethnic and cultural diversity, the benefits for business of soliciting inquiries through the Net are by no means so obvious. No doubt the Net is here to stay, but growth is for the moment much stronger in the mundane, inside-business world of the Intranet. It is expensive to maintain a Web site. It is difficult to *sustain* a new product or technology platform in the market. More and more manufacturers would rather experiment with small market doses of an innovation, to test reaction, than commit in a big way. The upshot is that a camcorder, for example, can be regarded as an essential family purchase one year, only to be excoriated as a wedding-day-only accessory the next.

For manufacturers, the ambiguities surrounding the digital consumer have implications that are far from academic. Consumers are likely to *postpone product purchase* until perceptions of job security improve, product prices decline, product sophistication increases, technological standards are clarified, and a stable legion of hardware or software owners is recruited. Rightly or wrongly, consumers feel somewhat destabilized by the new media. Difficulties that surround designing the digital experience are not, therefore, just methodological; they are real.

### The Illusion of Consumer Sovereignty

It is worth running through all the *divergent* avenues opening up in front of the consumer to appreciate how limited, in fact, consumer sovereignty (consumer "pull") is. For the relatively uninitiated—for the majority, let us not forget—digital media might even turn out to be a new form of domination more than a tool for liberation.

That domination could take many forms. The aspect that is subject to the most attention—the influence on-screen imagery has on young or impressionable individuals—is probably overdone. Much more disturbing are economic domination and, worse still, intellectual enslavement:

- The more consumers spend on digital hardware and on network services, the more these items come to represent regular debits. On top of the mortgage payments and the telephone bills come charges for on-line use, software and hardware upgrades, maintenance and repair, etc.
- While many react against suppliers tracking them electronically, still more welcome the state with alarming speed when, under the guise of consumer protection, it offers to defend their privacy. They also accept, more often than not, the jurisdiction of the state in regulating when and how what kind of digital images are viewed.
- Above all, consumers can come to accept that mastering the *everyday minutiae of digital life in the home* is what *freedom* is all about.

In fact the human subject cannot, and should not be reduced to someone, or even a community of individuals, for whom freedom is another lengthy search or chat on the Net. This is to diminish the nature of freedom and to substitute immediate considerations of lifestyle, or of culture, for wider social goals.

The digital consumer is not a victim. Consumers, we have argued, change the meaning of the products with which they are supplied. But to posit the consumer as a real king, beside a Bill Gates or a Rupert Murdoch—such a flagrant breach of common sense can only testify to the way in which individuation has become the alpha and omega of social theory nowadays.

The battle for the living room is important. But if the design of the digital experience finds its targets there troublesome and hard to understand, new, more careful thinking is required. Certainly the search for genuine empowerment among existing and future "mouse potatoes" is likely to prove fruitless. ♦  
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