

Consumption as Work, Play, and Art: Representation of the Consumer in Future Scenarios

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1. Introduction

We create the future by speaking, visualizing, and imagining about it. Representations describing the future of the consumer society have a tendency to shape the world in their own likeness. For instance, the creation of the image of a modern consumer has been essential for the success of the television and car.¹ Product developers draft the products of the future for imaginary consumers. Real consumers encounter these products on the market and transform their own lives accordingly, in the direction pointed by the products. It may be, paradoxically, that the imaginary consumer segments of marketing, in fact, produce real consumer segments.²

This kind of circular influence places any future oriented research—especially futures research—in a special position in the realm of science: real phenomena and real creatures are preceded by their representations. With this idea in mind—I refer to it as the **principle of constructive future studies**—I aim to examine some of the pictures or representations that have been made of the future consumer and the information society in particular.

It is not by chance that companies such as Intel, Philips, L.M. Ericsson, Nokia, and Siemens, for example, are actively involved in the debate about our future: “So to stay in rhythm, Intel must create ‘new uses and new users’—which is, in fact, the company’s slogan for keeping the market in sync with its own pace.”³ Correspondingly, in a film on design futures, Philips people say: “We know there is no need for any of this (i.e., new products). Our job is now to create the need, so that we have the reason to make the products—and sell them.”⁴

A key feature of futurological discourse is its power to influence and to convince. Great myths always have been a means of ruling the masses: earthly sacrifices and struggles would be rewarded in the Kingdom of Heaven.⁵ The rhetoric of economists about “increasingly keen competition, the necessity of adjusting to new technology, and the inevitability of unpleasant economic decisions” serves to promote the same great myth: that the individual must step aside when the interest of the system so requires. Similarly, the talk about megatrends implies a predestined and

1 Mika Pantzar, “Kuinka teknologia kesytetään,” *Kulutuksen tieteestä kulutuksen taiteeseen* (Domestication of Technology, From Science of Consumption to Art of Consumption), (Helsinki: Tammi, 1998).

2 Peter Miller and Nikolas Rose, “Mobilizing the Consumer: Assembling the Subject of Consumption,” *Theory, Culture & Society* 14:1 (1997): 1–36.

3 Kathleen Eisenhard and Shona Brown, “Time Pacing: Competing in Markets That Won’t Stand Still,” *Harvard Business Review* (March–April, 1998): 59–69.

4 Peter Butenschon, “Design, Youth, Consumption,” *ICSID Information* (3/98).

5 Lyuben Nickolov, “Everyday Values vs. Oversocialization,” *International Sociology* 6:3 (1991): 375–9.

given future.⁶ Business futurologists have acquired a major role in constructing and replicating these disciplinary myths of “inevitability’s.” The future is a driftwood to which we will all have adjust.

The purpose of this article is to review—perhaps with some exaggeration and normative tone—the different types of consumers upon which the information society and new everyday technology is being constructed, as well as the “new human types” which thus are being bred. My data include a number of technological and social scenarios that have been published in recent years.⁷ The approach is based on the hypotheses about changing consumer motives and consumer types discussed more thoroughly in *The Domestication of Technology*.⁸

2. The Future Consumer Is a Player, a Worker, and an Artist

The changing relationship of the consumer to a new commodity can be seen as a three-stage process. In the earliest stage of a novelty product, the consumer’s relationship often is such that the product itself is understood as being a “message” in itself (1. *Stage of self-purposeful consumption*). The most important thing about the first automobiles and radios was the excitement of experiencing the product. I refer to this stage metaphorically as “*consumption as play*.”

Gradually, however, consumers will begin to raise their expectations of the novelty commodity (e.g., reliable operation of a motor or the quality of an image), and the relationship with the product then becomes more rational. The new commodity also will begin to make claims on its environment (e.g., radio and TV as coordinators of people’s daily schedules). (2. *Stage of instrumental consumption*). Metaphorically, this stage can be termed “*consumption as work*.”

Finally, the relationship to the commodity becomes increasingly critical. Consumers may begin to question the lifestyle which is based on the product, and start to analyze their own commodity-dependency (*Stage of critical consumption*). I call this stage “*the art of consumption*.” Is not the main role of art to create perspectives that are radically new, and to question and criticize the existing state of affairs? We might equally well talk about the stage of reflective or self-critical consumption.

The division into periods can be seen most clearly in the history of media technology. Along with the spread of film, record player, radio, and TV, the underlying motives guiding the choice of media products have been essentially transformed within the past one-hundred years: toys (“moving pictures and living sound”) have evolved into instruments for recording reality (“documents”) and, finally, also into means of shaping realities and questioning them (“editing”). This is a much simplified summary of the history of media technology.⁹

6 Richard Slaughter, “Looking for the Real ‘Megatrends,’” *Futures* Oct. (1993): 827–49.

7 See David Brown, “Cybertrends,” *Chaos Power and Accountability in the Information Age* (London: Viking, 1997); Michael Dertouzos, *What Will Be? How the New World of Information Will Change Our Lives?* (New York: Harper Edge, 1997); Faith Popcorn, *The Popcorn Report. Faith Popcorn on the Future of Your Company, Your World, Your Life* (New York: Doubleday, Currency Book, 1991); Shirley Roberts, *Harness the Future: The 9 Keys to Emerging Consumer Behaviour* (Toronto: John Wiley & Sons Canada Ltd., 1998); Kevin Warwick, *March of the Machine: Why the New Race of Robots Will Rule the World* (London: Century Books, 1997).

8 Mika Pantzar, “Domestication of Everyday Life Technology: Dynamic Views on the Social Histories of Artifacts,” *Design Issues* 13:3 (Autumn 1997): 52–65.

9 Paul Levinson, *The Soft Edge: A Natural History and Future of the Information Revolution* (New York: Routledge, 1997).

In the “pre-realistic” early period, the audience was content merely with the experience of moving pictures. The media was the message. Gradually, however, audiences began to demand content, accuracy, and truthfulness; in other words: realism. In the latest stage, film also has developed into an instrument for “editing” and rearranging reality. Art films question the existing realities and create something new. In the future, the editing of digital virtual realities is likely to alter our relationship with the real world to an even greater degree, as I will argue later.

At the level of the information society as a whole, the next stage—the stage of art—still lies ahead of us. Enlightened critique of the consumer society calls for a better understanding of the role of culture and content. We also need a deeper understanding of our own commodity-dependency and the ways minor daily decisions influence global geophysical conditions. The critical question facing our contemporary society is: Which will come first—an active, critical awareness of the problems related to consumerism or a more radical backlash in the face of more extreme imperatives?

Table 1 is a summary of the characterizations of change presented in my book.¹⁰ These generalizations, which were based on historical observations, hopefully will serve as a stimulus for further assessment. The domestication of technology can be seen on many different levels in consumption. The motives for product choice, the function of the product, the socio-cultural atmosphere, the production technology, and the applications of the product all are transformed in the course of a product life-cycle.

Table 1: Changes of functions and choice motives in a product life-cycle

	Stage 1: Self-purposeful consumption (Consumption as play)	Stage 2: Consumption for instrumental value (Consumption as work)	Stage 3: Critical, creative consumption (Consumption as art)
Collective conception of the product's function	Toy, luxury, “wonder of science”	Tool, necessity, “serious” commodity	Critique of the material- intensive lifestyle
Production method and phase	Creative induction phase	Standardization	Reappraisal of the product's function
Function	Collective, shared experience of use, finding the function	Personal use, routines	Deroutinization, from necessity to luxury
Motive	Sensation, pleasure, status	Satisfaction of needs, routine	Stylization, collecting, self-expression

Can the information society and digital technology be understood on the basis of this kind of categorization? The above table can be interpreted in three different ways. The perspective in my book was primarily that of the rooting and stabilizing of an individual commodity: from toys toward useful objects. An alternative per-

10 Pantzar, “Domestication of Everyday Life Technology.”

spective would be to picture consumption as play, consumption as work, and consumption as art as roughly representing the transformation of the Western mass consumption society over time.

The various technological products of the late nineteenth century, such as the motion pictures, bicycle, or automobile, were characterized by a sense of play and curiosity. In the first decades of the twentieth century, the doctrine of industrial rationalization spread not only to business enterprises but also to households. The relationship to commodities became more disciplined, with an increasing emphasis on rationality. Particularly in the 1930s, the rational managerial controllability of consumption became a well-valued virtue both at the household level and at the level of the national economy as a whole (e.g., the New Deal and subsequently Keynesianism). At the same time, things such as household work, market studies, advertising, and design were drawn into the sphere of "modern science." And consumption became part of a housewife's work.

The next stage is still only emerging. The themes of increasing aestheticism in postmodern society and everyday life reflect the coming of a new age. Consumption is becoming more of an art than mere work. Simultaneously, work in many organizations is beginning to resemble play rather than strictly disciplined sacrifice.¹¹ Youth culture, in particular, mixes and combines different styles without restraint. Marketing professionals face a tricky problem with the uncontrollable "generation X." Young people have their own specific way of interpreting street fashion and market messages. A combination of expensive designer clothing and flea-market gear speaks its own language. This phenomenon has to do with the trend of development on a more general level. Possibly, centralized control and governability is relinquishing its position to a theme which focuses on contingency, empowerment, uncertainty, and uncontrollability: examples of this likewise are seen in fashion, economy, and people's everyday lives. I will return to this theme at the end of this paper.

A third way of interpreting the above table is to suggest that representatives of the different orientations (players, workers, and artists) are present simultaneously at all points in time. The main aim of this paper is to ponder this question: What will the new consumer types of the information society be like? What subgroups might consumption as work, for instance, fall into? It is not only a question of whether consumers can be divided into different segments by their relationship to technology, but also about new "versions of human beings" emerging as a result of the newest digital technology. Still, most of the technologically-oriented scenarios of the future tend to be quite secretive about the new type of human being. Why?

11 Paul du Gay, *Consumption and Identity at Work* (London: Sage, 1996).

3. John Doe, Versions 1.0–3.3

The American Dream—Without a Car and TV?

Where is America heading now that the rising generation no longer believes in the car and the TV? This concern was voiced by American futurologists at the meeting of the World Futures Society in the summer of 1997. The car and the TV have shaped what we understand by the term “an American.” Is there another kind of human being now emerging to succeed the type produced by the automobile and television? And what might the key commodities in such a transition be nowadays?

In his most recent book, Douglas Rushkoff, the media researcher hailed as Marshall McLuhan’s successor, wonders why technology visions fail to openly discuss the notion that new technology changes the human being.¹² This is a good question. Are we dealing with a taboo: technology must not change us, so let us avoid even mentioning the possibility? Or is this a question of an empirical observation: technology does not change the human being fundamentally. I tend to believe the former argument.

Possibly, it is political correctness that does not allow us to see the nature of technology as changing (wo)man and her/his personality.¹³ The impact of technology is discussed only in the language of structural changes: How will our life change along with new technology? But not: How will we, ourselves, change with new technology? It is permissible with utilitarian tone to refer to “objective benefits,” but experiences, deep emotions, and addictions are excluded from this type of discussion.

An interesting reference could be made to the early days of modernism. The notion that technical innovations should alter the form of life lay deep in the political ideology of modernism. The architecture of modernity of the 1920s and the 1930s demanded far-reaching rationality. The crudest manifestation of this ethos can be found in the Soviet Union, where creating a new citizen was, at one time, openly on the agenda.¹⁴

I would argue that, just like it is said that capitalism “produced” the worker, cities encouraged the development of an urban “mentality of indifference,” and like big business created “the organization man,” so perhaps is our digital era now generating new types of personalities.

Without further justification I choose to abandon the idea—which I consider somewhat naive and too simplistic—of new information technology as the germ of the wise human being, a true *Homo Sapiens*. Moreover, I am not talking about a real or a widely spread new human type. The majority of the world’s population still live beyond the reach of the information society.¹⁵ The material on which I base my arguments primarily consists of the mental pictures and narratives encircling the technology debate, and only secondarily of empirical observations of a new type of human being.

12 Douglas Rushkoff, *Playing the Future: How Kids Culture Can Teach Us to Thrive in an Age of Chaos* (New York: Harper Collins, 1996), 93.

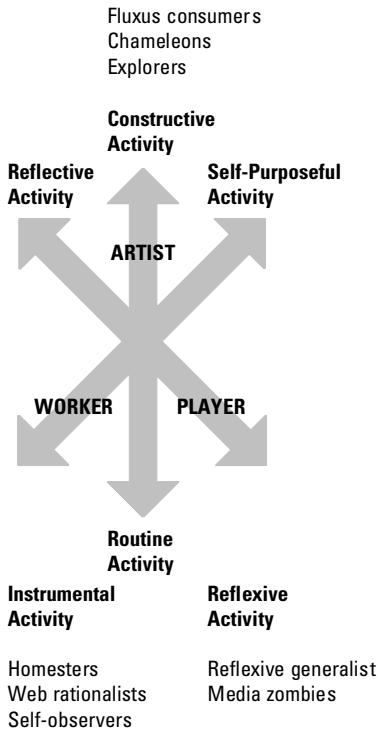
13 Langdon Winner, “Who Will Be in Cyberspace” *The Information Society* 12 (1996): 63–72.

14 Peter Gallison, “Aufbau/Bauhaus: Logical Positivism and Architectural Modernism” *Critical Inquiry* 16 (Summer 1990): 709–2.

15 What we choose as a measure of the information society naturally has a decisive effect on our picture of development. Most of the people in the world, e.g., do not have a telephone at their disposal.

Figure 1

Consumer Versions in the Information Society



The following classification follows the tripartite division into play-work-art described in the previous section. I have finetuned this division with subtle distinctions. The new human types are set into “types of activity”—space in figure 1. As the dimensions, I have selected the following controversial but analytically useful pairs of opposites: instrumental vs. self-purposeful activity; reflective vs. reflexive activity; and constructive vs. routine activity. These categories are obviously problematic in many respects.¹⁶ It would be equally important to ponder how human culture—e.g., values and ideologies—and structures—e.g., the world of commodities—change along with the digital media. Social change has to do with the transition of activities, culture, and structures, and the categories are by, no means, distinct.

It is possible to identify, from current future visions, eight consumer types in the “information society”:

1 Consumption as an instrumental activity: houseworkers

- a Web rationalists
- b Homesters in their smart homes
- c Self-observers

2 Consumption for its own sake: self-purposeful play

- d Players (reflexive generalists)
- e Media zombies (addicts conditioned by interactively intelligent products)

3 Consumption as an art of reflection

- f Explorers
- g Chameleons constructing a social identity
- h Fluxus consumers

4. Rational Workers in the Home

What kind of people are those whose activity is instrumental, often routine-like, but still very conscious? The newest information technology reinforces the traditional picture of the “rational consumer.” We might say that *Homo oeconomicus* is inscribed in the manual of the information society. It is no coincidence that the term “user” is underlined in information technology rhetoric. The users of older media, such as TV, are “consumers” and passive recipients. In new technology, however, users are actors and active creators of content.¹⁷ In the future, we will no longer watch TV. We will use it. We will not enjoy or consume something, but use it. Let us look at three subcategories which represent special cases of the rational user.

Version 1.1: The Web Rationalist

It has been predicted that electronic shopping will be the biggest winner in home networking. Judging by the precursors of teleshopping (e.g., Amazon.com, CdNow.com, Peapod.com), the only

16 The juxtapositions are not genuine—if x, then not y. It is a question of a fuzzier logic: probably, if x, then not y. Instead of the pair “reflective-reflexive,” it might be better to use “conscious-unconscious.” Both concepts refer to a reflection. Reflective activity originates from the brain and from thought, whereas reflexive activity is more of an automatic reaction; a question of reflexes. Instead of “self-purposeful,” it might be more appropriate to use the term “autotelic” activity.

17 Melinda McAdams, “Information Design and the New Media,” *Interactions* (October, 1995): 39–46.

conclusion to make is that the formerly very unrealistic ideal of *Homo oeconomicus*, cherished by economics, finally is being realized in network shopping. Or is this really the case? Electronic shopping makes it easy for us to make price comparisons, and the different alternatives are offered in a very concrete form with unit sizes and prices. We are able to read the book reviews in an electronic bookshop before deciding what to buy. We get an itemized bill from each purchase indicating, for example, the price of shipping and handling.

The food shop of the future, apart from monitoring the purchasing budget, will also keep a record of the number of calories purchased and consumed. A bank will automatically record the payments made with digital money into an account book. Expenses and income can be followed without difficulty. Moreover, since the time savings are considerable, network purchasing responds to a social call and offers an important opportunity to the consumer who wishes to optimize his or her leisure time, effort, and budget. This is what numerous visions of electronic shopping lead us to understand. In any case, a shopping revolution has been waiting just around the corner for a number of years.

Version 1.2: The Homester in His/Her Smart Home

The Utopia of the “homester” appears to be typical of the American visions of the “intelligent” and safe home.¹⁸ It represents the tiny mouse in its hole, safe from the cat and the dangers of the surrounding world. The homester is a teleworker and a teleshopper. His/her children are telelearners, utilizing the most advanced technology. The safety of the home is guaranteed by a complex alarm system. The intelligent system allows access to only one exit and moving about only in daylight. Public space is visited only by abnormal actors to whom home is not paradise: predators and weak individuals—the homeless—in a broad sense.

My personal—no doubt a normative—stand on the smart home is that, so far the visions of the smart home have borne more resemblance to the MIR space station than to a genuinely intelligent home. An intelligent home requires adaptation and adjustment from its residents. What is essential is that all technical functions are integrated. The remote controller enables the residents to manage the energy consumption and air-conditioning in the building, as well as the influx of information and entertainment. Smart cards, entrance surveillance systems, and television cameras create a feeling of security. But security vanishes into thin air if the home’s central processing unit collapses. What will we do then, ask for leave of absence from the home, which was what the head of the MIR space station did when the gyroscope system failed?

Does the vision of the intelligent home represent the early twentieth century ideal of centrally controlled technological systems, which no longer works in postmodern world ambivalent

18 Dertouzos, *What Will Be?* and Popcorn, *The Popcorn Report*. In Finland, the task of developing intelligent buildings in the 1980s was assumed by three companies which have since fallen into economic crisis. These projects were designed on American models, although the Finnish reports on the subject indicate a somewhat critical view of the naïve American model.

values? Are we basing the technology of the twenty-first century on the Tayloristic values of the early 1900s, when the ultimate goal was to minimize the diversity of human life?¹⁹ The terms used for the intelligent building are quite descriptive: “total house, automatic house, global house, smart house, and the intelligent house.”²⁰ But what will we call it when there are serious technical problems, or even total disorder?

The “home of the future” has been impending for almost a hundred years now. In the 1920s, it consisted of a living space full of electronic gadgets. In the 1930s, it was a mass-produced, turnkey home. In the 1940s the future home was seen as a dream-come-true, built around the kitchen. In the 1950s, it was a plastic module dwelling. The home of the future in the 1960s was a geometric structure; and, in the 1970s, an energy-conservation unit. The ideal of the intelligent home represents the 1980s.²¹ All of these technocratic forecasts, however, have failed. In the magazines, the home of the future has turned into a joke and an object of ridicule.²² A home of the Jetsons?

Paradoxically, many of the applications of intelligent buildings have focused on trivialities and not on “real-world” problems. Two experiments from America include a vacuum cleaner which switches off when the phone rings, and a robot, “robotler,” which serves refreshments but needs the help of a human to pour the drinks into the glasses.²³

Where are the inventions that would genuinely ease our everyday life? Might we expect that the smart system could be switched off if we so wished? My own experiences with an “intelligent” computer program and an “intelligent” garage are rather depressing. The computer automatically keeps removing the letter “z” from my last name, and insists on numbering my paragraphs. The garage decided to lock my car out for the Christmas holidays. Surely, intelligent machines should not mean that the contents of the human brain are emptied into the machine?

Will the interaction between a “learning machine” and a learning human being lead to similar “systemic risks,” as in the stock exchanges when the machines began to communicate with each other? Interconnected computers and their extremely short reaction times caused dramatic market fluctuations in the late 1980s. Might wisdom ultimately be about learning to understand the human-machine relationship? Or to live one day without electricity?

Version 1.3: The Self-observer

The consumers of the future will be more aware than ever before of the fluctuations of their own health. The Battalle Institute, which specializes in the commercialization of technology and in technology forecasts, considers the introduction of the self-monitor in the home as one of the major innovations of the future.²⁴ It is hardly

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- 19 Donald A. Norman, *The Invisible Computer* (Cambridge, MA: MIT Press, 1998), 167. He points out that the idea of technology conforming to the people actually is of very recent origin: “This is the reason for the paradox that today’s technology is largely built from a machine-centered point of view, even though it is designed and built by humans.” Still, ordinary people perceive technology as full of contradictions: freedom/enslavement, competence/incompetence, and control/chaos. For these paradoxes, see David Glen Mick and Susan Fournieur, “Paradoxes of Technology: Consumer Cognizance, Emotions, and Coping Strategies,” *Journal of Consumer Research* 25 (1998): 123–3.
- 20 Santiago Lorente, “The Global House” in *New User Telecommunication Opportunity in Automation and Information*. Paper submitted to the COST248 Home Group, Electronic House Online 1996.
- 21 Anne-Jorung Berg, *Digital Feminism* (A Gendered Socio-Technical Construction: The Smart House). (Senter for teknologi og samfunn. Norges teknisk-naturvitenskaplige universitet, Rapport nr. 28, 1996).
- 22 Brian Horrigan, “The Home of Tomorrow, 1927–1945” in Joseph Corn, ed., *Imagining Tomorrow* (Cambridge, MA: MIT Press, 1986).
- 23 Berg, *Digital Feminism*.
- 24 The complete Top 10 list of the commodities of the future can be found in Stephen Millett and William Kopp, “The Top 10 Innovative Products for 2006: A Technology With a Human Touch,” *The Futurist* (July–August 1996): 16–20.

accidental that the Institute is currently commercializing various inventions related to this issue. This is social constructing of reality at its best!

The self-monitoring device makes it possible for us to check our blood pressure, pulse, blood sugar, etc. If necessary, the machine also can serve as a home kidney unit, insulin syringe, etc. In the morning, we will ask the machine to tell us whether or not we are fit for work. The machine replaces the family doctor, dietitian, and personal fitness coach. If we are in danger of putting on weight, the machine will give us dieting instructions, and advise us to go jogging.

With plans of putting a ceiling on public health expenditure, the increasing privatization of health care services probably will take us back a hundred years. Only the most affluent people will be in a position to enjoy high-quality health care and prophylactic treatment—at home. Hospitals will be for the poor. The growth of an active population of old people will further encourage this development. The “help desks” of the future no longer will deal only with computer problems, but with human problems as well. A cardiac monitor or an intelligent WC, which performs analyses, will send our data directly to the nearest health care center. In case of alarming results, the message will be passed to the doctor in charge at the interactive call center, who will then contact the patient.

A human being who monitors himself or herself, and is connected to a machine, can be called a cyborg of the first or second degree. A first-degree cyborg is one with mainly cosmetic transplants: silicon breasts and silicon lips. A cyborg of the second degree has had part of the vital functions replaced with mechanical and more efficient devices: an artificial heart or a home kidney machine. The artificial parts can be exchanged for newer versions as needed. The vital functions of athletes, for example, can be considerably improved from the current level. Cyborgs of the third degree are continuously connected to machines, so that signals from the brain pass directly to the machines. Fourth-degree cyborgs have dissociated themselves from physical space: the consciousness of these bodiless actors floats around in cyberspace.²⁵ We will select the most suitable body for ourselves in Alphaworld, and perhaps even change our sex. We will visit each other’s avatar bodies. Could this be the ultimate freedom from exploitation by our bodies? Such a stage also might be termed consumption as play and art.

5. Consumption as Play

The idea of consumption as play (of current technology visions) is based on the notion that consumption primarily is an activity done for its own sake: the process itself always is more important than the outcome. A positive perspective to these “players” would emphasize the development of a new type of competence (reflexive gener-

25 Mike Featherstone and Roger Burrows, *Cyberspace/Cyberbodies/Cyberpunk—Cultures of Technological Embodiment*, (London: Sage Publications, Theory&Culture&Society, 1995); and Chris Hables Gray, *The Cyborg Handbook* (New York: Routledge, 1995).

alists), whereas a critical appraisal would stress the conditioning aspect of the activity (media zombies).

Version 2.1: The Reflexive Generalist

How does computer-based modeling of society affect our conception of the world and of human activity? What happens when we move increasingly from static to dynamic representations? What kind of adults will computer games generate?

Today's young people often are accused of superficiality. They seem to lack the energy to read an entire book or to concentrate on watching just one television channel. What I see in channel surfing, computer games, and network playing is not superficiality but a new type of competence of simultaneous action: insight and a capacity to react, a skill to combine various functions. Surfing across TV channels may indicate a more "genuine" state of desire than passive reception. Besides suggesting a kind of short-sightedness, the active use of the remote controller also implies a broad range of interests, and a state of mental activity and agility: not just anything goes. One may, of course, ponder why the remote controller lies more in the hands of the father and the children than the mother. Or who would remote control the intelligent home?

Youngsters who are active players of video games often have been found to be more creative solvers of problems and more skillful in conceiving visual information than more average youth.²⁶ They have a better abstractive ability than those who use the computer less: "Communication with a computer, therefore, affords the child opportunities that foster the development of representational ability which forms the basis for mental time travel, and mature social thinking about self and others."²⁷

To deal with the surge of information and stimuli which overflows our comprehension, we need a new kind of competence. The reflexive generalist sees life as composed of playing fields where you have to act rapidly, anticipating, simulating and guessing. Action often precedes conscious deliberation (shoot first and aim later). There is more intuition and reflexes, and less consideration and reflection. Nor should we overlook the pedagogical power of the method of trial and error which is such an essential element in computer games.

In the old days, an atlas of the world in elementary school gave a spatial, static picture of the world. We had to learn by heart the rivers in different Finnish provinces, and the names of the world's mountain ranges. Today's school children perhaps perceive the "world atlas" as time-space dimensions of dynamic maps, as possible worlds, and as interactive hypercycles of choices and consequences, where cause and effect no longer are distinguishable from each other.

Do we still need the metanarratives of religions to ensure long-range activity and self-discipline? Is there a multidimensional,

26 Rushkoff, *Playing the Future*, 50, 182.

27 Claire Fletcher-Flinn and Thomas Suddendorf, "Do Computers Affect The Mind?" *Journal of Educational Computing Research* 15: 2 (1996): 97–112. These kinds of positive assessments raise an important question: Why is it that empirical research often stresses the blessings of human-computer interaction, whereas the more philosophical and less empirically oriented literature seems to be quite critical in this respect? Are we dealing with the truthfulness of empirical research—or maybe with the arbitrariness of questions being posed too narrowly?

more dynamic morality emerging beside the Biblical, taxonomic idea of good and evil?²⁸ Actors in society might develop new forms of self-perception and self-control through simulation and modeling capability to replace regulation from the outside.

However, life is not a game. Many of the irreversible processes of modern society are unfortunately controlled with economic and social models that are based on the principle of reversibility and control. After all, life is not SimLife, where "All life is an experiment."²⁹

Version 2.2: Media Zombie

If the reflexive generalist is a utopia of new kind of competence, then the media zombie is a dystopia of a human being chained to an entertainment machine: computer-dependency and the end of rational life. The computer society and the hundreds of digital TV channels would offer unprecedented opportunities for the passive reception of stimuli.

The increasing interactiveness of smart machines is one of the core changes in future technology. The pessimistic view is that machines which are capable of learning in interaction will lead to completely new kinds of human-machine dependencies. Although we speak euphemistically of "machines that learn and are customized to the user's preferences," possibly, we are dealing with a completely new level of dependency. Take, for example, a personal robot connected to digital TV, which searches the channels for the viewer's favorite programs based on preferences revealed by previous watching choices. At the same time, the program robot of the media operator continuously monitors the changing of TV channels in households. The program robot learns "from experience" at what dramaturgical points people stop watching a program. Finally, the robot learns to select the programs from the producers' list that will attract a maximum audience. The program-compiling robot in the media production unit then receives this information and begins to prepare combinations of different series of programs offering maximal satisfaction—as well as maximum dependency—to the viewer.

The picture of the media zombie fits in well with the long tradition of consumption critique. The elite are worried about the behavior of the masses. It is not hard to predict that the future flood of visual messages will provoke the rage of the literati as a form of "low-brow" culture at the stage when the multimedia and virtual stations become reality also apart from advertisers' slogans. How will we react, for instance, to digital TV or third-generation mobile media phones in the first years of the twenty-first century? Will people be infected by them? Doctors already warned about the LSD-like harmful effects of virtual reality in the 1980s, before the first virtual helmet had even been manufactured.³⁰ Who will be the first to voice concern over the effects of digital and interactive TV on our genes, or on the quality of human sperm?

28 The Bible is, in fact, a most representative document of postmodern times. It is a hypertext in which the same events are described from several different perspectives. Its moral and unequivocal binding power probably is based, on the one hand, on certain universally approved chapters such as the Sermon on the Mount. On the other hand, people who have interpreted the Bible have tended to petrify their own interpretations into universal, binding norms.

29 For the problems of maps and illusion of modernistic control, see Donna Haraway, "Deanimations: Maps and Portraits of Life Itself" in C. Jones, P. Galison, and A. Staton, eds., *Picturing Science, Producing Art* (New York: Routledge, 1998).

30 Chris Chesner, "Colonizing Virtual Reality: Construction of the Discourse of Virtual Reality, 1984–1992 (CULTRONIX, 1997).

Rational utilization may turn out to be the winner of information technology, because it is so easy to talk about it in line with our cultural norms: technology is a servant. Consumers are the employers, the users of instruments, and the workers in consumption. There is, however, a contrasting view: consumers as artists.

6. Consumption as Art

What characterizes those people in the information society for whom consumption activity, in itself, is valuable and highly conscious, and for whom the creation of something new is more important than routines. I refer to this group as "artists." They have the ability and the desire to question their own relationship with consumption and with technology. There are at least three types of artists: the explorers, the Web chameleons, and the fluxus aestheticizers of the everyday.

Version 3.0: The Explorer

The first news in Finland about the Internet in the early 1990s described the revolutionary opportunity to surf on global information superhighways. Words such as navigating, browsing, and exploring were part of Web language. The journeys of exploration, the conquest of the West, and immigration to another country are apt metaphors for illustrating this attitude: the notion of capturing something new and facing the unknown.

Explorers discovered new continents, and often lost their way and misnamed those continents. They had the soul of a searcher and traveler, and a genuine uncertainty and risk in approaching the ends of the earth were part of their everyday life. Nor should one overlook the opportunity for economic gains and the symbolic elements of conquest. It is hardly a coincidence that the language used in speaking about virtual realities in the United States specifically is the language of the white man: using phrases including conquering the unknown frontiers of the Wild West, and words such as pioneers, junctions, watering holes, colonialization, resettlement, and reservations.³¹

When we surf in the Web, we are charting unknown territory. Curiosity and a chance to experience something new are an important motivation. One of the fascinating features of hypertexts such as those on the WWW is that they are open systems in which the true and untrue coexist. For information society thinking, which stresses unequivocal wisdom, this poses a problem: anyone at all can produce information, for instance, about the creation of mankind. Anyone at all can devise a scientific map of the missing link between man and ape. But maps open up to each individual in a different way. This offers a special challenge to the traditional universal concept of knowledge and to the advocates of taxonomic

31 Brown, "Cybertrends."

systems of knowledge. Maybe, along with the new media, the word “research” is regaining its original meaning: “to travel through” and “to survey.” And to re-search: “to explore again.”

Version 3.1: The Chameleon, Building a Social Identity

The germ of the future type of human being lies in youth culture, claims Douglas Rushkoff:³² in techno-music, rave, chat forums, cartoons, simulation games, Power Rangers, etc. For young people, everything is possible—at least in the imagination. What older people see in all this is either the moral decadence of a fragmented culture, or a shift into a global monoculture. Young people do not believe in the simplistic dichotomies of either/or. Accordingly, young Web citizens are constructing a completely new kind of collective identity. By engaging in games, by playing, dreaming, and changing their sex and their age, they are building, besides their own identity, a social identity and mutual understanding as well.³³ The various chat channels and joint Web sites for several users (e.g., Alphaworld) are a clear reflection of this type of future trend.

Paradoxically, the most important condition for new kinds of Web identities to emerge is the fact that the possibility for identifying the participants is nonexistent. It's identity without identification—like chameleons. As virtual characters (avatars) constructed in the Web, according to researchers of cybersex, we are at last able to discuss our most intimate fantasies freely and openly.³⁴ The stories about respectable American housewives who build up sado-masochistic identities in the Web make one stop and wonder.

The wildest visions picture “sexbots” or sex robots that offer satisfaction many times superior to that offered by real people. The overwhelming predominance of sex in the content of Internet offerings is surely an implication of intrinsic pressures and of the direction in which the new human identity is evolving. More stimulation and more simulation. On the other hand, a corresponding phenomenon took place in the early stages of the video. The first to arrive were the sex videos, and only afterwards the other uses of the video.³⁵

One might imagine that the idea in the different chat channels and Web conversations is that we have the tools to raise, out of our own free will, our individual level of consciousness towards a more collective understanding and sense of responsibility. This process has no need for rulers or external influences, which often have been instrumental in the birth of collectives in the course of the history of mankind. “Worker ants” are becoming conscious both of themselves and of their role in building the anthill. Collective action is no longer based on violence and force, but on people's own will and collective self-understanding. Many of those who believe in the information society probably base their views on precisely this type of Gaia vision of the growth of consciousness.³⁶ By means of communication made possible by information technology, we are

32 Rushkoff, *Playing the Future*.

33 Sherry Turkle, *Life on the Screen. Identity in the Age of the Internet*. (London: Weidenfeld & Nicolson, 1996).

34 Michael Adamse and Sheree Motta, *Online Friendship, Chat-Room Romance and Cybersex* (Deerfield Beach, FL: Health Communications, 1996).

35 Ruby Dholakia, Norbert Mundorf, and Nikhilesh Dholakia, *New Infotainment Technologies in the Home. Demand-Side Perspectives* (Mahwah, New Jersey: LEA Publishers, 1996).

36 James Lovelock, *Gaia, The Practical Science of Planetary Medicine* (London: Gaia Books, 1991); and Rushkoff, *Playing the Future*.

better able to understand our collective self. This phenomenon can be compared to a stadium audience creating waves by standing up in turns—and thereby also creating a conscious sense of collectiveness.

The newest technology and its multiple perspectives enable us to begin to understand more thoroughly than before our interactive dependence on other human beings and on nature. An even more radical idea is to see the newest technology as a way of releasing us, and making us free to return to our own “biological nature.”

Version 3.2: The Fluxus Consumer

The creative way of finding our place in a complex world is, for most of us, not done by being artists, writing texts, making music, but by selecting and buying ready-made symbols offered to us in the marketplace. We activate our creativity by living through things.³⁷

Technology does not necessarily change us or bind us. There is an alternative possibility. High technology may liberate our biological, creative selves from the artificial order and self-discipline required by the agrarian and industrial system. Is man’s 10,000-year-long confinement in a prison of cultural rules and regulations barring social interaction finally coming to an end? The book *Social Cage* by Maryanski and Turner, and the comprehensive study of values by Inglehart, would seem to point towards that kind of development, similar to futurologist Rolf Jensen’s argument of the rise of the Dream Society.³⁸ What about Nicholas Negroponte and the ideology of medialabs?

According to Jensen, we are moving into a society of dreams and storytelling. Possibly, new technologies—e.g., interactive games, motion based simulators—encourage whole new genres of experience. Terms such as “experience economy,” “experience society,” and “symbol intensive organizations” have been coined.³⁹ In such a society of narrators, we shall all be artists, creating something new. All of us, and not just the nobility: “Fergie, who doesn’t know how to cook, has conjured up a cookbook for Americans” (newspaper headline January 25, 1998), and “Fergie writing a book on how to bring up children” (newspaper headline June 11, 1998), for example.

The creative fluxus person may well be a dominant form of human existence in the future. The term “fluxus” refers to an art movement which claims that every human being is a creative artist in his or her own everyday life. The fluxus movement wanted to stress the artistic dimension of seemingly meaningless things: church services, children’s play, the circus, fairs, and cooking all are forms of art. Sophisticated art can be thrown in the trash bin, once we begin to view our own everyday with new eyes, as a creative process similar to an artistic production. This was the line of thought of the representatives of the 1960s’ fluxus art movement,

37 Butenschon, “Design, Youth, Consumption.”

38 Ronald Inglehart, *Modernization and Postmodernization. Cultural, Economic, and Political Change in 43 Societies* (Princeton: Princeton University Press, 1997); Rolf Jensen, “The Dream Society,” *Futurist* (May–June, 1996):16–21; and Alexandra Maryanski and Jonathan H. Turner, *The Social Cage: Human Nature and the Evolution of Society* (Stanford: Stanford University Press, 1992).

39 Respectively, Joseph Pine, and James Gilmore, “Welcome to the Experience Economy,” *Harvard Business Review* (July–August, 1998): 97–105; Gerhard Schulze, *The Experience Society* (London: Sage, 1995); and Virpi Leikola and Thomaz Wood, “Symbol-Intensive Organizations: Management in the Age of Metaphor and Rhetoric,” forthcoming in Richard Goodman, ed., *Modern Organizations and Emerging Conundrums: Exploring the Post Industrial Sub-Culture* (San Francisco: New Lexington Press and Jossey-Bass, NA).

headed by George Maciunas.⁴⁰ The fluxus philosophy further contained the important notion that we are entitled to reject the newest technology. One of the goals of technological development is to create subsectors in our lives which are also able to function without technology, and where we can employ our own autonomy. In the face of the newest technology, the fluxus personality will ask: do I prefer to teach my child to play the piano or the stereo equipment?

In Conclusion

The aim of this article is to convey the view that the creation of a consumer and identification of needs—"consumer configuration"⁴¹—is an essential element of the innovation process, and also of the information-intensive society, not merely the final part of the process. The outcome of consumer configuration is a kind of manuscript according to which the consumer is assumed to act when he or she confronts a new commodity. Technology research refers to this manuscript of "correct consumption," prepared, for example, by means of scenarios, as a "script."⁴² It often is the innovative consumer who determines and defines the scripts for new commodities, which then become established.⁴³ In this sense, consumers also participate in the social construction of needs.

The extent to which various kinds of market studies and consumer segmentation into different groups shape reality in their own likeness is another interesting question in itself. Market studies are used as a basis for the production of new commodities, which, in turn, shape the consumers' everyday lives. We are dealing with a complex dynamics of interaction and circulation of ideas that can never be fully grasped by research that limits itself to narrow individual disciplines.

The consumer of the future does not exist in the form of a market waiting for new products to appear. On the contrary, the future consumer is being created by a wide diversity of actors with their own expectations, actions, and products. However, nobody can control the process as a whole, because the potential of new technologies usually does not reveal itself until it is applied in practice.

For one reason or another, the "politics of forecasts" and expectations management often have been treated with an indifferent or palliative attitude.⁴⁴ It is as if futuristic visions were neutral and innocently produced pictures of the future. Just like Moore's Law, which claims that the data processing capacity of computers would double within a period of a year and a half, similarly, our conception of future consumers will shape the world. Therefore, we need critical discussion about these consumers and citizens of the future. It also is important to form an idea of the actors of future society. In what light will we see one another? As characters in a play, as workers, or as artists? We are creating the future by means of language—obviously within a natural and cultural framework.

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- 40 Elizabeth Armstrong and Joan Rothfuss, **LM: A Publication Called. . . GM: FLUXUS, and that's it that was going to be Like a book with a title, that's all** (Minneapolis: Walker Art Center, 1993).
- 41 Steve Woolgar, **Rethinking the Dissemination of Science and Technology** (Cricit Discussion Paper No. 44, May 1994); and Steve Woolgar, "Technologies as Technological Artefacts" in W.H. Dutton, ed., **Information and Communication Technologies, Visions and Realities** (Oxford: Oxford University Press, 1996). There is an abundance of parallel expressions in the English language for the creation of a consumer: user configuration; social construction of the user; and inscription. A general presentation of this perspective can be found in the collection of articles by W.E. Bijker, T. Hughes, and T.J. Pinch, eds., **The Social Construction of Technological Systems. New Directions in the Sociology and History of Technology** (Cambridge, MA: MIT Press, 1987).
- 42 Madeleine Akrich, "The De-Description of Technical Objects" in Wiebe Bijker and John Law, **Shaping Technology/Building Society-Studies in Sociotechnical Change** (Cambridge, MA: MIT Press, 1992); and Madeleine Akrich, "User Representations: Practices, Methods, and Sociology" in Arie Rip, Thomas Misa, and Johan Schot, eds., **Managing Technology in Society: The Approach of Constructive Technology Assessment** (London: Pinter Publishers, 1995).
- 43 Tufan Orel, "Designing Self-Diagnostic, Self-Cure, Self-Enchanting, and Self-Fashioning Devices" in Richard Buchanan and Victor Margolin, **Discovering Design. Explorations in Design Studies** (Chicago: University of Chicago Press, 1995).
- 44 John Guise, "Designing the Future: The Culture of New Trends in Science and Technology" **Research Policy** 28 (1999): 81–98; and Slaughter, "Looking for the Real Megatrends."

Even seemingly neutral language shapes the future—for example, our talk about the utility applications of information technology.⁴⁵

Future-oriented design studies may play an important role in the configuration of the new human being: they may serve as a democratic counterbalance to the modernistic speech which is based on domination and linear thinking, from the designer's desk to the users. Like all future-oriented debate, my own contribution is also quite goal-oriented and biased: I would like to raise the values of play and critique in technological development to an equal level with those of discipline and obedience. Accordingly, the designer's role is to generate commodities and services that are as "open" as possible, and which are well-suited for various uses and users. These include not only tools, but also toys and pieces of art.

Although I ventured some educated guesses above about the new type of human being, let us not forget that there is, indeed, a great deal of stability in human nature and human culture. Stability is based, on the one hand, on our biological traits and, on the other, on profound cultural undercurrents. The persistence of family values, for instance, has come as a surprise to many value researchers. Whatever happens in technology, values such as reciprocity, sympathy, and affection seems to prevail.

45 Päivi Eriksson, Katja Oksanen-Säreälä, and Mika Pantzar, *Just a Tool: Metaphors of Computers in Advertising Texts*. Paper presented to "Samples of the Future," a conference on organization research, Stanford University, Sept. 20, 1998.

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