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Technology for Recreation: A Look at the Famicon and Personal Computer Communication

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1. INTRODUCTION

If we go back to the time when technology was a means to achieve one's ends in areas such as hunting, swimming, the domestication of animals and so on, we can say that the use of technology for recreational pursuits began at a fairly early stage in man's history. As the techniques relating to these kinds of occupations became used for purposes other than production and people derived some form of pleasure from this, we can see the origins of state-of-the-art techniques being used for recreation.

If we then look at how the domestication of animals, initially the dog, began, there is a strong suggestion that at this early point animals were kept purely for "fun." It is at any rate clear that this use of technology for recreational purposes was already in operation in hunting days.

This "technologization of recreation" developed and continued from this point on, but it has only been since we entered the twentieth century that we have been consciously "recreationalising technology." The view of the car as not simply a means of moving at high speed between point A and point B but as a form of mass "recreation" in itself, providing one with such physical thrills as speed and the sensation of having an "extension to one's body," followed after the mass production of the Ford Model T.

With the arrival of the 1990s and the global dismantling of the Cold War structure, the principal thrust of state-of-the-art techniques has ceased being the expansion of military strength. The value of material possessions, meanwhile, has fallen with the heights reached by high-technology-intensive mass production. As a result

1) From the Dutch word *electriteit*, used to denote an electric massage machine introduced to Japanese medical practice from Holland during the Edo period.

one of the main objectives in the development of high-technology has swung towards recreation.

As technological development carried out by industrial society with specific aims in mind has reached a culmination point, a culture has thus arrived which seeks to derive pleasure from "aim-*less*" high technology.

This cultural process is seeing a variety of successfully developed mechatronics systems (systems consisting of electronic and mechanical components) being introduced into a number of recreational fields. These include:

various telephone functions–Dial Q2, for instance

new media such as cable TV and high–definition TV

audiovisual equipment such as *karaoke* and video

large urban electronic displays

a number of high-technology-intensive theme parks

Formula One and other motorsports

diversification in cars, with 4-wheel drive and so on

large-screen installations such as Omnimax and the New Planetarium

the physical games machines found in games centers

amateur wireless and CB radio, including space communication and image communication

the application of high technology to yacht racing, mountaineering and international athletics competitions

synchroenergizer–, biofeedback–, etc, induced states of meditation and relaxation.

Among these I intend on this occasion to focus my report on personal computer related recreation.

2. PERSONAL COMPUTER NETWORKS AND THE FAMILY COMPUTER

My reason for selecting personal computer recreation stems from the computer's position as the piece of machinery which represents and symbolises our information society. The personal computer was made in the latter half of the 1970s with the intention of creating a trend towards the personal possession of computers. In the IBM mainframe era the idea of the man in the street playing on a com-

puter was absolutely unthinkable. What made the latter possible was the personal computer, which began in Altea in the United States in 1975 and which reflects the hard work of the Apple Corporation in particular and the young people who were associated with it.

I intend to deal especially with computer networks. This is because the recreational factors, as with games, are high, while international comparisons can be drawn about the present state of affairs in various geographical areas. From their beginnings in America, through Europe and then in Japan, PC networks spread down to grass-root levels, outside the supervision of the big network companies. Other Asian countries meanwhile have not yet experienced this kind of growth.

I would also like to take a close look at video games, in particular the "Family Computer" branded machine, known as the "Famicon" or, in America and Europe, as "Nintendo"—a small computer designed exclusively for games and meant for personal use, although strictly speaking not a PC. Famicon use has spread throughout the world, from America and Europe to Asia and Australia, with the machines being used not only by children but by adults too. In 1983 Nintendo was a Kyoto playing card manufacturer—in the decade to 1992 since the Famicon was brought out, Nintendo figures show that the Japanese domestic market has absorbed 21 million machines (these figures include both the original Famicon and the 16 Bit Super Famicon brought out in 1990) while there are over 40 million machines in households around the world. In terms of volume of sales, therefore, this represents the largest single digital product ever manufactured, excluding the calculator and the digital watch. According to Nintendo magazines, over 1000 games software titles and over 400,000,5000 cartridges have been sold around the world.

3. SWITCH TO FAMICON MODE

Why, though, are so many people drawn to the world of computers—be it PCs or Nintendo—not for work but for recreation? Are there differences in the way the same system is received, the way it appears and the way it is played from one region to another? Are there perhaps in the electrical equipment itself cultural factors which give people pleasure? Let us consider these issues here, beginning with an investigation into the Nintendo system and its attendant accessories while consciously avoiding the psychological interpretations which have to date prevailed.

The first man to express an interesting view on this was Shirahata Yōzaburō. Shirahata pointed to the international flavor, or rather the multinational flavor, of the Mario brothers, the main stars of Nintendo's software, and their world, Super Mario World. Thus the brothers Mario and Luigi themselves are Spanish; the policeman's clothing is American; Princess Peach is French; King Kuppa is Korean; the setting is the cactus-dotted desert of Mexico, while the transformations that follow eating mushrooms seem American Indian. This view merits serious consideration, especially as it was this software that accompanied the hardware when

the system was first released in America as the "Nintendo Entertainment System."

Mario, however, is not the be-all and end-all of Nintendo, so we cannot assume that Shirahata has the answers to all of our questions. Let us take a brief look at the software as a whole. The electronic game genre to which Nintendo once belonged used to be called that of "video games" or "TV games"—the same type of game did indeed exist before Nintendo's arrival on the scene. Video games, available in games centers or coffee shops, were basically played by manipulating images moving on a cathode-ray (TV) screen, while TV games were connected directly to domestic televisions and made it possible for one to play in one's own home. In the games trade world, the former is called an arcade game (or a trade game).

Distinct from these are PC games, more sophisticated in appeal and played on PCs. These games used early integrated circuits with cathode-ray tubes.

The world's first game of this type was "Star Wars," created by S. Russell, a student at America's Massachussetts Institute of Technology, on a mainframe computer in 1962. "Fun" games followed as pingpong games and block-demolishing games were invented with simple displays, which were made to move as dots of light on the screen alternated between being either on or off. This system was grafted onto PCs, which were being built for fun at this early stage in 1977 by various college companies, the most important of which was Apple. Apple realised the educational and cultural potential of PC games and proceeded to help to establish PC culture as they moved on into intellectual fields. Atari, on the other hand, noticed what the PC offered in entertainment terms and developed the PC as a games machine. (Atari's founder N. Bushnell visited Japan in the hippy era and felt drawn by the "mystery" of Japanese *go* black and white pieces—when he returned home, he adopted as the name for the company that he set up the Japanese word *atari*, which is used to signal one player's victory in a game of *go*.)

In America the PC embodied counter-culture against a military-industrial complex; in Japan, however, it grew from games. Games companies imported the pingpong and block-demolishing games mentioned earlier and hit on the idea of putting them in coffee shop tables. At the end of 1978 one of these companies, a games-maker called Taitō, developed "Space Invaders" in-house.

Similar table games copied from "Space Invaders" took over the country's coffee-shops during the course of 1979 and 1980. They were brought out and leased by companies such as Sega Enterprises, at that time involved in importing and leasing juke boxes, Namco, who made play equipment for amusement parks, and the now bankrupt Osaka *pachinko* company APP. As a result of their success more than one third of the *pachinko* parlors in Tokyo, Osaka, Kyoto, and Kobe were forced to change their business and become games centers.

As other companies, for instance board-game makers such as Epoch (famous for their "Baseball Board") and household appliance manufacturers such as Japan Electric and Sharp, brought out TV games (domestic units) for use direct on televisions, something of a boom took place. Among game players of the time, however, the sense was of playing games on a television and not yet that of playing

games on a computer.

Because the household appliance manufacturers had brought out these early PCs, however, young PC users emerged from among the young TV game fans—using these early PCs, writing their own games in BASIC and enjoying niche magazines. From amongst their number there then emerged the people who would build the software houses that exist in Japan today.

From the above it is clear that there were two broad lines along which the video games movement developed on its way to the Famicon. These were

1) "Space Invaders" and the arcade games,

2) PC games in the early Apple mould.

In these two streams the content of the games was completely different. To play the first group, the arcade games, the player generally inserts a ¥100 coin (or a 25 cent coin), thus buying not the game but time. He must therefore be able to obtain instant gratification from the game without having to understand complicated rules. For the games company to enjoy a large return from a game there must also be an end, which is reached in a short space of time. It must meanwhile involve some sense of achievement for the player and at the same time, in order to provide a challenge for the player to play the game again, he must make steady, if limited, progress the more times he plays.

With the second PC game group the game has already been bought, so there must be an interesting storyline and complex rules, requiring the player to spend time and to use his head. For a game to be really appealing the player must be made to identify with the storyline's hero-figure and the game must draw him right into its world.

Group 1) has developed from "shooting games" to "action games," with more attractive and faster computer graphics. More recently these have shifted into "virtual reality games," "body games" which assault the player's senses and even those which involve his whole body, making him feel as though he has leapt into a three-dimensional zone created with the computer.

Group 2), meanwhile, has progressed from "role-playing games" into "adventure games" where one explores strange software worlds, and then from there on to "simulation games" where one gives the basic conditions for a global or urban environment and then enjoys seeing that personal world or city evolve.

What happened with domestic TV game units was that the latecomer Nintendo in effect fused the two groups into one. Group 1) games reached domestic households, but people seem soon to have tired of them and their appeal remained limited to children. As is reflected in the state of the PC in Japan today, Group 2) games were too complicated and thus the enthusiasm of their players was again limited. What, however, would happen if the two groups were fused into one? The pictures and sound were entertaining. There would be a storyline in which

the player could be the hero-figure and yet, at the same time, each individual scene would be a stage with an ending. As each scene was finished, the player would draw slowly closer to the final goal. This is the basic concept of Famicon games.

In fact, it may not, however, have been Nintendo themselves that originally invented the fusion idea. The Famicon was brought out in 1983, but the boom first took off in 1985 with the software for "Zebius"—although this had the traditional "shooting game" as its basic format, it had a spaceship voyage storyline added onto it and the graphics were excellent.

Whereas "Zebius" was made by Namco and not by Nintendo, what superseded it in terms of entertainment and mass appeal was "Super Mario Brothers." Ever since then with "Dragon Quest," "Final Fantasy," "Sim City," "Street Fighter," and so on Nintendo has put the software houses' talents to excellent use while exploiting those talents themselves to increase their hardware sales and to make phenomenal profits, despite a recession which has struck pervasively at every area in the manufacture of state-of-the-art technology.

4. COMPARATIVE FAMICON CULTURES

The Famicon may be spreading throughout the world, but it is not growing at the same rate everywhere. Hearing what the game designers at both Nintendo and Konami (a large software house deploying overseas market strategies for the Famicon) have to say, it is clear that each area exhibits certain trends.

Apparently "action games" and "role-playing games" are popular in North America. What with the widespread use of PCs there, especially of the game friendly Macintosh and Amiga, the craze is for "simulation." It comes as something of a surprise that America, despite its problems with gun-toting juveniles, has no interest whatsoever in shooting games.

In European and Asian countries, however, the simple "shoot 'em up" game is the main attraction, even though it perhaps seems hard to envisage European white-collar workers playing their Nintendos like their Japanese counterparts. In Hong Kong's Akihabara equivalent, Shanshuipu (known as "Computer Street"), meanwhile, cartridges are on sale which have unlicensed copies of one hundred different Famicon games loaded onto them, and of these one hundred nearly all are very similar "shooting" and "action" games.

Elsewhere in Asia, in India, the Famicon is not widespread. Apparently Indians constitute a reasonably high percentage among Asians studying for computer science Ph.D.s in American universities, but despite this there seems for the time being little likelihood that the Famicon or the PC will take off on a mass scale in India. Is there perhaps something in the Hindu world view that makes it hard for PC culture to gain acceptance?

Thus we observe that the number of Famicon users in Europe is limited, that in Hong Kong action games are overwhelmingly popular, that India is preserving its individuality within and separation from the rest of Asia, and that whilst Japan is of

course the country where the Famicon was first made, there is still constant demand for improvement in what is on offer. Do all these circumstances perhaps indicate that while the Famicon is a type of PC, it also has very strong links with the television?

5. ARE COMPUTER MANIACS THE REFINED CONNOISSEURS OF TODAY?

In Japan it would appear that at the latest the general populace was already using technology in an amateur way as a means of recreation, in the same way that the Famicon is being used nowadays, in the Edo period. Amusement and recreation made use of technology—we are told that a number of pursuits that did so existed at the time—mechanical dolls and *erekiteru*[1] machines for instance, highly ornamental Japanese clocks and the practice of refining and improving Morning Glory flowers—and that they were quite advanced.

Unlike the situation in Western Europe, the state-of-the-art techniques visible in the Edo period rarely linked up directly with production techniques. Because it was recreation, however, the amateur taxed his ingenuity to its limits as he contested to prove the superiority of his particular art. High technology thus had a recreational function, and one can conceive of a link between this tradition, widespread in the Japanese population since Edo times, and the popularity which the Famicon and PC networks enjoy in Japan today.

This is also connected to the way that PC networks are used and received in Europe and America. The Japanese computer maniacs like high technology and make amusing themselves with it an end in itself, and they communicate their enthusiasm to one another. The trend with the messages that appear on the network boards is that anything goes. All that is important is simply that some sort of information is being conveyed—the more grass-roots the network becomes the more so this is. As Macluhan says, the media is the message. Yet at the same time there is zealous devotion to technological innovation. Since also there are large numbers of people in the Japanese networks who have shifted over from amateur radio and CB, there is a pool of computer knowledge and expertise and enthusiasm runs high. Shunning the telephone network, they are building wireless PC communication networks and making advances in PC imagery and in space communication using amateur satellites which they send up themselves.

By contrast, most of the American computer network members (not counting hackers and nerds) are not PC maniacs. One reason for this lies in the fact that the computer network was completed before the fax machine arrived, whilst there is also the cultural element, in contrast to the situation in Japan, of the alphabet being naturally well suited to PC use.

For most American intellectuals, however, the PC is simply just one means of communication—it is an important medium for some things that people want to say. Thus in the early days of the network the principal users were groups concern-

ed about ecology, feminism and gay liberation. Unable to take advantage of the mass communications media to publicise their movements and spread information, they turned to PC communication. When the earthquake hit the San Francisco Bay Area in 1989 also, even though most information was provided through other forms of communication, much of the communication between volunteers took place through PCs.

The phenomenon was visible again in the recent 1992 Presidential Election with Ross Perot, the third candidate, using PC networks as well as telephone and fax lines. Its cultural significance is clearly evident in the concept touted by Clinton (the successful candidate) and Gore, of establishing an information democracy in America over a national PC network along the lines of the Interstate Freeway road system—a network which they dubbed "Internet" and which is also backed by Silicon Valley's communication industry.

While the provision of high-tech recreation for the general populace in the Edo period was not organised on an industrial basis, modern high-tech recreation is now being institutionalised in society. Industrialization has taken place and this provides the means for high-tech recreation, even though the industry is not quite part of our present "production society." In these forms of recreation and the attitudes to them we can see what the near future holds in store for society. Just as *pachinko* foreshadowed industrial society, the popularity of the Famicon and PC communication is heralding society's information-oriented future.

Unlike the Famicon and the mass permeation which it achieved from being TV-based, PC communication networks involve connoisseurs and connoisseur equipment. These amateur connoisseurs—hackers, nerds, and "*otaku*" (maniacs) being some of the names used to refer to them—remind one of the practitioners of the tea ceremony of former times with their closed world, isolated in time and space, their pseudonyms and the constant grooming of their art.

6. THE JOYS OF THE VIRTUAL THEATER

The difference from the tea ceremony is that this world is an electronic one, an artificial one. PC networks are electronic systems, while their essence is information, and thus they do not involve the physical reality of the tea ceremony. What they are is virtual reality.

It is necessary to point out the superficial disparities between PC communication linking large numbers of computer maniacs and the personal, private pleasure the Famicon provides. Despite these, however, PC communication still fails to bring real people into face-to-face contact with one another. We should perhaps remain careful not to view it as a technology which allows people to talk to one another. Rather than a process of mingling with other physical human beings, we should instead think of it as mingling with artificial personalities inside the system, and thus as an extremely individual form of recreation. Be this as it may, we can surely describe the high-tech recreation delighted in and favored by today's con-

noisseurs as absorption in a virtual theater.

In the Edo period Chikamatsu chanted lines about "the web of truth and falsehood" (thus of "fact and fiction," "reality and fantasy" and so on), but now in the modern age amid the efficiency of the real world the imaginary world has been separated off to enliven and activate reality. Nowadays, however, with recreation the focus of technology and with that high technology wrapping people up in a world where time and space are artificial, we are witnessing nothing less than culture itself becoming artificial, becoming virtual.

When we imagine what culture will be like in the near future, perhaps the image we have is one of a world that has done away with the physical plane, where the synapses in our brains and the circuits in computers are in constant exchange of electrical impulses. With the high-tech recreation embodied in PC communication and the Famicon man loses his physical limits, and as he loses these limits, so the aspect of food and the aspect of sex which used to feature in the tea ceremony and the artistic pursuits of ages past disappear. Set in artificial time and space the search is one for an ecstasy that transcends these basic needs. This is the rise of a futuristic culture whose aims are purely recreation and enjoyment.