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Finland

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Introduction: The Birth of Finnish Gaming Culture

Finland, a sparsely populated Nordic country with 5,4 million inhabitants, has grown larger than its size in terms of its video games culture and industry. Combining high technology with the spirit of experimentation, the Finnish game design has managed to join other success stories in high technology, such as Linux operating system or Nokia mobile phones. On the other hand, the public perception of gaming in Finland has been often conflicting. The conducted studies have nevertheless revealed the Finns of all ages to be rather active game players.

The earliest history of game playing in Finland relates to the rich tradition of folk games. Ranging from verbal puzzles to physical outdoor games, this folk tradition also attracted the attention of scholars already in the eighteenth century. This research carried out in the field of folkloristics forms also the early basis of Finnish game studies (Sotamaa 2009). The rich mythology of oral poetry, transmitted from generation to generation and finally compiled and published as the Finnish national epic *Kalevala* (1835/1849) should also be mentioned, as it has had long standing influence to Finnish cultural imagination. After the second world war, more Finnish card and board games started to appear. The most famous of these is *Afrikan Tähti* (The Star of Africa), a board game designed by Kari Mannerla and published in 1951. However, there is no direct continuity from the folk game traditions, or traditional board game publishing to later Finnish electronic and video games.

The first Finnish electronic game, *Nim*, was designed and constructed by Hans Andersin, one of the team of engineers who were responsible for implementing the first Finnish mainframe computer project, ESKO in the 1950s. Inspired by a newspaper article about an earlier American electronic version of the same game, Andersin described the game rules in mathematical logic and constructed the Nim game system using relays and diodes in 1955. (Paju 2003.)

The earliest popular gaming machines in Finland were pinball machines installed in bars, cafés and amusement parks. However, the culture of gaming arcades never properly established itself in Finland, possibly partly due to the relatively short history of urbanisation and public amusements in Finland. The early video arcade games were installed in bars alongside pinball games and *pajatso* slot machines. (Saarikoski 2004, 217.) The dominant cultural ethos, rooted in a long religious tradition, was also culturally antithetical towards games and joyful leisure of any kind; the Northern protestant ethic was traditionally very work oriented and perceived gaming and gambling of any kind as "sinful" (Alho 1981). In 1976 a law was passed that granted the gambling monopoly RAY the exclusive right to control access also to the "leisure automatons" like arcade video games. The aim was to put public gaming under tighter regulation, and in discussion the rationale for this was based to the supposed addictive nature of gaming and the possibly immoral character of video games. As gaming arcades waned, the door was opened to home computers and video games to dominate the Finnish gaming scene.

The cultural tension between work and leisure, or entertainment and utilitarian purposes surrounded the early contacts with computers and video games in Finland. Jaakko Suominen, a historian of technology, has described how computers and electronics moved from the domains of administration and science to become parts of the increasingly electronic landscape of modern Finnish homes (Suominen 2003). The first video games in the early 1970s were presented as tools for activating the passive television audiences; the advertisements portrayed games as engaging interactive media that would bring entire families together in the living room. The role of video games and computers proved to become particularly central to the culture of Finnish boys and young men; girls participated in video gaming from early on, but the male dominance in computer clubs and other venues where gaming enthusiasts gathered was often noted. (Suominen 1999.) Games scholar and developer Sonja Kangas has noted how the gender roles clearly mark technology in Finland as belonging to the male domain, so that most girls learn to shy away from displaying their interest and competencies in games and in information technology in general. However, Kangas also notes that particularly from mid-1990s onwards there has been significant cultural changes in Finnish computer and gaming culture that have begun to allow more flexibility and room for constructing identity as a female as well as male gamer or computer enthusiast. (Kangas 2002.)

Petri Saarikoski, another Finnish cultural historian, has identified three key periods in the formation of Finnish computer culture:

1. Microprocessor Revolution (1973-1981)
2. Home Microcomputer Boom (1982-1990)
3. The Recession Years (1991-1994).

(Saarikoski 2004, 411.)

The period of Microprocessor Revolution was dominated by (male) electronic hobbyists, radio amateurs and business users who were the early adopters of computers in Finland. Some users built their own computers using assembly kits ordered from abroad. Games were often perceived as programming exercises during this time. It was during the Home Microcomputer Boom when computers entered Finnish homes and began their process of cultural domestication. Video games were a key element in the popularization of home computers, and particularly young boys emerged as the new “virtuoso” group who developed skills for mastering their full potential. The years of economic recession in the early 1990s in Finland were also the years when personal computer and Internet became an element in the everyday lives of wider demographics. Dedicated video game consoles started to become popular in Finland only in mid-1990s when Sony PlayStation became available. The surveys carried out in the early 1990s reported only 4-7 percentages of Finnish gamers owning a video games console. (Saarikoski 2004, 289.)

The Commodore 64 Years

The single most important turning point in the history of Finnish game culture was the introduction of home computers, particularly Commodore VIC-20 (1980), Commodore 64 (1982) Amiga (1985) in the Finnish markets. The early computer hobbyist and hardware hacker cultures started evolving at that point into a programming and gaming oriented computer subculture. Finland at this point already had a century-long history in highly-ranked education (as later witnessed by the top positions in the international PISA studies), as well as of excellence in such fields as engineering, design and the fine arts, and computer and video games appeared as an area where all these strong traditions could be united.

The Finnish home computer culture supported also the evolution of specialized publications like the wide-ranging, leisure-oriented IT magazine *MikroBitti* (1984) and a dedicated games magazine *C-lehti* (1987), which was later rebranded as *Pelit* (1992), both of which soon built up the largest circulations of their kind in the Nordic. The illegal copying, sharing and cracking of copy protection from video games was an

important element in the creation of gamer and computer enthusiast community; the crack intros (computer animated title screens) designed by the computer software cracker teams soon evolved into demos, or non-interactive real-time presentations of computer art. The gatherings of this 'demoscene' grew into important breeding grounds for the Finnish video game developers. The most important event of this kind, Assembly, has been organised annually from 1992, and still brings together thousands of coders and gamers with their computers, requiring the use of largest available sports arenas.¹

The first Finnish video games were programmed in the early 1980s to the popular Commodore home computers. Publishing printed programming code in magazines like *MikroBitti* was an early form of game publishing. The pioneering commercial developers were single, multi-talented individuals like Stavros Fasoulas and Jukka Tapanimäki, who both got their Commodore 64 games into international distribution in the late 1980s. From early on, there was a broad range of genres that Finnish developers were exploiting. Copying or liberal borrowing from successful foreign games (such as *Tetris*, *Elite* or *Boulder Dash*) was in ample evidence, but so was also original creativity.

The games of Jukka Tapanimäki provide good examples of the early Finnish video game design and programming. Tapanimäki, originally an aspiring designer and a literature student at the University of Tampere, published his first commercial game, *Octapolis*, in 1987 through a small company English Software. Already before that Tapanimäki had published games as printed programming code in *C-lehti* and *MikroBitti*, where he also wrote magazine articles about game programming.²

Octapolis is a genre hybrid which involves both a shooter game and platform game modes. The backstory displays familiarity with the conventions of science fiction and revolves around the challenge of a sole pilot (representing Galactic Imperium) attacking alone against the eight cities of planet Octapolis. The player must first navigate into the cities by flying his small spaceship in a split-screen mode, destroying obstacles while simultaneously moving the ship forward and backward, up and down, as well as left and right (by holding the fire-button down while moving the joystick). The platform game mode inside a city is focused on evasion strategies, since the space pilot is not able to harm any other enemies except the "evil eyes", which grant bonus points when shot. The game was positively reviewed at the time (see e.g. *Zzap!64* Magazine 33, p. 28 [Christmas Special 1987]). The main point of comparison was Stavros Fasoulas' *Sanxion*, a futuristic side-scrolling space shooter published year earlier. Both shooter and platform game elements were nothing new, but as a demonstration of skills in art and programming by a single young developer, a game like *Octapolis* was a forerunner and set the example for the next generation of Finnish game makers.





Figures 1 & 2 & 3: Screenshots from *Octapolis*. (Source: Mobygames.com.)

Commercial Success: PC and Online Games

The combination of programming and audio-visual design excellence was established as the trademark of best Finnish video games. Marketing was necessarily not a similar forte among Finnish developers, and commercial success was relatively rare for early Finnish video games. The stereotypical view of Finns being introverted and highly technically skilled, yet lacking in social skills is partly a myth, yet it has also been established as a part of the public perception of Finland abroad (Moilanen & Rainisto 2008). The individual game developers working mostly alone during the 1980s rarely had access to major marketing efforts. The first Finnish commercial game development companies, Terramarque and Bloodhouse emerged from the demoscene, and were both established in 1993. The companies developed several games for Commodore Amiga home computer, but without major commercial success. The two companies merged together to form a new firm, Housemarque in 1995, and focused their joint energies on the PC market that was emerging as an important game development platform at the time. This investment paid off, as Housemarque was able to release an international best-seller video game at the end of the 1990s. (Saarikoski & Suominen 2009.)

Supreme Snowboarding (Infogrames, 1999; titled “Boarder Zone” in the US market) was among the first snowboarding games for PC to make full advantage of the 3D graphics cards that were quickly becoming the norm among PC gamers of the late 1990s. Housemarque designers also utilized their Finnish “snow-how” and demoscene background to design high-speed tracks with visually impressive, dynamic lightning effects. The reviewers praised the game for the realistic snowy environments and special effects like multiple shadows, reflective surfaces and weather effects.³ The game was also easy to control and enjoyable to play, yet the repeated criticism found the game lacking in content when played longer. The game music and brand-name snowboards were all designed to tap into the fashionable snowboarding subculture. As a technologically advanced game, *Supreme Snowboarding* was also adopted by hardware manufacturers to demo the potentials of latest PC processors and 3D graphics cards in various industry events during 1998-1999.



Figure 4: *Supreme Snowboarding* screenshot. (Source: Housemarque.)

The great Finnish IT success story of late 1990s and early 2000s was Nokia, which established itself as the global leader in mobile phones during that period. The public perception of Finnish game development has also largely focused on games for mobile handsets. There were several mobile gaming companies founded already during the late 1990s and the early 2000s, but historically the sales and international visibility has actually been greatest in PC and console games. Housemarque, for example, has continued to develop games for multiple platforms, including *Transworld Snowboarding* for Microsoft Xbox in 2002, *Floboarding* for Nokia N-Gage mobile platform in 2003, and *Super Stardust HD* for PlayStation 3 in 2007. The close relations to Nokia proved to be a mixed blessing for several game companies, since the commissions of games and technology demos from Nokia on the other hand provided welcome revenue, on the other tied their resources sometimes to non-optimal development environments, like the failed N-Gage.

The most successful release of early 2000s in Finnish games, or game related services was the opening of *Habbo Hotel* (2000) by Sulake. *Habbo* is a teen-oriented virtual world, focused on chatting and playful interaction in virtual rooms such restaurants, dance clubs or in customizable “guest rooms”. There are eleven online communities, users logging in from over 150 countries, with reported average number of unique visitors exceeding ten million per month (Sulake 2012). The user created content is the driving force behind *Habbo’s* success, as the young users are active in organising events and competitions to each other, or in inviting each other over to take part in self-designed games or quests (Ylisiurua & Durant 2009). While *Habbo* is free to access, the virtual furniture, “furni” that are necessary to set up and personalize one’s room, are bought using different means such as credit cards, pre-paid cards or with SMS payments. The virtual environment has also been used for promotional activities such as visits by musicians like Gorillaz and Avril Lavigne. In addition, some non-profit youth organisations have set up their own operations inside

Habbo (e.g. “Elämä on parasta huumetta”, the Finnish anti-drugs association). The actual video games implemented inside *Habbo* are typically social and casual, such as SnowStorm, a snowball fight. The average age of *Habbo* users ranges from 13 years in Belgium to 16 years in Peru; it appears that in the Northern countries young people prefer to move on to other, more “adult” games and services at an earlier age than in Southern and developing countries (KZero 2011). The visual style of *Habbo* and its avatars is based on the 8-bit era of 1980s video games, and appears today as an ageless “retro” or nostalgic style, looking back to the origins of digital culture and virtual worlds.



Figure 5: Car racing in *Habbo*. (Source: Sulake.)

The role of national cultural background and mythology has not been particularly strong in those Finnish video games that have gained international acclaim. It appears more appropriate to characterise Finland as a country whose developers have been skilful in adopting diverse cultural influences and sometimes successfully creating new, technically advanced interpretations of such, international themes and contents.

The third person shooter game *Max Payne* (2001) by Remedy Entertainment is a good example of this. The game is most famous for its slow motion gameplay mode, “bullet time”, where the perception of time is slowed down so that it is possible to avoid bullets and gain advantage over the enemies. The visual influences of bullet time can be tracked through *The Matrix* (1999) science fiction film to the Hong Kong martial arts cinema. The adaptation of slow-moving “battle ballet” to a shooter game was, however, an original innovation by the Finnish developers.

At the level of game’s milieu and themes, *Max Payne* is similarly indebted to several international influences. The plotline focuses on Max, a policeman whose wife and new-born daughter were brutally murdered and who is on a personal vendetta, trying both to gain revenge and solve the puzzle behind the crimes. There are obvious visual and narrative references to the storylines of hard-boiled detective novels, as well as to “film noir” style of crime dramas. The video game also makes use of graphic novels to replace the narrative cut-scenes with comic book style panes. In addition to the multiple popular cultural references, there are certain mythical undertones in the game; most importantly, the Norse myth of Ragnarök, the end of gods, is used to infuse the game world with an apocalyptic sense of doom.

Max Payne was a major success and was used as the foundation for a franchise including games for multiple platforms as well as a Hollywood film. The publisher, Take-Two Interactive reported that the game series had sold over 7.5 million copies by 2011.⁴ The sequel *Max Payne 2: The Fall of Max Payne* (2003) was still developed by Remedy Entertainment, after which *Max Payne 3* (forthcoming in 2012) has been developed by Rockstar Vancouver while Remedy has focused on developing new intellectual property around *Alan Wake* (2010). *Max Payne* was rewarded with multiple “game of the year” awards and has been discussed by game scholars as a notable example of a video game, which perhaps fails to reach the status of “great art”, is nevertheless an important artistic achievement (Smuts 2005; Løvlie 2005).



Figure 6: Max Payne screenshot. (Source: Remedy Entertainment & Rockstar Games.)

The Rise of Mobile Games and Digital Distribution

Even while the greatest success stories of Finnish game development were long related to PC games, also mobile games have remained as an important, though often difficult area to work in. One of the main challenges for mobile game developers in early 2000s was the fragmentation of handset market. With variable hardware specifications like screen sizes and processors, and many different mobile phone operating systems, several Finnish mobile game developers had to develop, test and release each game in literally hundreds of different versions. The access to consumer was channelled through network operators, who decided which games were provided the best positions in the operator decks, typically favouring familiar brand names. Consequently, the complex and risk-averse mobile game ecosystem was highly problematic for any real innovation to emerge (Costikyan 2004). There were nevertheless some interesting and innovative releases like *Pathway to Glory* by RedLynx in 2004, a turn-based tactical strategy game, which allowed real-time mobile multiplayer gaming over mobile data.

Pressured by their fragmented development and publishing environment and the associated risky revenue models, the Finnish mobile game developers were eager to look for alternatives and Apple was the first to provide a unified environment for developing and distributing mobile games with its iPhone and iOS App Store, the latter released in 2008. Another way of minimising operational risks to a small game studio were mergers, and four leading Finnish mobile game developers, RedLynx, Mr Goodliving, Universomo and Sumea were all acquired by larger foreign companies during the 2004-2011 period. There appears to be risks involved also in being owned by foreign capital, as Universomo and Mr Goodliving were both closed down by their parent company sometime after the acquisition. Industry analysts have pointed out that there is lack of venture capital in the Finnish game industry (Lukkari 2011) but on the other hand Tekes, the Finnish Funding Agency for Technology and Innovation, has been active in supporting promising game developers. New digital distribution models constituted the most radical change for video game publishing and sources for revenue in Finland during the latter part of the first decade in the 21st century. iOS App Store, Google Play, Valve's Steam and the online delivery services by major console manufacturers have all opened up new possibilities for Finnish games to bypass geographical marginalization and reach world-wide audiences. (Sotamaa & Karppi 2010.)

No other example captures the full potential of this new distribution model and business ecosystem better than *Angry Birds*, the game series and franchise created by Rovio Entertainment in 2009. The strategic puzzle game is focused on the physics of flying trajectories, as the player is challenged to sling different birds towards fortifications of pigs in game levels featuring increasingly fantastic designs. *Angry Birds* was among the first video games to utilize effectively the possibilities opened up by the touch screen interface. The casual enjoyment provided by various physics puzzles is coupled with cartoon style design and theme that makes the game and its characters into a distinctive and identifiable brand.

In March 2012 it was reported that different versions of the game had been downloaded more than 700 million times, and that more than 30 million people played *Angry Birds* each day (Barnett 2012). Rovio has expanded their franchise aggressively, and there have been releases of plush toys, a board game, T-shirts, and even dedicated retail stores for various *Angry Birds* branded products. In April 2012 the first *Angry Birds* themed activity park opened in Tampere, Finland. *Angry Birds* has been called the most successful mobile application in the world, but Rovio has been careful to point out that they had created 52 mobile games before having the huge hit with *Angry Birds* (Holthe Eriksen & Abdymomunov 2011). Rovio could base their game to development and marketing expertise to the groundwork laid by more than a decade of mobile video game business carried out in Finland. The classic *Snake* game for Nokia mobile phones was programmed by Taneli Armanto in 1997 (Saarikoski & Suominen 2009, 30-31).

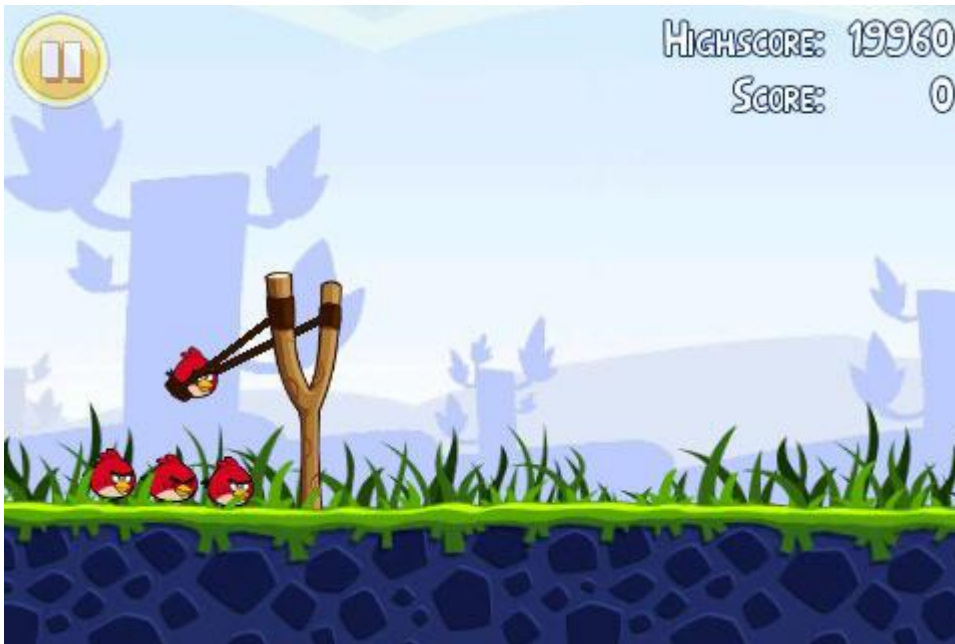


Figure 7: Angry Birds screenshot. (Source: Rovio.)

The rise of Rovio and Angry Birds is the most visible success story in the new generation of Finnish game development. At the same time, it is also suggestive of the renewed interest in mobile game development. In 2011, it was estimated that almost 40 percent of all Finnish game developers were designing games for mobile devices. At this point, there were total of c. 70 game development companies in Finland, with an estimated turnover of €165 million. (Neogames 2011.)

Research into the Finnish Gaming Culture

The academic video game research in Finland has been active, multidisciplinary, and has included theoretical, analytical, descriptive approaches to games, player experiences, as well as to the social and cultural aspects of video games. There have been also numerous studies that have focused on game design, game industry and gaming technology issues. The Finnish game researchers have also been active in establishing conferences, publications and international initiatives like DiGRA, the Digital Games Research Association. Multidisciplinary teams of several game researchers have grown in some universities, including the Universities of Tampere, Turku (especially the Pori unit), Jyväskylä, Oulu as well as Aalto University. In addition to anthropological, folkloristical and cultural historical research mentioned above, also work done in educational research and psychology on children's play and games has formed into a tradition of its own in Finland (Piironen 2004).

The most overarching view into the Finnish culture of gaming to date is provided by the Player Barometer series of survey studies (Karvinen & Mäyrä 2009; Kuronen & Koskimaa 2011; Karvinen & Mäyrä 2011). It is based on the an earlier series of qualitative interview studies of Finnish game players (Kallio, Kaipainen & Mäyrä 2007; Kallio, Mäyrä & Kaipainen 2011), and is aimed at capturing the game playing interests and behaviours of Finns between 10 and 75 years of age. Including card, board and sports games, as well as gambling games in addition to computer and video games, the survey data reveals active interest to game play among the Finns. In the representative sample of over 3300 respondents, some form of game playing was reported by almost everyone (c. 98 %), and active game players who played some game at least once a month formed a clear majority, 89 % of the respondents. Digital game playing was most popular among the younger (below 40 years of age) generation, but overall more than half of the Finns appeared to play some

form of video game at least once a month. In addition, during the three year period there was statistically significant increase of active digital game players (from 51 % in 2009 to 56 % in 2011; $p=0.025$). Also the oldest surveyed age group, those between 70 and 75 years of age had increased significantly their game playing, so gaming appears to be in process of becoming more popular among old as well as young Finnish people. (Karvinen & Mäyrä 2011.)

There is no single video game genre that would dominate the Finnish video game culture. The single most popular game that has gained most mentions as a recently played game in the Player Barometer surveys is *Solitaire*; apparently its ready availability as being pre-installed in personal computers with the Windows operating system explains much of its popularity. Also puzzle and classic games such as *Mahjong*, *Tetris* and *Sudoku* are high in the list of games that are played a lot. Sports and action games are popular particularly among boys and men, and their favourite mentions included *NHL*, *Call of Duty* and *Grand Theft Auto* game series in 2011. Also the popular Facebook game *Farmville* was among the most played games in Finland in 2011, but the one game that clearly peaked in the popularity listing in 2011 was *Angry Birds*. (Karvinen & Mäyrä 2011.)

The public reaction to video games in Finland has been somewhat divided. On the one hand, the older discourse of worry and negative media effects has proved to be resilient even while society as a whole has increasingly adopted game playing. The other discourse popular in media has focused on games and game industry as the potential next major national success story. There were two highly publicized school shootings in Finland during early 2000s, Jokela in 2007 and Kauhajoki in 2008, and the killers were reported in media to have played FPS video games. However, no major media panic that would have exclusively blamed video games of the shootings appeared in Finland, suggesting that the negative perception did not dominate the public discourse of video games any more. It had already become the expectation that any Finnish young person would play some form of video game by then; video games had become “domesticated” technology (cf. Haddon 2003).

As a whole, the Finnish gaming culture can be seen as both rooted in the national and Nordic cultural history, and also as immersed in the international influences. The enthusiasm for exploring the possibilities for new technologies is a pervasive thread in this development, as well as the increasingly permissive attitude towards new media and popular culture. There are tensions surrounding the rise of Finnish video game culture, but video game development, game playing and game studies have nevertheless managed to reach rather a visible status in Finland.

Notes

¹ See: <http://www.assembly.org>.

² For more about Tapanimäki's career, see Wikipedia: https://en.wikipedia.org/wiki/Jukka_Tapanimäki.

³ For reviews, see e.g. *GameSpot* (<http://www.gamespot.com/boarder-zone/reviews/boarder-zone-review-2538262/>), and *IGN* (<http://pc.ign.com/articles/162/162128p1.html>). The PC hardware manufacturer relations are mentioned in *Wikipedia* (<https://en.wikipedia.org/wiki/Housemarque>).

⁴ As reported by Gamasutra news:

http://www.gamasutra.com/view/news/37228/Grand_Theft_Auto_IV_Passes_22M_Shipped_Franchise_Above_114M.php. See also *Max Payne* in Wikipedia: https://en.wikipedia.org/wiki/Max_Payne.

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