Genesis of a Gaming Culture: a Historical Analysis Based on the Computer Press in Portugal

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ABSTRACT
Each technology is developed within a specific context and related to different social fields. This paper offers a historical analysis of the beginnings of press narratives about computer games in Portugal during the establishment of democracy and its entry into the European Economic Community in the 1980s. It focuses on the narratives created by two specialized computer press publications about the place of digital games in the broader social context and how gender and age group issues were presented in these narratives. It was possible to identify how computer games were directed to an imagined target population, given the worldwide tendency to relate technologies and games as a male "taste." This helped to distinguish those legitimately interested in gaming culture and exclude all those who did not fit this norm.

Keywords
history, digital game, narratives, gender, magazines, Portugal

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INTRODUCTION

Analyzing the beginnings of the narratives created concerning digital games in Portugal is an exercise that allows us to challenge specific historical frameworks proposed by academics, hobbyists, and journalists who were more concerned with arranging the games on watertight shelves (lists and maps). In a previous publication, Gouveia (2014) suggested that these narratives are a catalogue of games that, in turn, exalted the "creative potential" of (male) Portuguese programmers and forgot the artists[1]. Furthermore, they neglected digital games as a cultural phenomenon characterized by disseminating a new interactive technological apparatus and underlying socio-economic factors.

In the historical chronologies published in Portugal, we found that the absence of women in this sector is mentioned only to confirm that the profile of the first game designers is male, young, and with programming skills (Gouveia, 2014; Pinto, 2019).

Unpacking the narratives surrounding the origins of the digital game fans community and the gaming industry in Portugal allows us to see "the power dynamics involved in attributing certain characteristics to it" (Shaw, 2010, 404) and the processes of exclusion of marginalized groups. As Dovey and Kennedy (2006, 131) suggest, we should look at the emergence of this cultural niche "as a critical site where discourses around technology, technological innovation, and technological competence converge with dominant conceptions of gender and race".

According to Williams (2003, 524), a key component of computer games history is "understanding how this new technology was represented in the popular consciousness." Insight into these representations tells us not only about a new medium and its associated technologies but about how they were "touchstones for a vast array of social hopes and fears" of a population that, in this case, was restructuring itself economically, politically, and socially. It also allows us to understand who "counts" as a legitimate member of this niche; that is, who is authorized to create games, to participate, and to write about a culture that for a long time was named as strange and insular, starring teenage boys who had a passion for technology.

Placing digital games within larger cultural discourses is important because they are also a part of the dominant culture (Cote 2020; Shaw, 2010; 2014). Thus, analyzing computer games from the narratives of the Portuguese press can provide a window to visualize how video games were typified, the profile of the public who integrated this niche, and the main social tensions of the time in which they appeared.

This paper presents the preliminary results of broad research on the evolution of female participation in the digital games sector in Portugal[2]. This study aligns with Phillips (2020) in her attempt to reveal the underlying forces of friction that undermine the integration of discourses of (and about) women in gaming culture. Phillips considers the battles between ludologists and narratologists, previously analyzed by Gouveia (2010), as a site of struggle between those who align themselves with a competitive formalist view, which somehow positions itself in the vicinity of neoliberal forces, and those more closely related to the independent and artistic marketplace characterized by feminist scholars and artists. According to Phillips, "ludologists seem to have won the battle since the first two decades of game studies, they were dominated by formalist perspectives that not only shied away from a cultural critique of video games, whether on gender or race but also downplayed the impact of women in the field" (Phillips, 2020, 19).

We propose in this paper to recover and analyze the narratives about computer games presented by specialized computer press coverage in the 1980s in Portugal and identify how gender roles and age groups were presented in those narratives. Therefore, this paper analyzes magazines' coverage of computer games between 1983 and 1988, namely a periodical about microcomputers from one of the Portuguese newspapers with the largest circulation in the 1980s named Se7e[3], and the specialized computer magazine Mini Micro's[4]. These two publications are commonly cited by academics and hobbyists who narrate the history of digital games in Portugal.

The 84 issues that were part of our sample are available in the LOAD ZX Spectrum Museum's digital archive and in the Planet Sinclair blog[5]. We carried out a careful reading of the entire sample and identified some categories related to the aims of our study. The patterns resulting from this analysis will be discussed here. We hope that this paper serves as a starting point for a more detailed cultural-historical analysis of digital games in Portugal and, more broadly, contributes to the complex flows of establishing a (still) sexist gaming culture and a masculinized global and local industry.

BRAVE NEW WORLD: DEMOCRACY, GENDER, TECHNOLOGY, AND *SPECTRUMANIA*

Computer games burst onto the Portuguese mainstream scene in the early 1980s through the widespread use of domestic computers and the intense piracy of game cassettes (Zagalo, 2013).

The conditions that allowed the massive use of computers are related to the improvement in Portuguese household incomes, the production of Timex Sinclair and Timex Computer, and the public and media debates regarding the so-called IT revolution, as occurred in other countries such as neighboring Spain (see, for example, Medá, 2016).

In Portugal, the transition from the 1970s to the 1980s meant the end of a history filled with the dramas of nationalist authoritarianism and revolutionary rebellion, the establishment of democracy and the control of successive economic crises, as well as the arrival of a freer, more open and prosperous, but also more conformist society (Barreto, 1996; Trindade, 2014).

According to Trindade (2014), the ruptures with the dictatorial model after the years of revolution of 1974-76 are situated in the global perspective of transformation and cultural modernization of a country that was trying to accompany the rapid transformations of European societies, with the increasingly accentuated domination of urban cultures, of the new media, and new forms of entertainment. We are talking about a country that had a population of about 9,900 million people in the eighties. Of this total, about 6,225 million were of working age (15 to 64 years old) (Pordata, 2021).

On the political and economic level, it was a decade that was marked by Portugal's entry into the European Economic Community, the expansion of economic activities linked to the tertiary sector (which includes activities such as commerce, transports, public administration, education, and health), and the subsequent improvement in the living conditions of the Portuguese. However, there were severe social problems such as illiteracy, unemployment, and persistent social inequalities, mainly in urban centers (Barreto, 1996).

Regarding the rights achieved by women, even with the alterations introduced in the Constitution of 1976 when the principle of Equality was enshrined (article 13), the invisibility or negation of women remained present in the different social practices (Magalhães, 2007). As this author explains, in this period, "the dominance of the left's

discourse rather stifled the demands of feminists. The priorities that the popular movement put on the agenda did not include gender issues. They did much to denigrate the feminist struggle, often accusing it of being bourgeois claims" (Magalhães, 2007, 5).

Ironically, the advocacy of some radical and socialist/Marxist feminism currents that emerged after the "Carnation Revolution" also contributed to the silencing of women. These currents were advocated and shared by feminist movements on national territory, which from very early on were accused of being "crude, contemptuous and disrespectful of women themselves" (Freire, 2019, 93), and therefore acquired a negative meaning in the eyes of the general population (Freire, 2019; Tavares, 2008). Feminism was thus "seen as a caricature (...) poorly regarded and not taken seriously" (Tavares, 2008, 352). Thus, "many women were silenced by the calm that followed the revolution, not by any censorship, but by the multiplicity of messages issued by other centers of power. Having played a significant role in the movements from the '25th of April' onwards, women gradually passed into the background" (Tavares, 2008, 359).

As in other countries, this was a period marked by changes in family and women's roles. As Williams (2003, 527) states, "divorce, remarriage, and new non-traditional forms of a family challenged traditional, previously fixed concepts as promoted in official discourses and media representations." However, the conservative forces that questioned the morality of non-traditional family types had as allies some journalists who fought against feminist rhetoric and reproduced sexist views in the news they broadcast.

Another essential aspect in this historical contextualization was the production, in Portuguese territory, of Timex Sinclair (more focused on the US market) and Timex Computer. According to Beira (2004, 22), "the mass production of the Timex was the first industrial operation of digital electronics in Portugal and despite the product being based on the Sinclair project, and the novelty of the technology among us, its industrial organization is based on Portuguese knowledge and techniques." For this researcher, the presence of Timex brought many benefits to the Portuguese population, "both in terms of the training of a highly qualified first generation of Portuguese specialists in industrial operations of digital electronics, and in terms of the supply chain, and encouraged various business initiatives in sectors and technologies" (Beira, 2004, 23). Furthermore, it generated public and media debates around the so-called information technology revolution and the emerging information society.

Interestingly, between 1981 and 1983, the first Portuguese computer was developed at the University of Coimbra- the ENER 1000, initially aimed at Portuguese schools. According to João Silva (2018), one of its creators (see Figure 1), this project was not commercially successful because, in addition to the high competitiveness of the global personal computer market, there were forces opposing collaboration between university and industry. In this period, the left-wing ideological force was also very present in universities.

Figure 1: João Silva and colleagues developed the first Portuguese computer- ENER 1000, in 1983. Source: *Diário de Notícias* newspaper[6], August 2018.

With these conditions established, digital games became the object of the public's desire, reborn from the ashes of a long period of dictatorship and material and economic scarcity. It was also a new interactive technological medium that emerged associated with the hegemony of new audiovisual technologies and the intense production of personal computers in the country, attracting a new profile of consumers eager for entertainment.

THEORETICAL BACKGROUND

Technology is seen, by many theorists, as social production and reproduction. Each technology is developed within a specific context and related to different social fields, linking the "technological to economic and political, political to religious and then to economic" (Gunderson, 2016, 44-45). This can be updated in a social constructivism vision which considers technology as a multilinear process (Law, 2012; Constant II, 2012), in which "the way in which the artifacts relate to social, economic, political, and scientific factors" should also be considered (Law, 2012, 106) since it is the social that "lies behind and directs the growth and stabilization of artifacts" (Law, 2012, 107).

Even if there is the possibility of sharing technologies between different cultures, the same technology will develop according to the context in which it is inserted, giving rise to different forms of use (Constant II, 2012; Ellul, 1980; Gunderson, 2016). As Mauss argues, technology is intrinsically social, since it results from social processes that give it a symbolic character and also a creative force of values and a change of attitudes, seeing as technology demands a certain number of virtues from individuals (such as precision, exactness, seriousness, a realistic attitude, and, over everything else, the virtue of work) and a certain outlook on life (modesty, devotion, cooperation) (Ellul, 1980).

Technology permits "very clear value judgments (what is serious and what is not, what is effective, efficient, and useful)" (Ellul, 1980, 149) and "now we have a positive and joyous acceptance, not only through material benefits, but also through an esthetic consumption of the machine" (169). Technology thus becomes, in the words of this author, "a sociological object, because the synthesis between the countless diverse technologies has altered social bodies and human life" (160). Thus, we can see how technological development allowed the changes necessary for the technology itself to penetrate Portuguese homes so that, with this very entry, the development of the technology itself, influenced by its new context, could take place.

Like what Weber describes on the development of the whole technology and symbology surrounding the piano, we can also find similarities of this process in the production of the ZX Spectrum in Portugal. On the one hand, the Portuguese benefited from the affordable price of this machine when the economic power of Portuguese families increased. On the other hand, the ZX Spectrum had its "fame" (Ellul, 1990) for being considered a markedly national product, which facilitated its entry into Portuguese homes, becoming, like the piano in Weber, "a significant piece of middle-class furniture" (Gunderson, 2016, 45).

As Ellul (1980, 145) argues, technology's applications depend on its possibilities rather than a good or bad application. However, despite being amoral, technology should not be seen as neutral because it allows for different uses. This, coupled with the question of symbology from Mauss and Weber, helps us refer to the construction of stereotypes around the processes and rituals of use around technologies, in this case, computers. It also helps us understand how they were associated with males and younger age groups. In this way, technologies are associated with values that Western culture identifies as masculine symbols, which allows a greater approximation of the technological artefact to the male gender.

As Ellul (1980) suggests, the choices of uses of technologies are made by technocrats, the technology experts, so the more positive or negative moral weight of technology in each context is the responsibility of these technocratic aristocracies. In other words, the stereotypes around the use of computers in the Western world are associated with the decisions made by these same technocrats, whereby the computer has become an artefact dedicated to young age groups and males since it has become a "household item."

The following sections will discuss the press material collected and presented, part of the user profile. Due to the page limitations of this paper and for better intelligibility of the results of this study, we adopted more fluid writing that contains excerpts and images taken exclusively from our sample.

MINICROSE7E AND MINI MICRO'S: WHOM WERE THEY INTENDED FOR?

Initially, Microse7e had 16 pages and was published on the last Wednesday of each month in the Portuguese newspaper Se7e. In turn, Mini Micro's was a monthly magazine with a more extensive volume of pages (between 24 and 52) than Microse7e. The interaction with its readers through competitions, awards, the publication of letters, pokes, and hints sent by the readers themselves was a very present feature in both publications.

According to the publishers, Microse7e was created "to correspond to a demand: the readers of Se7e and, in particular, its fringe (which is immense) of younger readers who were demanding a space where they could talk about the micros fever and this unstoppable phenomenon (...)" (nº 31, September 1986, 4).

Note that the newspaper Se7e, according to the Portuguese historian Luís Trindade, was a media that promoted the birth of new cultural forms and subjects in a post-revolutionary context and the irresistible imposition of a new hegemony of the audiovisual, particularly television. It accompanied the so-called "golden age" of Portuguese popular music and national rock. Created in 1977, Se7e responded to the desires of an imagined public that, at that time, was seen as essentially urban, culturally cosmopolitan, and progressively depoliticized. In the 1980s, it became the most significant Portuguese newspaper, consumed mainly by young people between 15 and

24 years old and women (53%) coming from the middle and upper-middle classes (Trindade, 2014).

Being a monthly Se7e newspaper magazine and aimed "at young people fascinated by microcomputers," Microse7e delimited its target audience: boys eager for knowledge (i.e., mastery of the machine) and entertainment (mainly video games).

Implicitly, Se7e newspaper established two profiles of the public: female readers of the weekly newspaper (Se7e) who consumed the news related to the cultural and artistic fields, and male readers (Microse7e) who consumed the news related to "the unstoppable phenomenon" of "computer arts." This distinction can be proven in issue nº 30, August 1986:

"The standard reader of Microse7e is a young person aged between 15 and 24 (53%), student (59%), male (95%), and lives in the Lisbon region (61%). Our reader often uses the computer for gaming (57%) or programming (39%). He sometimes uses the computer for didactic programs (44%) and discusses computer-related subjects with friends (92%)."

As was also mentioned in Mini Micro's magazine, readers had a great need for information related to microcomputers, as we can see in the first issue of this magazine:

"Mini Micro's does not pretend to be more than a space of dialogue, alive and accessible, where experiences and programs, technical and documental information can be exchanged. It is thus proposed to assure wide spreading of all that of more advanced that appears in the attractive world of the micros- and home computer-, programs of several marks and origins, in an effort here renewed, periodically" (Editorial, nº 1, May 1983).

These two publications functioned as a social network in the pre-internet era. In them, readers could freely express their opinions, be authors of some items, exchange ideas about computers and games, tips and pokes, content about hardware and software, sell and trade computer games and accessories, and propose editorial changes.

Personal Computer: What are the challenges for teenagers?

This is the title of one of the Microse7e feature articles published in March 1984. In this news article, signed by two women - an engineer and a psychologist - computers are presented as "a small, low-cost, simple communication toy that is transforming the very way we are in life" (1984, 8). Eight boys and one girl were interviewed (see Figure 2) about why they used computers, in this case, "essentially to play" and make game modifications. Except for the girl, all the interviewees had already experimented with "making a small program" on the computer.

In this same news, the parents of two young people interviewed said that their children "have much more malleability and flexibility to get into new things than adults. We (adults) follow a theoretical path, they follow a different path, they go there in an empirical way" (Microse7e, 1984, 10).

Figure 2: "Microcomputers: a small toy with potentialities equivalent to the 'monsters' of ten years ago..." (Microse7e, nº 1, March 1984, 9).

We bring some excerpts from this article because they illustrate the patterns related to the profile of gamers found in the sample analyzed. They show that the legitimate computer game players were young boys/teenagers, students, and thirsty for information about the code language that would allow them to modify and create their games or programs on a low-cost "toy" machine. Therefore, as in other countries, digital games served as a recognized and understandable interface between the male audience and new technologies.

According to Williams (2003), the popular conception of digital gaming as a purely youth-centric phenomenon is a media construct. This researcher states that throughout the 1980s, there was a predominant media framing in the US focused on the idea that adults could not understand games and did not have the skill and aptitude to play. Something that was very much incorporated into the marketing of the personal computer industry.

In this study, we observed that adults were more inclined to use computers for professional tasks (e.g., use of spreadsheets, writing texts, etc.) and encourage their children to use the machine as a pedagogical tool and a form of "techno-literacy." The prevailing view was that "the computing world was considered mysterious and difficult" for adults. Furthermore, having a computer was a way to keep the child(ren) safe at home to occupy their free time.

Microcomputers were also considered a fundamental stage in choosing "promising" professions linked to computers and technologies. For example, in Microse7e nº 3 (May 1984, 8), a testimony from a 19-year-old boy illustrates this pattern. He said: "I chose computer science because it will be the profession of the new times."

Both Microse7e and Mini Micro's praised the use of the games as a "serious" toy, indispensable for the mastery of the code language (Basic, Assembler, etc.) and of the hardware. We found that much attention was paid to the programming of games, completely silencing their artistic character and linked to the creative industries.

It was possible to identify that the narratives conveyed in the two magazines analyzed here had a strong influence creating a community of video game fans in Portugal. Both Microse7e and Mini Micro's functioned as a locus of convergence of knowledge and dissemination of the nascent gaming subculture, particularly the "spectrumaniacs"

niche. Thus, journalists, curious people, admirers, enthusiasts, computer experts, and computer game creators helped develop mechanisms to disseminate images, symbols, and values of this subculture on the rise in the country.

In this context, we identified two fundamental groups for the diffusion of this subculture. The first group concerns journalists and specialists (mostly computer experts) who were more concerned with "making the public aware of the transformations that computing is introducing into modern life" (Microse7e, nº 18, August 1985). They also publicized the initiatives of computer production and distribution companies and the "machine's playful possibilities" (see figure 3).

It was also concerned with showing the educational benefits of computers and the quality of Portuguese programmers who, as we have seen in some news reports, were silenced by the notoriety of Spanish programmers in the international press.

Figure 3: "One hundred thousand Spectrums sold in Portugal, until 1985. The machine's playful possibilities are one of the buyers' motivations" (Microse7e, nº 65, July 1988, 2).

Journalists and computer experts were also responsible for encouraging readers to participate in the various competitions for amateur programmers, microcomputer fairs, computer Olympics (see Figure 4), and controlling the piracy of game cassettes.

Figure 4: "Informatics Olympiad. Excellent technical level: the grey matter does not sleep." (Mini Micro's, nº 3, September 1984, 23).

The second group included amateur programmers and computer club members who had a regular presence in the local media (and not only in the computer magazines), mainly with their pokes and hints about games and software. Some teenage readers were also authors of rubrics related to pokes, hints, and game reviews in the two magazines analyzed.

Through the microcomputer clubs spread throughout the country, hobbyists mobilized a new public interested in computer games, including those who did not have a machine at home.

The popularity of games was also one of the effects of extensive software piracy among home computer enthusiasts. Many games went viral through copying and distributing game software among friends, a practice that was not illegal in Portugal in the 1980s. In addition, our results suggest that game piracy has also contributed to democratizing access to these new technologies for people with fewer economic resources. Something very similar to what happened in other countries in Europe (Saarikoski and Suominen, 2009), Asia (Jo, 2020; Nicoll, 2019), and Nigeria (Larkin, 2008). In Finland, for example, game piracy began to evolve as its cultural form in the mid-1980s. According to Saarikoski and Suominen (2009), even after home computer markets were established in the 1980s and 1990s, game piracy continued and developed as one of the subcultures of home computer hobbyists.

Larkin (2008, 77) suggests the notion of piracy "as a technical infrastructure that influences and shapes the forms of sociability, aesthetic production, and economic organization that mark urban life". This author clarifies that "examining piracy as a technical mode rather than a legal one helps pull into focus the form of piracy rather than its content. It looks at what piracy does and its resulting effect on people's experiences of temporality and subjectivity, on practices of watching and using technology, on the new forms of leisure and sociability, and in the forging of new aesthetic forms".

Although some news articles and readers' letters denounced this practice as immoral, we did not verify the existence of any anti-piracy campaign or movement consistently in the sample analysed. The lack of regulation that could control the copying and distribution of games may have hindered or contributed to the development of the digital games industry in Portugal in that period. Further research on this issue would help better understand the effect of piracy on the national digital games industry.

Women: the great absentees

The initial formation of a masculine culture around digital games in Portugal, aided by conceptions that technologies are inherently masculine, has promoted sectoral gender segregation in this sector. As discussed in other publications (Lima and Gouveia, 2020; Lima, Gouveia, and Pinto, 2021), this situation still exists in the national digital games industry. What was not clear to us was how the media's narratives specialized in computer science contributed to the concealment of women in the universe of games and microcomputers.

The resulting patterns in our analysis indicate that the binary view of gender was very present in news articles in the magazines analyzed. We identified a consistent pattern of technocratic male privilege manifested in framings ranging from girls' and women's lack of interest in technology to the advertising of microcomputers in which the man was in a position of machine dominance (see figure 5). Images and narratives reproduced the stereotype that technology and "computers depended on men" and not on humanity (men and women). It was common to use the word "man" in the sense of humanity in news articles.

The two genders (male and female) were framed differently in the media coverage analyzed. This is due to how Portuguese society in that period silenced women in public life, as we argued above. According to Vaquinhas (2002, 201), this silence is an old habit, inherited from the tradition of generations in which "the rules of decency imposed silence on a convenient woman. Under the sign of anonymity, they dedicated themselves to philanthropic works, collaborated in the periodical press, and sponsored social causes. Women who dared to claim to be journalists were rare, often hiding behind pseudonyms. Discretion was encouraged by the dominant culture."

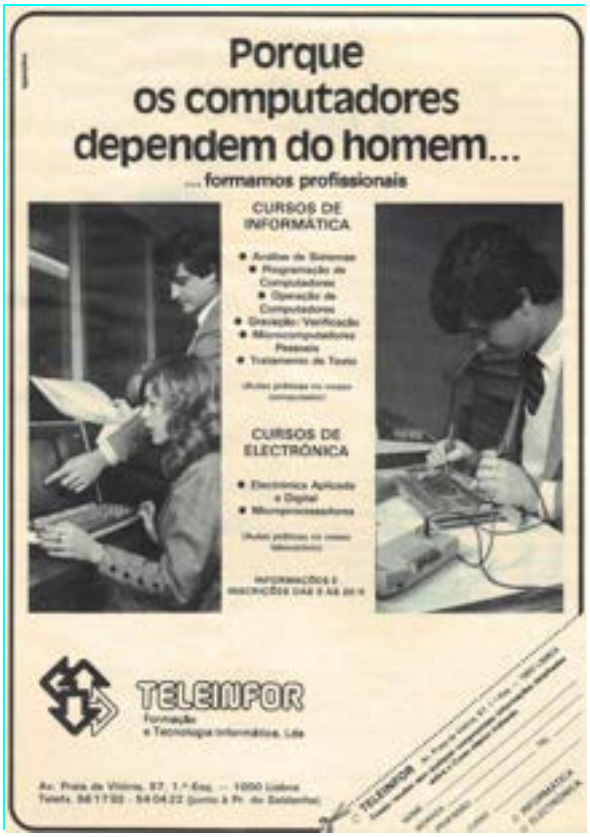

Figure 5: "Because computers depend on man..." (Mini Micro's, nº 1, June 1984, 11)

There was no discussion on this absence of women by the two magazines. With the title "Women: the great absentees," the magazine Mini Micro only mentions the lack of interest of Portuguese women in the world of microcomputers without arguing the reasons that caused this, as can be seen in these excerpts:

"From the opinions heard, there is total unanimity on the following: young or old, interested in games or technical applications, the consumers of 'micro' are, above all, men. Women are few and, when they do appear, they usually follow their husbands to be 'convinced' of the advantages of the new domestic appliance" (Mini Micro's, nº 1, 32).

"At this Olympiad, which around fifty young people attended, we only met one girl, 17 years old, who told us: I don't understand why only boys showed up at the Olympiad. There was a similar interest of girls in computer science in my class compared to boys" (Mini Micro's, nº 3, September 1984, 23).

The invisibility of women in these spaces (microcomputer shops, computer Olympics, micro clubs, etc.) contributed to reinforcing the stereotype that women were not

interested in games or technologies. Thus, these narratives perpetuated the functionalist view of the difference between the sexes. That is a view that naturalizes gender stereotypes, in which women are assigned to the private sphere while the public sphere is left to men (Dias, 2007).

According to Williams (2003), the male-centered framing of technology took on a framework of biological determinism in the early eighties. Snakes, snails, and puppy dog tails were considered natural ingredients, and the results of this were hopelessly violent boys. In Williams' analysis, this framing was often repeated during the 1980s and 1990s. For boys, games satisfied a basic desire, in which they were drawn to games on a deep and primal level. At the same time, women were described as sources of conflict and containment in coverage that framed men as technophiles and women as ignorant obstacles. Coverage of technology and video games was so male-centric that masculinity became an invisible baseline.

In Portugal, the specialized press helped crystallize the societal constructs around the binary gender in the nascent context of the community and fans formed in the 1980s. Another clear example of this was how computer games were directed to an imagined target population, given the worldwide tendency to relate technologies and games as a male "taste." This helped to distinguish those legitimately interested in gaming culture and exclude all those who did not fit this norm, including women, adults, the elderly, and blacks. Even when news articles did not mention gender, masculinity often functioned as the invisible norm.

CONCLUSION

This paper offers a historical analysis of the beginnings of media narratives about computer games in Portugal during the establishment of democracy and its entry into the European Economic Community in the 1980s. Therefore, it focuses on the narratives created by two specialized computer magazines about the place of digital games in the broader social context and how gender and age group issues were presented in these narratives.

We discuss the biased view of the development of the Portuguese videogame industry in historical analyses, in which males are given a pivotal role. At the same time, females are pushed into the background. This deconstruction is achieved by analyzing how the community of video game fans developed in the country, aided by the creation of magazines dedicated to technologies, particularly the ZX Spectrum phenomenon.

We also analyzed how the particular social, political, and economic context of the time intertwined and allowed the formation of different dynamics around and within the relationships established between users and technology, outsiders, and the uses of this technology, as well as the construction of stereotypes around this technology and the people who used it.

Such as many theorists put it, technology does not exist on its own. Its uses and development are influenced by its context. As such, the way technology is seen as good or bad is not an inherent characteristic. However, one of these characteristics is attributed to it by how its uses have been established in certain societies, by the specialists in those same technologies. It is these very specialists, as Ellul puts it, that create not only these rituals of use but also determine who can and cannot participate in them.

In this sense, the way that western cultures establish a binary view of society, in which male and female are seen as counterparts, where the public sphere and instrumental role is attributed to males and the private sphere and expressive role to females (Leandro,

2001, 145), we can understand how technologies, described as demanding a certain number of virtues from individuals (such as precision, exactness, seriousness, a realistic attitude, and, over everything else, the virtue of work) (Ellul, 1980), were more easily associated with the male gender very early on in this process. This can be seen in the survey results made by one of the magazines analyzed in this study, in which 95% of their readers identified as being male.

The fear of being bullied may also play a role in silencing, and the lack of female readers' participation in engaging with other readers through the magazines, as many of the competitions promoted within these magazines had some women winners, which shows that there was some female participation in this audience.

Another exciting finding is how younger users seemed to have an easier time using these new technologies, and a greater propensity to use them for recreational hobbies and creating their own programs. At the same time, adults (or, in this case, parents) saw the computer as a tool more suited as an aid to whatever tasks their job required. This seems to be one of the reasons for the way technologies have become associated with younger audiences. Another reason that emerged was the futuristic vision of how important technology-based professions, and how these discourses, so present in these magazines, easily and quickly took root in the minds of these young readers, who saw the opportunity to build a career in something they liked to do.

It was possible to identify that the narratives conveyed in the two magazines analyzed here had a strong influence creating a community of video game fans in Portugal. Both Microse7e and Mini Micro's functioned as a locus of convergence of knowledge and dissemination of the budding gaming subculture, particularly the "spectrumaniacs" niche. Finally, game journalists, amateur programmers and computer club members were especially useful in popularizing gaming culture and history and being influential creators of community spirit among gamers because they were almost always computer hobbyists themselves.

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ENDNOTES

1 The relationship between arts and gaming in Portugal was done by authors such as Gouveia (2010) and Carita (2015), among others.

2 This study is part of a broad research involving a multidisciplinary team. Full details can be found on the project website https://www.gameartandgenderequity.com/

3 We analyzed 66 issues of Microse7e, a publication of the society of journalists who called themselves free and independent of any party-political power. Further information at https://arquivos.rtp.pt/conteudos/6-o-aniversario-de-o-jornal/)

4 We analyzed 18 issues of Mini Micro's magazine, a publication that intended to be a space for dialogue and analysis of microcomputers.

5 Planeta Sinclair blog has been dedicated for several years to preserving and making available to the community content relevant to the history of the Sinclair family computers in Portugal. The Load ZX Spectrum Museum, based in Portugal, occasionally preserves items from donations that have historical relevance (e.g. Timex Portugal materials). More information at https://loadzx.com/

6 Information available at https://www.dn.pt/edicao-do-dia/27-ago-2018/joao-gabriel-silva-universidade-de-coimbra-e-uma-das-grandes-instituicoes-fundadoras-do-brasil-9762747.html