

“A club for all the Greeks”

Home Micros Computer Clubs between Magazines and Stores

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The article offers a history of home microcomputers in Greece, focusing on the role of computer clubs in the second half of the 1980s. It is based on a study of articles published in mostly all Greek computer-related periodicals of this period. We introduce the formation of computer clubs for home microcomputers in Greece by arguing that there were two types of clubs, open and closed. We then elaborate on the role of computer magazines in the development of computer clubs in Greece, and, also, the interaction between computer clubs and computer stores. The article challenges the image of the Greek user of the personal computer as a passive recipient of a fixed technology. Greek users shaped home microcomputers through club-mediated practices which included, but not limited to, the modification, copying and distribution of software and the sharing of technical expertise.

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Introduction

This article introduces the role of computer clubs in connection with the use of home microcomputers (known also as home micros) in Greece during the 1980s. It aims at contributing to the understanding of the interaction between users and home microcomputing technology in the historical context of the 1980s, which, in the Greek case, was characterized by minimal or no support given to computer users by either computer manufacturers or the state, amidst a parallel lack of formal / standardized education in computing.³ Club members had the opportunity to share experiences with

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3 For the rhetoric about the necessity of big computing technology projects in the 1980s see ARAPOSTATHIS Stathis, TYMPAS Aristotle (eds.), «Introduction. History of Technology in

home microcomputing technology, to exchange programs that they had created themselves, challenge the merits of commercial software, and contest established technical knowledge about machines, software and peripherals – all this while arguing in favor of the advantages of home microcomputing technology. Through collaboration and debate, computer clubs ushered in training in software, whilst promoting the distribution of it in both commercial and homemade forms, most usually as copies.

Clubs members were offered the opportunity to attend seminars that were organized by the institution that housed the computer club. These seminars were aimed at helping users taking their first steps with computing technology, and also with programming and learning about specialized commercial programs and computer languages. In addition, participation in a computer club gave access to hundreds, if not thousands, of software programs, usually copied ones. This was a critical aspect of the use of home microcomputers in the Greek sociotechnical environment of the 1980s, where the available software was limited, mostly imported and in any case expensive. Members of Greek computer clubs were provided with software through lists of copied software that covered almost every aspect of use, i. e. entertainment, applications, programming. Against international legislation, the club practices of software copying, cracking and distribution were advanced as an integral part of computer use.

Through the club, the user had the opportunity to maximise the use of the personal computer, and – furthermore – to enrich and negotiate the meanings ascribed to it by its designers, sellers, advertisers and other mediators. Exploring different aspects of the use of home microcomputers in the Greek sociotechnical framework, as reflected and represented in computer magazines and stores, we suggest here that we should reconsider the image of the user of the personal computer as a passive receiver of a ready-made technological product. Through a process that was rather open, users shaped the home micros in a way that brought it in line with the social, economic and cultural context of the time.

The research presented here is part of a broader study of Greek computer magazines of the 1980s.⁴ In this article we focus on *PIXEL*, from issue 1

Modern Greece from the Nineteenth century to the Present Day», *History of Technology*, 33/1 (2017), 1-17.

4 This broader study was launched by the one of the authors of this paper in 2003–2004. See TYMPAS Aristotle, *One Global Machine, Many Local Journals: The Proliferation of a Nation-specific Press in Electronic Computing for the Case of Greece*, Society for the History of Technology Annual Conference, Atlanta (GA) 2003; TYMPAS Aristotle, *For a Historiography of the Academic and Popular Journals and Periodicals of Computing Science and Technology: Mediating between the Ideal of an International (Universal) Machine and National Technological Realities*, 'Information Systems and Technologies in Organizations and Society' Workshop of the 'Networks of Europe' Network, Barcelona 2003. It has culminated in a series of graduate theses and doctoral dissertations, including the following:

(October – November – December 1983) to issue 69 (December 1989), *MicroMad*, from issue 1 (December 1985) to issue 27 (January 1989) and *SPRITE*, from issue 1 (September 1988) to issue 12 (October 1989). These three were the most important out of a list of 27 home micros magazines that we have so far been able to source.⁵ We were led to this research by theories of technological change which place the emphasis on the crucial mediation of a whole range of social groups and actors,⁶ and the importance of the reconfiguration of technology-in-use.⁷

Through their participation in the computer clubs proliferating in the period under consideration, communities of computer journalists and store owners became leading mediators of computer technology. They played a key role in opening the black box of home microcomputing technology so as to make its contents appropriate for domestic use.

Historiography of Computer Clubs: Perspectives and Issues

Historians of computing technology have shown that user clubs contributed substantially to the spread of microcomputers.⁸ The most striking example may be that of the *Homebrew Computer Club*, which, together with similar user groups, was key to the development and diffusion of

LEKKAS Theodore, *Public Image and User Communities of the Home Computers in Greece, 1980–1990*, Unpublished PhD thesis (Athens: University of Athens, 2014); KONSTA Harikleia, *The Public Image of Computing Technology in Greece, 1954–2004: Labor, Gender, Workplace, Educational Issues*, Unpublished PhD thesis (Athens: University of Athens, 2014).

- 5 For a complete list of the Greek computer magazines published in the 1980s, see the table in page 23, in: LEKKAS Theodore, “Computer Technology Periodicals and the Circulation of Personal Computer Knowledge in 1980s Greece”, *History of Technology*, 33/1 (2017), 224–251.
- 6 CORN Joe, “Educating the Enthusiast: Print and the Popularization of Technical Knowledge”, in: WRIGHT John L., *Possible Dreams*, Dearborn (MI) 1992, 19–33; CORN Joe, “‘Textualizing Technics’: Owner’s Manuals and the Reading of Objects”, in: MARTIN Ann Smart, GARRISON J. Ritchie (eds.), *American Material Culture. The Shape of the Field*, Winterthur (DE) 1997, 169–94; GUERREIRO-WILSON Robbie et al., “Information Systems and Technology in Organizations and Society: Review Essay”, in: SCHOT Johan et al. (eds.), *Tensions of Europe. Network First Plenary Conference Proceedings*, Budapest 2004; OLDENZIEL Ruth, DE LA BRUHÈZE Adri Albert, “Theorizing the Mediation Junction for Technology and Consumption”, in: DE LA BRUHÈZE Adri Albert, OLDENZIEL Ruth (eds.), *Manufacturing Technology, Manufacturing Consumers. The Making of Dutch Consumer Society*, Amsterdam 2009, 9–40; OLDENZIEL Ruth, DE LA BRUHÈZE Adri Albert, DE WIT Onno, “Europe’s Mediation Junction: Technology and Consumer Society in the 20th Century”, *History and Technology*, 21/1 (2005), 107–139.
- 7 OUDSHOORN Nelly, TREVOR J. Pinch, *How Users Matter The Co-Construction of Users and Technologies*, Cambridge (MA) 2003; EDGERTON David, “From Innovation to Use: Ten Eclectic Theses on the Historiography of Technology”, *History and Technology*, 16/2 (1999), 111–136; EDGERTON David, *The Shock of the Old. Technology and Global History since 1900*, Oxford 2007.
- 8 For a list of the computer groups in Unites States from 1940s to 1960s see CORTADA James W., *The Digital Flood. Diffusion of Information Technology across the United States, Europe, and Asia*, Oxford 2012, 57.

computing in the United States.⁹ Clubs like this offered a forum for users to exchange experiences and ideas and to solve technical problems in a collaborative manner.¹⁰ Many members of pioneer computer clubs, such as Adam Osborn, Steve Wozniak and Bill Gates, went on to join or form their own major companies in the field, thereby influencing greatly the course of computing technology.

Computer user groups have a long history. On August 22, 1955 a group of IBM 701 users from Los Angeles met in Santa Monica, California to ponder the possibility of jointly managing and planning their programming work so as to upgrade their installations for use in the new IBM 704, a technologically improved successor to the 701. Representatives of major companies were present, including the Rand Corporation, North American Aviation, Lockheed Aircraft Corporation and IBM.¹¹ The SHARE network, as they called themselves, sought to convey the values of “cooperation and communication”,¹² and evolved into a knowledge sharing hub for data professionals. Users of medium and large IBM computers could rely on it to exchange information and programs.¹³ SHARE aimed to promote cooperation between users of the digital computing equipment, so as to overcome the inadequacy and scarcity of IBM’s programming tools. Approximately 300 programs were distributed among SHARE members.¹⁴

SHARE members pushed certain legal limits while collaborating during their programming work. To defend themselves from accusations of illegality, they emphasized a rhetoric which underlined the voluntary character of their work which dominated their correspondence and processes. In addition to the development of a sharing culture, in the mid-1950s, when programmers belonged to no specific work community, SHARE also offered many of them a unique space to develop and demonstrate their abilities.¹⁵

Another example of computer club was that of DECUS (Digital Equipment Computer Users Society), which was formed in 1961, soon after the presentation of the PDP-1 model (Programmed Data Processor-1), the first computer from Digital Equipment Corporation (DEC). DECUS

9 SWAINE Michael, FREIBERGER Paul, *Fire in the Valley. The Birth and Death of the Personal Computer*, O’Reilly Media, Dallas 2014, 114.

10 CERUZZI Paul E., *Computing. A Concise History*, Cambridge (MA), 2012, 112; LEVY Steven, *Hackers: Heroes of the Computer Revolution*, Sebastopol (CA) 2010, 24–25, 180.

11 CERUZZI Paul E., *A History of Modern Computing*, Cambridge (MA) 2003, 88.

12 ARMER Paul, “SHARE—A Eulogy to Cooperative Effort”, *Annals of the History of Computing*, 2/2 (April 1980), 122–129.

13 CAMPBELL-KELLY Martin, *From Airline Reservations to Sonic the Hedgehog. A History of the Software Industry*, Cambridge (MA) 2003, 32–33; CAMPBELL-KELLY Martin, “The Development and Structure of the International Software Industry, 1950–1990”, *Business and Economic History*, 24 (Winter 1995), 81.

14 CAMPBELL-KELLY (see note 13), 33.

15 AKERA Atsushi, “Voluntarism and the Fruits of Collaboration: The IBM User’s Group Share”, *Technology and Culture*, 42/4 (2001), 710–736.

developed into one of the largest user communities worldwide, with over 100,000 members.¹⁶ The motivation behind DECUS was the need to exchange information and software for the PDP-1 computer. The practice of sharing the information was very important. Before starting to work on his own first version of a BASIC interpreter, Bill Gates obtained the source code for a version of BASIC from DECUS.¹⁷

Expertise in computer knowledge and the practice of exchanging this knowledge proved very popular in the following decades (1970s and 1980s), which were characterized by an increased importance of micro-computing and, later, personal computing technology.¹⁸ It was estimated that 50,000–250,000 people were involved in at least 500 computer clubs around the world in 1981.¹⁹ In many countries, early adopters of personal computers, computer hobbyists and students in information technology began to formulate computer clubs as a user support network.²⁰

“Open” vs “Closed” Computer Clubs for Home Micros: The Greek Case

Computer clubs have been studied from several angles. Leslie Haddon has focused on retrieving gender-related biases in the history of computer clubs in the United Kingdom.²¹ David Skinner has pointed to tensions between club members interested in computer games and amateurs seeking to

16 PEARSON Jamie Parker, *Digital at Work. Snapshots from the First Thirty-five Years*, Burlington (MA) 1992, 20.

17 ALLAN R. A., *A History of the Personal Computer. The People and the Technology*, London (ON) 2001, Chapter 6.3.

18 CAMPBELL-KELLY Martin, ASPRAY William, *Computer. A History of the Information Machine*, New York 1996, 222–226, 240–241; CERUZZI Paul E., *A History of Modern Computing*, Cambridge (MA) 2000, 182–189, 207–211.

19 MOSKOWITZ Robert, “Computer Clubs are a Big Hit”, *InfoWorld*, 3/9 (1981), 40.

20 SAARIKOSKI Petri, “Club Activity in the Early Phases of Microcomputing in Finland”, in: BUBENKO Janis, Impagliazzo John, Sølvsberg Arne (eds.), *History of Nordic Computing*, New York 2005, 277–287; WASIAK Patryk, “Playing and Copying. Social Practices of Home Computer Users in Poland during the 1980s”, in: ALBERTS Gerard, OLDENZIEL Ruth (eds.), *Hacking Europe*, London 2014, 129–150; LEKKAS, Theodore, “Legal Pirates Ltd.: home computing cultures in early 1980s Greece” in: ALBERTS Gerard, OLDENZIEL Ruth (eds.), *Hacking Europe*, London 2014, 73–103; LEAN, Thomas, “Inside a Day You Will Be Talking to It Like an Old Friend”: The Making and Remaking of Sinclair Personal Computing in 1980s Britain”, in: ALBERTS Gerard, OLDENZIEL Ruth (eds.), *Hacking Europe*, London 2014, 49–71; VERAART, Frank C. A., “Transnational (Dis)Connection in Localizing Personal Computing in the Netherlands, 1975–1990”, in: ALBERTS Gerard, OLDENZIEL Ruth (eds.), *Hacking Europe*, London 2014, 25–48; LUNGU Dov, STACHNIAK Zbigniew, “Following TRACE: The Computer Hobby Movement in Canada”, *Scientia Canadensis. Canadian Journal of the History of Science*, 34/1 (2011), 1–23; “Computers in 1980s Malta”, *Maltese History & Heritage*, <https://vassallohistory.wordpress.com/computers-in-1980s-malta/> (accessed on 3. 7. 2018).

21 HADDON Leslie G., *The Roots and Early History of the UK Home Computer Market. Origins of the Masculine Micro*, Unpublished doctoral dissertation, Imperial College, University of London, London 1988, 187.

experiment with programming on their home microcomputers.²² In Skinner's view, computer clubs often offered a kind of official regulating framework for the unofficial social networks that had already been formed around microcomputers and their use.²³ Petri Saarikoski has shown that computer clubs played a key role in the first users' exploration of the possibilities of microcomputers in the Nordic region.²⁴ Similarly, Dov Lungu and Zbigniew Stachniak have pointed out that the earliest Canadian computer hobby organization contributed significantly to the introduction and social acceptance of home computing in that country.²⁵

In the Greek case, computer clubs were formed around user practices and different models of imported home micros rather than a certain model of domestically manufactured computer. In our view, the computer clubs in 1980s Greece can be classified as either "open" or "closed". The latter class addressed users of a specific home micro model and was controlled by stores that were authorised resellers or wholesalers of this computer model. Membership to closed computer clubs was in most cases automatic, without the user's explicit consent. Purchasing a specific model was enough to give you access to newsletters, meetings, seminars or other training events organised at the store where the purchase was placed. Support to those who bought the specific model of home micro was the main aim of these clubs.

In a 1987 advertisement one can read that members of a closed club for users of Amstrad home micros could have access to several products and services, including "free educational and professional software programmes, constant help and updates, use of printers, Greek and foreign books and magazines, exchange of information and programmes between the members clubs, special prices in peripherals and books and seminars for amateur users". With few exceptions, this type of computer club ('closed') never became popular in Greece, due, firstly, to the limited number of big hardware importers able and willing to finance the operation of such computer clubs and, secondly, due to the absence of domestic manufacturers that would have been obliged to offer such products and services to their customers.

A very active "closed" computer club, operated by MEMOX, was founded in 1985. It served as the exclusive distributor of Commodore home computers in Greece up until the end of 1992. MEMOX was a family business but had soon grown enough to open several stores in Greece and a flagship central store in Athens (Sevastoupoleos 150, Ampelokipoi). It was at this

22 SKINNER David Ian, *Technology, Consumption and the Future. The Experience of Home Computing*, PhD thesis, Brunel University, 1992, 182-184, 310-313.

23 *Ibid.*, 181, 186.

24 SAARIKOSKI (see note 20).

25 LUNGU/STACHNIAK (see note 20).

**AMSTRAD
CLUB**

ΔΩΡΕΑΝ
ΣΥΜΜΕΤΟΧΗ

ΚΑΤΑΒΛΗΤΕΣ
ΤΙΜΕΣ



ΕΙΣΙΤΗ
ΠΡΟΣΒΟΛΗ
ΑΠΟΤΕ
ΕΠΙΤΟΝ

ΤΙΣ ΜΠΟΡΕΙΤΕ ΝΑ ΓΙΝΕΤΕ ΜΕΛΟΣ ΤΟΥ AMSTRAD CLUB

Αποστέλλοντας από εμάς οποιοδήποτε μοντέλο
H/Y AMSTRAD ή ΕΚΤΥΠΩΤΗ (ή από μας δωρεάν)
γίνετε ΣΥΝΕΛΑΣΣ ΔΩΡΕΑΝ ΜΕΛΟΣ
του CLUB

ΠΩΣ ΕΙΝΑΙ ΤΑ ΩΦΕΛΗ ΑΠΟ ΤΟ CLUB

- * ΔΩΡΕΑΝ ΕΚΠΑΙΔΕΥΤΙΚΑ ΚΑΙ ΒΡΑΧΕΙΑΜΑΤΙΚΑ ΠΡΟΓΡΑΜΜΑΤΑ
- * ΣΥΝΕΚΤΗ ΒΟΗΘΕΙΑ ΚΑΙ ΕΜΜΕΡΟΣΗ
- * ΧΡΗΣΗ ΕΚΤΥΠΩΤΩΝ
- * ΕΛΛΗΝΙΚΑ - ΞΕΝΟΓΛΩΣΣΑ ΒΙΒΛΙΑ ΚΑΙ ΠΕΡΙΟΔΙΚΑ
- * ΑΝΤΑΓΩΓΗ ΑΠΟΦΕΡΩΝ - ΠΡΟΓΡΑΜΜΑΤΩΝ ΜΕΤΑΞΥ ΤΩΝ ΜΕΛΩΝ ΤΩΝ CLUB
- * ΕΙΣΙΤΗΣ ΤΙΜΕΣ ΣΕ ΠΕΡΙΦΕΡΕΙΑΚΑ - ΒΙΒΛΙΑ ΔΩΚΕΤΕΣ ΣΕ ΤΙΜΗ ΠΡΟΣΦΩΡΑΣ
- * ΣΥΜΒΟΥΛΗ ΓΙΑ ΑΡΧΑΡΙΟΥΣ

ΣΤΟ AMSTRAD CLUB ΕΠΕΣΧΕ ΘΑ ΒΡΕΤΕ ΕΙΔΙΟΤΗΤΙΚΑ ΠΡΟΓΡΑΜΜΑΤΑ
ΓΙΑ ΟΛΟΥΣ ΤΟΥΣ ΤΥΠΟΥΣ H/Y ΤΗΣ AMSTRAD (ΑΙΘΩΡΑΚ, ΠΙΛΑΤΣ,
ΑΔΕΙΤΗΡΙΟΥ - ΜΑΡΚΑ - VIDEO CLUB - ΕΚΠΑΙΔΕΥΤΙΚΟ ΕΡΓΟ,
ΔΕΥΤΕΡΟΧΕΙΡΑ - ΗΜΕΡΟΛΟΓΙΟ-ΡΑΝΤΕΡΟΥ - ΑΣΤΕΡΗΝ)

ΠΩΛΗΣΗ ΧΩΝΔΡΙΚΗ - ΔΙΑΝΙΚΗ

BUSINESS MICROSYSTEMS

BUSINESS MICROSYSTEMS - ΗΡΕΨΟΥ 6 (ΜΟΥΣΕΙΟ) ΑΘΗΝΑ, ΤΗΛ.: 02.36.444.02.17.765

Fig. 1: Advertisement of the “closed” AMSTRAD Club. Source: *MicroMad* 10 (January 1987), p. 69.

store that all models of Commodore home micros, peripherals, software and various consumables were exhibited, for trial and prospective purchase. MEMOX created the Commodore Club, which was designed for all users that had bought a Commodore home micro. It provided these users with access to educational seminars (on Assembly, DOS, BASIC and other programming languages) and the right to borrow from a software library.²⁶

“Open” computer clubs addressed users of several home microcomputer models and covered many aspects of computer use. The main difference between the closed and the open clubs was that membership in the latter

26 PAPANIKOLAOU Aris, “Greek Software Houses in ‘80s and ‘90s – The Early days”, I am Retro, <http://www.iamretro.gr/greek-software-houses-in-80s-and-90s-the-early-days/> (accessed on 7.1.2017).

was independent of computer purchase. In most cases, a membership fee was required. These clubs operated through the computer stores and computer magazines which emerged as the leading mediating factors of the home microcomputing technology in 1980s Greece.²⁷ In contrast to closed computer clubs, open clubs encouraged aspects of use that could be accused of being illegal, like software copying and the modification of home computers. Open computer clubs formed an efficient and inventive communication nexus for users with varying interests, aims, abilities and mentalities. They allowed users to develop skills within a hospitable environment.

Open computer clubs encompassed official practices, like the organisation of programming seminars, as well as unofficial ones, where members-users could act according to their aspirations: they could practice programming, explore the potential of hardware and peripherals, exchange ideas and software, try a computer they considered buying or simply play a game.²⁸ Through such practices, the Greek computer clubs of this type allowed members to see, try and discuss all the elements of home microcomputing technology: hardware, software, peripheral equipment, documentation, etc. Software was of utmost importance to members since it was integral to the microcomputers' operation yet was expensive and scarce. Open club users could acquire copied software that they would otherwise not have access to. They could also circulate programmes they had written themselves.

In an advertisement, dating back to 1986, we can discern the main reason behind the creation and popularity of computer clubs in Greece: the lack of adequate software and support for home microcomputers: "Due to the lack of support in our country we created TI CLUB ATHENS. TI CLUB ATHENS has the support of TEXAS INSTRUMENTS INC themselves."²⁹ The amateur character of these computer clubs seemed more apparent than that of the closed ones. Greek home micros users who participated in open clubs were able to exchange information and practices without the fear of being accused of infringing laws related to software piracy. Most advertisements for this type of computer club emphasized the free and uncontrolled character of exchange through them.

After 1984, computer clubs in Greece developed dynamically, with Greek computer magazines hosting more and more news on their activities and foundation. Some of them published columns dedicated to computer clubs all over Greece. As was customary at that time, computer clubs

27 LEKKAS Theodore, "Computer Technology Periodicals and the Circulation of Personal Computer Knowledge in 1980s Greece", *History of Technology*, 33/1 (2017).

28 "The CLUBS ... and the clubs. Athens Microclub", *PIXEL*, 7 (February 1985), 38.

29 "Small Advertisements", *MicroMad*, 7 (September 1986), 88.

contributed to the magazines' content by publishing programme listings in the context of user support and by advertising their own activities. However, a reduction in advertisements and columns dedicated to them shows that interest in clubs declined towards the end of the 1980s.

Possible explanations for this development include the spread of affordable IBM-compatibles at the expense of home microcomputers. IBM's entry to the business of personal microcomputing in 1981 led to a gradual uniformity in the PC platform and to an explosion of PC clones, known as IBM PC compatibles, which provided the same functionality at a lower cost than IBM's machines. The clones were initially more expensive than the affordable home microcomputers produced by small computer manufacturers, but gradually their price decreased as many new companies making clones (and mainly based in Taiwan) tried hard to attract attention by offering low prices.³⁰

Moreover, the circulation of 16bit models of home micros gradually replaced the 8bit ones. This second generation of home microcomputers could reproduce impressive graphics and sound and contributed to their use for recreation instead of experimentation and programming, which were the uses which defined the first generation. By the early 1990s, most computer clubs had been transformed into professional initiatives and had lost much of the early amateur enthusiasm that defined them.

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“The PIXEL Club is You”: Computer Clubs and Magazines in 1980s Greece

The emergence of computer clubs overlapped with the early-1980s gathering of momentum by home micros in Greece.³¹ Computer clubs found a fertile field of development for several reasons, most notably the absence of formal state institutions for computer education. The Greek state was focused on issues of relevance to commercial policy and taxation. Neither

30 PORTER Martin, “PC Piracy: Growing by Leaps and Boundaries”, *PC Magazine*, 3/1 (1984), 185–190; BESHER Alexander, “Hong Kong’s Microcomputer Industry. Pirates Eye Market for IBM PC Clones”, *InfoWorld*, 12 (1984), 79–80; BESHER Alexander, “The Black-market Micros of Sham Shui Po”, *InfoWorld*, 12 (1984), 80–81. By 1983 there were more than 100 firms in Taiwan cloning the designs of Apple II and IBM PC. This explosion of cloning was facilitated by the open architecture of the IBM Architecture. SAXENIAN Annalee, “Taiwan’s Hsinchu Region: Imitator and Partner for Silicon Valley”, in: BRESNAHAN Timothy F., GAMBARDILLA A., *Building High-tech Clusters. Silicon Valley and Beyond*, Cambridge 2004; ASH R. F., GARVER J. W., PRIME P. B., *Taiwan’s Democracy. Economic and Political Challenges*, Abingdon 2011.

31 Similar activity has been identified in other countries, like Finland, where three user clubs shaped specific aspects of home microcomputers use: “The 1800 Users’ Club Association”, “Mikrofan – Computer Club Association of Pirkanmaa” and “Microprocessor Club of Salora Ltd”. SAARIKOSKI (see note 20), 277–287.

the state nor a state-related institution like public television ever developed any substantial policy to promote the use of home micros through education, or television programs, as did the BBC network in the United Kingdom through the BBC Computer Literacy Project during the late-1970s.³² No initiative aimed at promoting the understanding and use of home micro-computing or at helping to introduce them to new environments (such as public school classrooms and private homes), even though the number of Greek users that focused on programming and in-depth computer technical knowledge was at the time rapidly increasing.

Greek users of home micros were eager to exchange experiences, discuss different aspects of them and to exchange technical expertise and material in connection with the new technology. Columns where users could discuss their experiences were especially popular. In some cases the decision to launch a new computer magazine was shaped by the explicit need for such user discussion fora. *PIXEL* was actually formed by user feedback. More specifically, it emerged out of user pressure to publish more listings, attached to the parent magazine *Computer for All* (*Computer για Όλους*). From the first issue, *PIXEL* made clear that its emergence was a response to the need of an increasing number of amateur users for new programs. According to N. Manousos, the Chief Editor of *PIXEL* at the time:

“The need for the creation of such a magazine became evident through a questionnaire, published in the 5th issue of *Computer for All*, where a great number of users asked for more such programs. As a response to this feedback we launched *PIXEL*, the first Greek magazine that focuses on program listings for the most popular micros in the Greek market.”³³

The relationship between computer users and computer magazines was shaped by the fluid and amateur character of home microcomputing during the first half of the decade. Early computer magazines were overdetermined by a comradeship, a sense of being part of a family that included, in addition to the magazines, computer stores/retailers and users. Publications supporting computer clubs remained amateurish throughout the 1980s and thus managed to cultivate close ties between publishers/

32 BBC, Continuing Education Television. Computer Literacy Project, London 1981, <http://www.computinghistory.org.uk/pdf/acorn/BBC-Computer-Literacy-Project.pdf> (accessed on 3. 7. 2018); SALKELD Robert, “BBC Computer Literacy Project”, *Media in Education and Development*, 15/2 (June 1982), 67–70; BLYTH Tilly, “Computing for the Masses? Constructing a British Culture of Computing in the Home”, in: TATNALL Arthur (ed.), *Reflections on the History of Computing. Preserving Memories and Sharing Stories* (IFIP Advances in Information and Communication Technology), Heidelberg 2012, 231–242; LEAN Tom, *Electronic Dreams. How 1980s Britain Learned to Love the Computer*, London 2016, 192–200.

33 MANOUSOS Nikos, “Letter from the Editor” [Γράμμα από τον Εκδότη], *PIXEL*, 1 (November–December 1983), 3.



Fig. 2: "5 Years Compupress!!!!". Source: PIXEL 42 (March 1988), 12.

editors and readers/users. For an example of a family tie we may mention *PIXEL*'s decision to publish photographs of its crew during personal moments of celebration on the occasion of the five year anniversary of the Compupress foundation.³⁴

PIXEL became the most successful publication in the field of computers in Greece during the 1980s, surpassing *Computer for All*, of which it was initially an insert. It gradually acquired a following of almost 20,000 readers.³⁵ Its reader basis remained strong throughout the 1980s. Membership on the order of tens of thousands followers was also achieved by the computer

34 "Events. Our celebration" [Εκδηλώσεις. Η δική μας γιορτή], *PIXEL*, 42 (March 1988), 12.

35 ΚΟΥΣΕΡΑΣ George, "The history of the first USERS. An interview to the retromaniac society of amateur users", <http://www.tinyart.com/y7qqzh8d> (in Greek accessed on 3. 7. 2018).

magazine *RAM* during the following decade. This seems even more impressive if we take into account that, up until 1987, *PIXEL* addressed only users of home micros and not IBM compatibles.

The publication of *PIXEL* marked a turning point in the development of the Greek computer-related press. First, it signified the dominance of software over hardware. This culture emphasized practices like the modification, copying and distribution of software, through ignoring the guidelines of the manufacturers and state laws. Second, it emphasized the publication of program listings. The publication of listings helped create a dynamic means of communication with readers, since many of them negotiated with the magazine the publication of their own programmes, indicated errors and provided solutions to them. In some cases, *PIXEL* was used as a forum where readers/contributors could demonstrate their programming expertise in order to present themselves within the newly formed sociotechnical environment. Third, *PIXEL* focused on programming as being an expected and indispensable part of use of microcomputers. The emphasis in programming declined gradually in the late-1980s, yet remained, dominant throughout the decade.

Computer magazines ushered in the formation of their own computer clubs and both served as hubs bringing together the isolated Greek users. For example, the *PIXEL* magazine Club was launched under the following lines: “[...] our field was, and still is, an amateur field, for people who love what they do, without having any second thoughts about it. For people like this, for you, this magazine takes a great step. To bring all those interested in computers under the same roof, we are launching the *PIXEL* Club.”³⁶ The idea of networking was at the heart of the new initiative and the free exchange of ideas among users was discussed as an impetus to a wider and deeper use of computers, through the exchange of technical knowledge on software development and computer use in general. In the 1984 words of an anonymous *PIXEL* columnist:

“Should we also mention the great potential offered to an amateur user by the communication with others in the field of microcomputers? Or the need to save time and effort in the development and exchange of software?”³⁷ “The *PIXEL* Club aims mainly to bring personal computer users together and facilitate communication among them. This aim is, in our opinion, fundamental if we want to promote understanding of computer technology and programming.”³⁸

In this context, the *PIXEL* computer magazine took up the task of creating the first computer club formed by a technical press medium. It

36 “Why a User Club?” [Γιατί άραγε και λέσχη:], *PIXEL*, 2 (May–June 1984), 14.

37 “For Our Club to Begin” [Για να ξεκινήσει η Λέσχη μας], *PIXEL*, 3 (July–August 1984), 15.

38 “Our Club” [Η Λέσχη μας], *PIXEL*, 4 (September–October 1984), 116.

ΛΕΣΧΗ ΤΟΥ PIXEL
 ΝΑΙ, ΘΕΛΩ ΝΑ ΓΙΝΩ ΜΕΛΟΣ
 ΤΗΣ ΛΕΣΧΗΣ ΤΟΥ PIXEL
 ΤΟ ΟΝΟΜΑ ΜΟΥ ΕΙΝΑΙ:.....
 Η ΔΙΕΥΘΥΝΣΗ ΜΟΥ.....

 ΕΧΩ (Ή ΕΝΔΙΑΦΕΡΟΜΑΙ ΓΙΑ ΤΟΝ) ΥΠΟΛΟΓΙΣΤΗ:.....

Fig. 3: Application form for registering in the *PIXEL* computer club. Source: *PIXEL* 2 (May–June 1984), p. 14.

ΛΕΣΧΗ ΤΟΥ PIXEL
 ΝΑΙ, ΘΕΛΩ ΝΑ ΓΙΝΩ ΜΕΛΟΣ
 ΤΗΣ ΛΕΣΧΗΣ ΤΟΥ PIXEL
 ΟΝΟΜΑΤΕΠΩΝΥΜΟΝ: ΖΟΥΜΗ ΙΟΥΣΤΙΝΗ
 ΔΙΕΥΘΥΝΣΗ: ΔΙΣΤΟΧΟΥ 25 ΑΝΘ ΔΑΦΝΗ
 17235 ΑΘΗΝΑ
 ΤΗΛΕΦΩΝΟ: 9517765
 ΕΧΩ ΤΟΝ Η/Υ:
 ΕΝΔΙΑΦΕΡΟΜΑΙ ΓΙΑ ΤΟΝ Η/Υ: SPECTRAVIDEO SV:388
 & Commodore 64, VIC-20

Fig. 4: Application form number 200 as published in *PIXEL* containing personal details and preferences of the applicant. Source: *PIXEL* 5 (November–December 1984), p. 116.

contained special groups and even subgroups of users, based on their preferred microcomputer. The list of the first user groups included the following subgroups per home micro: SINCLAIR (ZX-81, Spectrum 16 and 48K, QL), ORIC (ORIC-1, ATMOS), COMMODORE (VIC-20 and COMMODORE 64), TEXAS (TI-99/4A), ATARI (400, 800, 600XL), BBC (A&B Model, Electron), NEWBRAIN, DRAGON, LYNX and BIT-90.³⁹

Its members were able to exchange expertise, information and user experiences with their computer of choice, software created by themselves or others, news about new or upcoming models and peripherals coming on the market.⁴⁰ Communication among users was facilitated by a special column in the magazine, the dispatch of newsletters to member's addresses and the distribution of each member's address to the rest of the group. We did not encounter any article mentioning life meetings, however.

39 Ibid.

40 Ibid.

The operation of computer clubs by and around magazines of the time was not strictly regulated by written rules and guidelines. Computer clubs resembled friendly gatherings of users, based on free initiatives. The only commitment expected was a minimum amount of activity to keep the club operational. Failure to sustain this single commitment, necessarily led to the group's disbanding. *PIXEL* encouraged initiatives involving users. The magazine collected and categorized user-related information and assigned temporary group directors from amongst members so as to smoothly launch and develop these initiatives. As the columnist responsible for the *PIXEL CLUB* operation informed: "The next step is for the temporary group directors to contact you by phone and arrange the group's first meeting. After the first meeting, a large part of the initiative will fall on you, the *PIXEL CLUB* members. It would be a mistake to view this *CLUB* as an executive centre that provides ready answers to your questions. Such a passive view of your membership in the *CLUB* undermines, we think, the great potential to be realized through the ingenuity and initiative of the members themselves. [...] Because, as we have said: the *PIXEL CLUB* is YOU."⁴¹

Even though there was experience with clubs abroad, which was frequently useful, considerable effort was required to tailor home microcomputer computer clubs to the Greek social environment. This was clearly explained in the column dedicated to the operation of the *PIXEL CLUB* in 1984: "[...] so, when an attempt is made to launch here something that already exists abroad, we end up going undecidedly back and forth between two possible solutions: to 'dryly' copy, or to adapt to our standards? Each solution has its own weaknesses, [...] adaptation, which is the ultimate goal, requires an infrastructure, something that traditionally is not appreciated in the Greek framework [...]."⁴²

As already mentioned, the operation of a computer club by *PIXEL* was perceived as an amateur activity. However, as the number of users wishing to join such a club increased, the magazine's management team gradually began to ask for a membership fee. The first 200 members received the title of founding members and were exempt from all charges, but all subsequent members were asked to pay a fee of 2000 Greek Drachmas (GRD),⁴³ roughly the equivalent of €15 today. This amount may seem small but it was actually 15% higher than the annual subscription to *PIXEL* or *Computer for All*, which at the same period (November–December 1984) was 1350 GRD.⁴⁴ This one-time fee caused some protest and was replaced, in the next issue, by two six-month instalments of 1000 GRD each. This

41 "For our club to begin" (see note 37), 15.

42 "Our Club" (see note 38), 116.

43 "Our Club" [Η Λέσχη μας], *PIXEL*, 5 (November–December 1984), 116.

44 User Club Application Form, *PIXEL*, 5 (November–December 1984), 118.

however, monopolise the information on the activities of Greek computer clubs. *MicroMad* computer magazine, for example, was one of the first to dedicate a column (“The Club’s Page”) to news and activities of computer clubs all over Greece.⁴⁷ Similarly, *SPRITE* magazine often published news regarding the operation of the Greek computer clubs in its column “News on Sprite”.

“The club that unites all the Greeks”: Computer Clubs and Stores in 1980s Greece

As we saw, the *PIXEL* Club was developed in connection with a computer magazine. Computer clubs were also formed through the initiatives of other mediating actors: authorized retailers, private educational institutions, and, more frequently, computer stores. For example, the computer store called *The Computer Club* hosted a computer club going by the same name, which grew out of its “customer support department”. Club membership allowed users to use the computers and peripherals available in the store. Interestingly, the store allowed beginner club members to borrow micro-computers and peripherals, for use at their own homes, so as to become acquainted and familiar with this new technology.⁴⁸ This practice was very important during the first years of the 1980s, when home computers, and especially peripherals like printers, were not affordable to many of the potential home micro users.

Another example is the “Club of Computer Friends”, which was launched by a computer store located at Stournara Street, a road in downtown Athens known as the “Greek Silicon Valley”. According to this club’s founding announcement, published in *PIXEL* in 1985, members could use, at no additional cost, all the club computers, including machines like the ORIC ATMOS, SPECTRUM, Commodore 64, New Brain, Amstrad, BBC Model B and the MSX. This announcement also stressed that the club provided printers for all the above microcomputers, which were necessary for printing program listings. Members actually had access to a library that contained “Greek and foreign computer literature as well as

47 “The Club’s Page” [Η Σελίδα των Clubs], *MicroMad*, 2 (February 1986), 30–31. According to G. Kourtesis, a columnist of *MicroMad*, the magazine also attempted to mediate in the communication of the information regarding the operations of the computer clubs. In 1985 he wrote: “[...] the list of clubs is already very extensive and since their activities are equally extensive, it is our duty to inform you every month about their actions and their news. This is the aim of the present column and I believe there is no lack of interest in the matter of CLUBS. KOURTESIS Giannis, “The Club’s Page” [Η Σελίδα των Clubs], *MicroMad*, 1 (December 1985), 12.

48 “The CLUBS ... and the Clubs” [τα CLUBS ... και τα clubs], *PIXEL*, 4 (September–October 1984), 10–11.



Fig. 7: "The club that unites all the Greeks". Advertisement of the Computer Club run by the computer store that went by the same name. Source: PIXEL 5 (November–December 1984), 11.

a unique collection of Greek and foreign computer magazines".⁴⁹ A user could become a club member by paying an entrance fee of 500 GRD. The user could then choose the length of his/her subscription and pay the corresponding fee.⁵⁰

Some of the computer clubs run by computer stores were part of international networks of clubs. This gave club members access to international newsletters and, more generally, experiences with home micro-computer use in various sociotechnical environments. The availability of this international network brought Greek users in contact with the more advanced technical knowledge of foreign computer clubs. The communication between the domestic and foreign computer clubs was realized

49 "A Few Words for the MICROCLUB" [Λίγα λόγια για το MICROCLUB], PIXEL, 9 (April 1985), 109.

50 A monthly subscription cost 1000 GRD while subscription for three months and six months cost 2500 GRD and 4000 GRD respectively.

through two main forms, typical and non-typical. The typical form required a kind of formal partnership, usually involving knowledge exchange and provision of the one club's newsletter through the other club; non-typical communication involved buying and reselling newsletters, user guides and software. *Computer Club* developed non-typical forms of communication with foreign computer clubs and referred to them in its newsletter. This newsletter, delivered to the members by mail, contained all kinds of computer-related news and advertisements.⁵¹ By 1985 computer clubs hosted by computer stores were already quite popular and their numbers kept increasing. In the inaugural September – October 1984 *PIXEL* column that was devoted to Greek user clubs we can read:⁵² “The smooth operation and great number of computer clubs is, as we all know, one of the main factors that help familiarise the public with computers and their applications. This column is launched with the aim to provide information on the activities of clubs and to provide answers to basic questions like where are they located, what they offer to potential members, how much a membership costs, what activities do they organize etc.”

Users who bought in 1988 the Atari ST home microcomputer from the *Computer Market* store at Botasi street could subscribe to the ATARI CLUB for free. The ATARI CLUB was advertised as if it was independent but it was actually strongly connected to the *Computer Market store*. This club was introduced by the store as part of its “promotion and user services sector”.⁵³ Like most clubs, the ATARI CLUB was represented as an attempt to collect and disseminate information on software and hardware for the ATARI ST computers. This was necessary because the support for 16bit computers, like the Atari, was inadequate in comparison to the 8bit home micros. As explained in a press release published in the magazine *SPRITE*, the club “started out as an idea to gather ATARI ST users, through the exchange of software and ideas”.⁵⁴ A photograph of the ATARI CLUB depicts the internal design of the computer store, showing the mezzanine that hosted the club. It contained the ATARI ST machines used for software copying and demonstrations.

Membership of the ATARI ST club included free access to software. As explained, “one of the main advantages of CLUB membership is the access to all programmes that are available in Greece or abroad for free”.⁵⁵ A club member could acquire up to three programmes per day for free.⁵⁶ These

51 “The CLUBS ... and the Clubs” (see note 48), 10–11.

52 Ibid.

53 “Facts... Rumors... Comments” [Γεγονότα... Φήμες... Σχόλια...], *PIXEL*, 44 (May 1988), 11.

54 “News on Sprite”, *SPRITE*, 1 (September 1988), 10.

55 Ibid.

56 Testimony of a home microcomputer user from that time, <http://turricanblog.blogspot.gr/2012/06/computer-market-2-atari-club-st.html> (accessed on 3. 7. 2018).



Fig. 8: A photograph of the ATARI CLUB hosted in the Computer Market 2 in the Exarcheia area (Solomou street 25A & Botasi street). Source: User testimony, <http://turricanblog.blogspot.gr/2012/06/computer-market-2-atari-club-st.html> (last access on 3. 7. 2018).

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Fig. 9: A photograph of a home micro user from the 1988 reveals a collection of diskettes with the “ATARI CLUB” logo which were contained copied software. Amongst them, one can recognize a diskette that contains a set of Greek font designed by the Greek company ELKAT S. A. Source: Ibid.

programmes were copied from the originals. They covered almost every aspect of microcomputer use, including recreation, education, professional use, and support of Greek fonts.⁵⁷ Club members could select the software of their choice from an extensive list of available programmes. The only cost for the member was that of the blank disks used by the club to copy the programmes. According to a relevant press release, an ATARI CLUB member had at his/her disposal several several hundred titles, which covered “public domain software, dozens of accessories and utilities, application programmes, programming languages and myriads of games [...] access to most of the Greek and international computer literature [...] a prospect for free computer training”.⁵⁸

The collaboration between computer magazines and computer stores resulted in a dynamic bond between the two, which offered the basis for additional services. For example, in July 1985, the *Microcomputer User Club*, hosted by the computer store MICROCLUB, addressed readers of *PIXEL* who wished to have their software (program listing) published in the magazine. Knowing that most users of home computers did not own a printer, the computer club offered its own printers for printing program listings, in order to mail them to the magazine for publication.⁵⁹ *PIXEL*'s collaboration with MICROCLUB included the publication of technical solutions to various problems, covering the gaps in the technical know-how provided by available manuals and instruction sheets that accompanied microcomputers and their peripherals.⁶⁰

Also in 1985, MICROCLUB introduced, in collaboration with *PIXEL*, an amateur software house comprised of members that would write software for home microcomputers on a voluntary basis. These programmes were not “professional”, as the main goal was to actively include users in software development in order to counterbalance the scarcity of software for the home micros. One of the aims of this initiative was the creation of educational software for high school classes.⁶¹ In the same spirit, a “mini software house” was announced in 1985 as part of the customer support offered to users of Amstrad's QL microcomputer. According to the announcement of this initiative, this “mini software house would be comprised of dedicated

57 Ibid.

58 “Facts... Rumors... Comments” (see note 53), 11.

59 *PIXEL*, 12 (July 1985), 17.

60 “Microclub. Microclub's News” [microclub. Τα νέα του microclub], *PIXEL*, 10 (May 1985), 116. It followed a whole series of related articles published in: *PIXEL*, 11 (June 1985), 116; *PIXEL*, 13 (August 1985), 116; *PIXEL*, 14 (September 1985), 97–98; *PIXEL*, 15 (October 1985), 99–101; *PIXEL*, 18 (January 1986), 107–108; *PIXEL*, 19 (February 1986), 97–99; *PIXEL*, 20 (March 1986), 85–87.

61 “Microclub. Microclub's News” [microclub. Τα νέα του microclub], *PIXEL*, 15 (October 1985), 98, and *PIXEL*, 18 (January 1986), 107.

Fig. 10: Advertisement of the User Club MICROCLUB: Seminars in Information Technology. The lower part of the advertisement is an application form. Source: *PIXEL* 9 (April 1985), 111.



admirers of computing who take it upon themselves to support QL users by creating software”.⁶²

Another important function of clubs was the organisation of seminars for both beginners and advanced users of home computers. Beginners could attend familiarisation seminars on home micros running on BASIC, which were provided for free to club members. Advanced users could attend seminars on programming languages like Pascal, Fortran, C, Cobol and the machine languages Z-80 and 6502.⁶³ These seminars focused both on hardware and software, with programming covering almost all the aspects of use of home microcomputers. As displayed in Figure 10, MICROCLUB organized seminars on various aspects of home microcomputing programming. The form to apply to these seminars was published in *PIXEL*.

The computer stores’ initiative to create computer clubs complemented user support efforts by software and hardware manufacturers. The added

62 KOURTESIS (see note 47), 12.

63 “Microclub. Microclub’s News” [microclub. Τα νέα του microclub], *PIXEL*, 18 (January 1986), 107.

advantage of unofficial support helped develop and employ practices beyond the scope of commercial companies. Through such participation, users also felt that they belonged to a community of users with similar needs and interests. In this manner they acquired the identity of active users gaining technical expertise and access to hardware, software and knowledge on all aspects of microcomputing.

Conclusion

In the early 1980s, a number of computer clubs were introduced so as to help in adapting the computer to local needs. Since there was no formal state education in the use of the personal computer, many users were driven to seek alternative channels of training on how to use their home micros. This gap was largely filled by the computer clubs. The Greek computer clubs played a more crucial role than did international clubs, because the Greek clubs addressed pressing local needs. Clubs domesticated home micros and adjusted them to the needs of the Greek users by providing appropriate programming knowledge and copied software.

In 1980s Greece, a populist socialist government sought to advance big computing technology projects in order to bring Greece closer to the technologically advanced countries of Europe. Our findings, however suggest that the advance of personal computing technology in Greece was actually influenced by the actions of ordinary users, who formed networks in the context of computer magazines and/or stores, rather independently of any state initiatives.

Computer magazines and stores featured as the core mediating actors in the development of computer use in this period. They ushered in the sharing of technical experiences and knowledge. To be sure, during this period there was neither a big Greek computer manufacturer nor a computer retail chain market. The Greek computer market was fragmented in hundreds of small stores soliciting business from consumers purchasing a home computer for small business, education or entertainment.

The imported home computing technology was mediated by these stores, which hosted computer clubs as part of their support and services to customers. Moreover, amateur users could rely on these clubs to help become familiar with machines, peripherals and software. On top of everything, joining a computer club that was hosted by a computer store provided access to copied commercial software. The availability of copied software was key for most users. In many cases amateur software houses were developed within computer clubs, by member-volunteers who produced microcomputer software.

Computer clubs were crucial factors fostering computer use in the 1980s. The closed clubs, and more so the open clubs, brought together users of different mindsets, aims, interests and capabilities, in a very productive manner. Club members were given a space to form attitudes and identities of use within a friendly environment, which encouraged practices that were not necessarily part of the rhetoric expressed by the manufacturers and official importers. The dominance of the open type of computer clubs reveals that an open culture of use, with the practice of sharing at its heart, was the predominant social paradigm of computer use in 1980s Greece.

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