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Encountering the national variations of the information society: the peculiarities of the 'Greek model'

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Abstract

Although the contemporary nation state has been facing considerable pressures both from global processes and from sub-national entities, it retains a significant role in socio-economic projects that articulate the national and sub-national level with the regional and the transnational. The recent eEurope programmes for the promotion of a knowledge-based competitive European Union are a case in point. These initiatives have been built on the concept of the 'information society', which has been systematically deployed to denote a set of significant economic and social transformations with implications for governance and potential for development and quality of life.

The underlying assumption of this paper is that instead of viewing 'information society' as an abstract device, one should examine the rich articulation of information and communication technologies (ICTs) with thick social, political and institutional contexts. Further, it claims that the national frame -always characterised by a historically developed, specific relationship between the state, the economy and the national society- necessarily inflects global information society tendencies and processes towards heterogeneous outcomes.

Examining the case of Greece, the paper attempts to highlight the ways in which the emerging information society (following EU goals and promoted through recent national initiatives) is in historical continuity with certain characteristics of the Greek social formation, namely incomplete industrialisation, complex state/industry relationships, clientelistic relations, anti-developmental state administration and weak civil society. All these can highlight potential advantages, impediments and implementation prospects and contribute to what can be called 'a Greek information society model'.

While information society initiatives have been studied in both developed and developing nations, limited research has been undertaken in semi-peripheral middle-income countries. In the context of the EU, the bulk of the research has been hitherto directed towards the European core or Scandinavian countries, while the south-European context has been relatively understudied. This is the gap that this paper seeks to fill by addressing the Greek case.

The paper concludes that the Greek state needs to play a more active/developmental role and that a number of national characteristics have to be taken into serious consideration, if the information society project is to contribute to economic development and welfare.

1. The evolution of information society in the EU

1.1. Early visions

The rapid technological developments in information and communication technologies (ICTs) since the late 1980s gave rise to a vision of the information society articulated by the EU circles since the early 1990s. This vision can be more or less taken to invoke 'the idea that the information revolution opens a path to new opportunities for sustainable growth and development, new potential for social inclusion and representation, and new ways to achieve social and cultural expression' (Mansell and Steinmueller 2000, p.9).

The 1993 European Commission White Paper *Growth, Competitiveness, Employment: The Challenges and Ways Forwards into the 21st Century* has been the first influential policy document communicating the vision of the information society. It reveals the importance attached by policy makers to the opportunities and challenges involved in the emergence of the information society, which it links with European competitiveness and prospects of growth and employment, particularly in skilled jobs and the creation of new services. At the same time, however, it warns of risks of unemployment, notably for people without skills, and potential social segregations, which have to be prevented through appropriate policies (European Commission 1994a).

The starting point of the White Paper is that the march of new technology is inescapable and the pervasive character of ICTs has a transformative role in production, organisation, management, labour relations, work patterns. These production and employment opportunities (including new forms of partnerships between organisations) should be taken up by European countries in order to gain a competitive advantage. The idea is that the information society provides opportunities to overcome chronic European structural problems, but that progressive change will be accompanied by some negative effects, which can, all the same, be tackled through social regulation (Mansell and Steinmueller 2000).

Subsequently, a report was produced for the meeting of the European Commission in March 1994 in Corfu. This report was the so-called Bangemann Report, after Martin Bangemann, the chair of the High-Level Group on the Information Society, which included nineteen senior members from government and industry. The report set out the following priorities: a) promoting the use of information technologies; b) providing basic services at a European level; c) creating an appropriate regulatory environment; d) developing training in the new technologies; e) improving technological and industrial performance (Bangemann 1994).

The need to be aware of the technological potential presented by ICTs across all sectors of society and the economy is also emphasised: managers 'need specific training to make them aware of the potential of ICTs and their organisational and socio-professional implications; technicians and other workers 'need to have specific ICT-related aspects better integrated into the training of their basic trade'; companies need to identify the 'strategic objectives, the functions and support to be provided by the system, and appropriate work organisations'; schoolchildren and students should

use ICTs 'in order to resolve general education and training problems' (Bangemann 1994, pp.112-113).

The White Paper and the Bangemann report therefore present a specific vision of the information society, which comprises the following elements:

- The process of technical change involving the diffusion of ICTs is irreversible
- Adopting and promoting these processes of change will bring economic growth, competitiveness and reduce unemployment in Europe
- To be at the forefront of these changes, policies are required in order to create a suitable regulatory environment, improve training and education, so that a common technical infrastructure is developed and deployed across Europe that will support information exchange and the production of new services
- Steps need to be taken to mitigate or prevent processes of exclusion that accompany these changes, as well as to preserve a European character of the information society
- Awareness of the scale and importance of the changes involved needs to be raised at all levels of society in Europe

(Mansell and Steinmueller, pp.16-17)

This approach is inescapably based on specific discourses emphasising certain dimensions, while concealing alternative scenarios. Goodwin and Spittle point out that 'Political debate over the information society…is firmly rooted in, and oriented to, a set of discursive, material and power relations articulated with reference to an historically established order of discourse' (Goodwin and Spittle 2002, p.244).

To this direction, the tone of the White Paper and the Bangemann report is quasi-deterministic, in the sense that the potential of ICTs to restructure production processes and to lead to new goods and services is taken as given. Moreover, the opportunities involved in the information society are highlighted, but at the same time the need to adapt to and exploit these technological capacities through building new regulatory frameworks and new skills is stressed. This is the rationale behind the creation of a common (pan-European) information area. This rhetoric clearly involves a dialectic of both opportunity and threat, in the sense that immediate action is required to reap significant benefits, while inertia will mean missing out on potential competitive advantages and as a result lag behind other major players like the US or Japan.

Given the lack of supra-national political resources, it was only the public sector at the national state level that could undertake certain dimensions of the vision, namely the creation of new skills through education and training programmes and the prevention of new forces of exclusion and geographical disparities, the promotion of institutional changes for the adoption of ICTs, the design of legal and regulatory frameworks suitable to the flexible, competitive and dynamic nature of ICTs. Still, the role of the state was not stressed enough in this early vision; on the contrary, it was the market that was given a prominent position to drive the process. Furthermore, although citizens' rights featured in the Bangemann document, citizens were often referred to as 'consumers', while their rights were rights of choice in the consumption of products and services and their quality of life was again synonymous with universal access to new commodities through new technologies.

The liberalisation of telecommunications is a very prominent feature in the Bangemann report, as it was considered instrumental in the evolution of the information society. Private initiatives were seen as a central source of communication infrastructure funding, while national and European authorities were to open up the sector by means of new regulatory frameworks. These proposals were followed in the action plan 'Europe towards the information society' designed by the Commission in July 1994. It contained four action lines: a) the adaptation of the regulatory framework for telecommunications to facilitate infrastructure liberalisation b) the promotion of network, services and content applications c) the harnessing of the social and cultural impacts of the information society d) concrete actions to promote the information society (European Commission 1994b; Sancho 2002). This plan was updated in 1996 (European Commission 1996).

The following years indeed witnessed a decline in the importance of the state in ICT policy through the liberalisation of traditionally state-protected national telecommunication sectors under continuous pressures from the private sector, which has been the main driver behind ICT diffusion in Europe, as well as from European Community authorities, during cycles of negotiation and strong contestation. These liberalisation, deregulation, and privatisation processes in Europe were placed in a framework of neoliberal thinking emphasising the inadequacy of the nation-state and the public sector to deal with new technological necessities and the need to introduce competition and let the market forces operate under independent regulatory authorities. They were also compatible with the overall market-driven approach to the European project, which has consistently sought economic rather than political integration.

In parallel, however, and in response to the 1994 Action Plan, the Commission set up in April 1995 a High-Level Expert Group so as to address the social aspects of the information society. This group, which involved a number of prominent academics and experts in ICTs challenged the doxa of technological determinism and prepared a report which approached technology as a social process, stressing its organisational, social and cultural embeddedness and moving away both from the uniformity of the information society and from the imperatives of deregulation that were ostensibly imposed by the dynamic technological properties of ICTs (High-Level Expert Group 1997).

Despite these alternative voices, however, the early debate over the information society in Europe was overall structured in terms of a series of discourses that privilege the economic at the expense of social and cultural factors, with resulting implications for the type of information society to be implemented. These derived from an institutional context that was not putting its emphasis on the social sustainability of the information society and should be seen as part of the overall character of the EU integration processes (Goodwin and Spittle 2002).

1.2. The Lisbon Strategy and the eEurope initiatives

The EU Lisbon summit in March 2000 signified a qualitative change in the unfolding of the information society. It starts with the realisation that Europe faces the

challenges of a transition to a knowledge society[1] and the need to set up a competitive platform that would at the same time sustain the European social model, maintaining social cohesion and cultural diversity. According to the conclusions of the summit, the Union seeks 'to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion' (Council of the European Union 2000).

The summit adopted a new open method of inter-state coordination for the acceleration of the translation of European goals into national policies: 'This method combines European coherence and respect for national diversity. It defines the required European guidelines in each policy domain, subsequently identifying best practices and reference indicators and, finally, materialising in national plans consisting of concrete targets and measures fitting each nation's case. Its purpose is to set up a vast process of innovation, learning and emulation between European countries, in which the European Commission may play a new role as a catalyst'. The aim is to develop a knowledge economy with social cohesion and to promote real convergence in Europe (Rodrigues 2003, pp.18-19).

This method initiates a decentralised approach in policy implementation, involving actively the Union, the member states, the regional and local actors, as well as social partners and civil society and NGOs in various forms of partnerships. The method of coordination is called 'open' because: a) European guidelines can be adapted to the national level b) best practices should be evaluated and adapted to the national and local context c) there is a distinction between reference indicators set up at the European level and concrete targets set by each member state for each indicator, in accordance with their point of departure d) monitoring and evaluation takes the national context into consideration e) the development of the method is open to the participation of civil society actors. The method contributes to the resurgence of a significant role for the national state, the participation of which is more than essential; its position into a context of governance arrangements involving national, subnational and transnational entities in reinforced, while its role assumes a kind of flexibility, as it can now function through intervention, regulation, enforcement, or as facilitator in new and indirect ways.

The new open method of coordination has been applied to a number of policy domains, including information society policies in the context of the 'eEurope 2002: An Information Society for All' initiative, which had been launched by the European Commission in December 1999. It initially set out ten priority areas for joint action by the Commission, the member states, industry and citizens. These included:

1) Bringing the Internet and multimedia to schools
2) Increasing competition to reduce prices and increase consumer choice

[1] A knowledge-based society has been defined as one where knowledge is being created, diffused and deployed in accelerated ways through ICTs; where increasingly sophisticated products codify and manage knowledge; and where there is a perception of knowledge as a strategic asset for individuals, firms and nations. Under these circumstances, one can speak of 'knowledge policies', namely policies regarding: knowledge creation (supporting basic and applied research, the culture industries, promoting interchanges between different cultures and groups); knowledge diffusion (promoting broadband networks, Internet access, content industries, education reforms); knowledge utilisation (supporting product and process innovation, knowledge management and learning in firms and public organisations, international partnerships for innovation) (Rodrigues 2003).

3) Advancing the necessary legal framework and expand the use of e-commerce
4) Ensuring high-speed Internet access
5) Facilitating the establishment of a European-wide infrastructure
6) Promoting the availability of risk capital for high-tech SMEs
7) Address the needs of the disabled in the information society
8) Maximising the use of ICTs for health monitoring, information access and care
9) Establishing safer and more efficient transport
10) Ensuring online citizen access to government information, services and decision-making processes

(European Commission 2000)

Placed under the open method of coordination, the eEurope initiatives have been operating under state consensus, i.e. acceptance on the part of the member states of the political commitment to implement it, in cooperation with other states, the European Parliament, the European Commission and other actors, according to predetermined schedules and national priorities (Sancho 2002). After the Lisbon summit and the informal Ministerial Conference on the Information and Knowledge Society a month later, the eEurope priorities were clustered around three main aims: a cheaper, faster and secure Internet b) investment in people and skills c) stimulation of the deployment of the Internet. An Action Plan was prepared afterwards by the Commission and was endorsed at the Feira Summit in June 2000, setting specific targets to be reached by specific deadlines by the public administration and the private sector in member states.

At the end of May 2003, the European Commission released a Communication entitled, 'eEurope 2005: An Information Society for All'. This initiative aims at providing favourable conditions for private investment, job creation, increased productivity, modernised public services, as well as circumstances for inclusion of firms and citizens in the global information society. In order to achieve this, the plan includes two actions, firstly to stimulate Internet services, applications and content and secondly to improve the underlying infrastructure through the promotion of broadband and increased awareness of security matters. The eEurope action plan also stresses the need to promote ICT skills and ICT-based opportunities, something that has been termed ‘e-inclusion’ (Eurostat 2003).

1.3. From the EU to the national context

The EU information society programmes, particularly the eEurope initiative, have had an impact on the formulation and introduction of strategic national programmes in the member states. At the same time policies have been transferred between European countries depending on successful examples and practices. Recently there have been certain degrees of convergence with regard to the tone and content of the information society policies adopted, which suggests that structures at a supranational level (mainly the EU, but indirectly political forces going beyond the EU level) influence significantly national policy directions. In parallel, the expansion of European professionals exchanging national examples and best practices has led to adoption, avoidance or modification of certain policies in accordance with the international experience. At the same time, the implementation of the initiative still rests with the authority and power of the member states.

Nonetheless, this does not mean that one should speak of a uniform information society in Europe. The image presented in quasi-deterministic terms in the early EU documents -based on a combination of technical infrastructure and human skills and emphasising the need for active policies to overcome impediments to its realisation- conceals the differentiations of this information society on a national or local level: 'There are many different configurations of the European information society. These configurations involve different industrial structures, different roles of users, and different approaches to policy in both the private and public sectors' (Mansell and Steinmueller 2000, p.18).

National variations have indeed been inescapable and have often been highlighted in comparative studies. Such variations are attributed to different pre-existing national political and socio-cultural circumstances, as well as different institutional structures and traditions, which are seen to influence the outcome of policy (Sancho 2002), but also of practice; as a result, 'we need to able to talk of the ways in which ICTs interact with multiply determined, social, technical, cultural and political relations to produce an unavoidably mixed set of outcomes –some good, others bad' (Goodwin and Spittle 2002, p.235).

2. The evolution of information society in Greece

2.1. Early vision: The 1995 White Paper

The first policy document regarding the information society in Greece was a White Paper titled 'The Greek Strategy for an Information Society: A Tool for Employment, Development and Quality of Life' (1995), which was presented in 1995 by the then Minister of Industry Costas Simitis and raised four goals to be pursued within the following 10-15 years. Specifically:

a) to limit the gap between Greece and the other EU countries in the use of advanced ICT infrastructure within 10 years
b) to ensure that a considerable proportion of Greek firms would have access to markets associated with the information infrastructure within 15 years
c) to ensure that family units increasingly have access to the information infrastructure within 15 years
d) to see that the greatest part of transactions with the state be carried out electronically within the following 15 years

(White Paper 1995).

A number of actions were proposed in the 1995 White Paper to pursue these goals, namely the development of a national infrastructure backbone, the establishment of a parliamentary committee to deal with the information society, the development of information networks for firms, the introduction of electronic transactions in public administration. Some of these actions have been pursued in the context of initiatives that are underway, while others have been subsequently revised in the light of new technological, political and institutional developments. Most of the actions have been funded by the second Community Support Framework Programme: the development of a national infrastructure linking universities, technological institutes and public research institutes, or the promotion of an e-commerce environment for business with

the establishment of a National Committee on Electronic Commerce, the application of EDI systems among enterprises, or actions to raise public awareness of e-commerce.

This first document served as a means of setting the information society agenda in the Greek context. It echoed the discourse of opportunity associated with the new technology, as well as the dangers of being left behind, and it presented the whole issue as a great challenge for Greece. It was mainly concerned with the inadequate national infrastructure, which limited electronic transactions and access to new products and services both for firms and for households in comparison with the other EU countries. In this respect, it was mainly orientated towards the developmental goal of limiting the technological gap, rather than being preoccupied with the social and cultural implications of the information society (Constantelou 2001).

2.2. Liberalisation of telecommunications

The main development related to ICTs in the 1990s in Greece (as in most EU countries) and the first major step towards the implementation of the information society has been the liberalisation of the telecommunication sector. Until the late 1980s the telecommunication sector in Greece as in most countries was based on a state monopoly in the provision of telephone and telecommunication services. In the wake of the early EU information society documents, where ICTs were articulated as providing new opportunities for growth and investment, as well as the general realisation of the poor performance of the public telecommunication operator (OTE), the Greek governments engaged in the gradual liberalisation of the sector. The deregulation of value-added services and mobile telephony services was enacted by Law 1892/90. Subsequently, Law 2075/92 served as a framework for the partial opening of the market, since it determined the provision of mobile telephone services by private operators (OTE was excluded). Following a public tender, two mobile telephony licenses were granted to STET Hellas S.A. and to Panafon S.A.

In 1994, Law 2246/94 replaced Law 2075/92 and initiated the liberalisation of all telecommunication services, apart from voice telephony and provision of the telecommunication infrastructure, both of which remained with OTE. Furthermore, this law enacted the full liberalisation of mobile telephony, allowing OTE to compete as well[2]. It also determined the responsibilities of the Ministry of Transport and Communications, while it introduced the establishment of an independent regulatory authority, the National Telecommunications and Post Commission (EETT). Subsequently, a new Law (2860/2000) was passed by the Greek Parliament in December 2000. This new law has five objectives: a) to protect the consumer b) to safeguard competition c) to safeguard personal information d) to ensure provision of universal service e) to ensure the growth of telecommunications[3] (OECD 2001 for a more detailed presentation).

[2] OTE indeed entered the mobile telephony market in April 1998 with its subsidiary company COSMOTE.

[3] While the EU deadline for full liberalisation in the provision of voice telephony and the associated network infrastructure was 1 January 1998, the Greek government had requested an extension until 1 January 2003 on the basis of the need of OTE to complete its modernisation programme. An extension was granted until 31 December 2000; after that date all restrictions on the provision of voice telephony and the network infrastructure have been removed.

2.3. The 1999 White Paper

In April 1999, a second White Paper was prepared by ten policy experts and advisors to the Prime Minister, based on international experience and feedback from the Ministries regarding the actions and steps that had been taken vis-à-vis the information society. This was more strategic and comprehensive and was titled *Greece in the Information Society: Strategy and Actions*. It declared the following:

'Information and telecommunication technologies change rapidly the way we work, play, communicate, and transform the bases of economic competition. They constitute a tool for the modernisation of the state and the competitiveness of enterprises, while creating new ways of work, new skills, and the need for continuing learning and adaptation of the education system. At the same time they allow the provision of better health, welfare, and environmental services, and contribute to the promotion of our cultural heritage and the Greek language. The government's concern is to ensure that the emerging Information Society will be a society for all, without discrimination between information haves and have-nots, and while safeguarding citizens' rights and the freedom of expression and information.

The overall government strategy for the Information Society is based on some basic principles: equal opportunities and access for all, the creation of an environment that is conducive to entrepreneurship and innovation, and safeguarding of personal freedoms and of the operation of democratic institutions.'
(White Paper 1999, p.5)

From the outset, the rhetoric reifying the potential of ICTs for competitiveness and better public services, present in the early EU documents, is prominent, together with the requirement of building human skills to take advantage of these opportunities. The imperative of universal access and the prevention of new types of social exclusion, reminiscent of similar concerns in EU documents, are also emphasised. In parallel, a particular character of the Greek information society is envisaged, one involving the promotion of Greek culture and language.

The requirement to adapt to new imperatives by advancing regulatory reform and broad institutional changes is time and again stressed in the White Paper: 'The changes that technology brings with it put to the test the adequacy of existing laws and impose their re-orientation from the institutions of the industrial society to those of the Information Society' (White Paper 1999, p.7). Again, the rhetoric of radical, qualitative shift to a new epoch reminds of the deterministic tone of the early EU documents, as well as the inadequacies of existing institutions to accommodate these transformative effects of new technologies. However, new technologies are also referred to as a 'tool' to achieve certain objectives.

The information society is defined in a way to highlight the potential benefits for Greece:

a) in terms of transparency and democracy, which presents opportunities for modernisation of the public administration
b) in terms of economies directly based on the generation, distribution and use of knowledge and information, something that provides opportunities for equal participation in the global marketplace for smaller countries like Greece

c) in terms of new types of employment, new skills, flexible employment structures, lifelong learning and education, something that could suit to the long-standing education ambitions traditionally encountered in the Greek family
d) in terms of quality of life, including better health and welfare services, better and safer transportation, conservation of the environment, preservation of cultural heritage, all domains in which Greece has to a smaller or larger extent traditionally suffered.

(White Paper 1999)

In parallel, certain aspects of the Greek society and culture that could contribute to the passage to an information society are also to be taken advantage of: e.g. resourcefulness and willingness to take risks, finding solutions through experimentation, deploying young people enthusiastic about technology within the family in order to overcome the technophobia of the older generation, taking advantage of the strong social fabric to communicate ideas about new technologies.

The bottom line is that 'In the emerging Information Society, Greece has a unique opportunity to upgrade its position in the global economy and to improve the quality of life of its citizens' (White Paper 1999, p.8) and that 'the largest benefits will go to societies that will be first in putting the new production tools to use for improving the quality of life of their citizens and their position in the international economic and political environment (ibid, p.10).

Given the relatively weak position of Greece in the global information society direction, the opportunities presented are accompanied by great challenges to which the state has to respond in order for benefits to be materialised:

a) modernisation of the economy, which is largely focused on traditional manufacturing and services, while there is a lack of research and investment in new products and process innovation, low rates of technology diffusion and a small ICT sector, single-product industries in many sectors and areas and geographical fragmentation, all of which are taken to inhibit development
b) more dynamic macroeconomic policy and structural interventions in the capital, labour and product and service markets so as to enhance investment, growth and employment in new technologies
c) initiatives to reform the operation of public administration, which is seen as a major impediment to the implementation of the information society, since obsolete structures, bureaucracy, lack of planning and staff, lack of feedback mechanisms prevent the assimilation of ICTs and the improvement of service provision
d) acceleration of the creation of appropriate telecommunication infrastructures under conditions of deregulation and a flexible regulatory framework supervised by the state
e) state interventions in the domain of education and vocational training in order to supply both material infrastructures and suitably qualified human resources with new skills and adaptability

The role of the state is consequently given prominence, in contrast with the EU documents. The role of the private sector is also considered very important in terms of

investment in new products and services and in the generation of growth and employment. As a result, the provision of a suitable environment for entrepreneurial activity is of capital significance. The implementation of the information society measures requires co-operation between the public and the private sector, firms and professionals active in the domain; it also proclaims that the shape of the information society will depend on how actively citizens participate in its formation. For the implementation of the strategy, interventions are foreseen on the organisational level (restructuring of IT services in the public sector, improvement of the legal framework for public IT projects), the regulatory level (reinforcement of regulatory bodies, reviewing of support mechanisms, improvement of evaluation procedures), as well as the executive planning and follow-up (Governmental Committee for the Information Society under the Prime Minister, establishment of an Informatics Board made up of public and private sector representatives). Finally, the establishment of an Observatory for the Information Society is foreseen so as to transfer relevant knowledge and practices from international experience.

The White Paper was a quite broad policy document, without specific focus on certain actions. Moreover, while it echoed some aspects of the early EU documents, it was also in line with the eEurope initiative, it reflected a wider concern about social implications and it was relatively tuned into the Greek reality, rather than merely repeating generalisations about the information society. Subsequently, nonetheless, it turned out that the government was less determined to implement it than originally thought (Constantelou 2001). Still, the advent of the third Community Support Framework and the launch of the eEurope initiative at the end of 1999 enabled the design of a more detailed information society approach.

2.4. The Operational Programme for the Information Society

Following from the White Paper, through the eEurope initiative and the Feira Summit of June 2000, the Greek government proposed a systematic Operational Programme for the Information Society (OPIS), linking it to the structural funds within the framework of the third European Community Support Framework[4]. This is an innovative horizontal programme, involving a number of government departments, and aiming to implement the essential features of the White Paper.

The OPIS aims to achieve two main objectives over the period 2000-2006: a) to provide better services to the citizen and improve the quality of life through the deployment of ICTs in public administration, health and welfare, transport and the environment; b) to promote development and build human potential through actions to increase competitiveness and employment and to put into place a suitable educational system (Constantelou 2001). To do so, it sets out the following four lines of action (shown with the corresponding shares of the total national and EU funding):

- Education and Culture (17%)
- Citizens and Quality of Life (37%)
- The Digital Economy and Employment (24%)
- Communications (19%)

[4] The Community Support Framework Programme for Greece consists of seven operational programmes, namely Improvement of Human Potential, Transport, Competitiveness, Agricultural Economy and Fishery, Quality of Life, Information Society, Regional Development. These are funded at 75% from national and EU funds. The OPIS develops synergies with actions of other programmes.

More specifically, the breakdown for each action line is as follows:

Education and culture

- Equipping all schools with the necessary IT, network and audio-visual equipment, creating or upgrading IT labs in universities and colleges.
- Establishing access to the Internet and multimedia resources by all Greek schools by the end of 2001 and a complete Intranet for the education system by 2006.
- Infrastructure development for tele-education for teachers and students throughout the country.
- Training of all teachers in the use of Internet and multimedia resources as an educational tool
- Creation of public Internet access points to ensure the access of youth to the Internet in less favoured areas.
- Administrative documentation and management of Greek cultural heritage, development of digital content and Internet resources with Greek cultural content
- Support of new forms of cultural expression that use IT-based media.

Citizens and quality of life

- Improved quality services to citizens and firms by the central, regional and local public administration
- Development of on-line applications, as well as use of ICTs to streamline and re-engineer procedures and communication within and between government departments, covering all of public administration (notably the fiscal, finance, social insurance, justice, regional development and emergency services domains)
- Use of ICTs in view of public sector modernization; training of public sector employees in new technologies and organisational methods
- Creation of geographical and environmental mapping and management information systems, linking central to regional and local government
- Use of ICTs to implement a comprehensive strategy for higher quality health and welfare services provision to all citizens and for the reform of the management of the health sector
- Introduction of telematics applications in land, sea and air transport

The Digital Economy and Employment

- Encouragement of the use of ICT applications by SMEs (in the primary, secondary and tertiary sector) in order to increase their productivity and competitiveness
- Developing infrastructure support for e-businesses (providing certification, prototyping, networking and information services)
- Improving conditions for high-tech business startups through the development of venture capital, incubators and other mechanisms
- Improvement of university-industry links through the support of partnerships between research and private sector entities
- Creation and dissemination of digital content and information (databases, libraries, etc.) relating to research needs

- Development of basic IT skills for the wider population, especially for socially disadvantaged groups, in connection with re-employment programmes
- Reduction of the existing gap between supply and demand of highly skilled professionals in the ICT field
- Promotion of employment by combined training and employment actions concerning the acquisition of working experience in ICT firms (trainees)
- Support of tele-work and tele-training pilot applications, especially in geographically remote areas

Communications

- Measures to enhance the liberalisation process in the telecommunications market (e.g. spaces for antennas, equipment for frequency spectrum management)
- Development of local-access network infrastructure in accordance with local needs in small towns and remote areas
- Support the development of broadband services for the public sector combined with special actions for the elderly and the disadvantaged
- Provision of access to people in less-favoured regions by using the existing postal agencies in remote areas as ICT access points

(OPIS 2000)

Two Ministries, namely the Ministry of National Economy and the Ministry of Interiors, Public Administration and Decentralisation, have been mainly allocated the responsibility of the running and supervision of the OPIS, in accordance with the guidelines of the eEurope initiative and the eEurope Action Plan of the Feira Summit.

According to legislation passed in 2000 (Law 2860/2000) several bodies have been set up to manage and implement the OPIS:

a) The Management Authority, operating under the Special Secretariat for the Information Society established within the Ministry of National Economy, which deals with the design, suggestion and approval of action lines for the OPIS, the follow-up and control of their implementation, as well as writing of annual techno-economic reports and supervision of financial, legal and logistical aspects
b) The Monitoring Committee comprising representatives of Ministries, public organisations, economic and social partners and non-governmental organisations and having a supervisory and advisory role
c) The Information Society S.A., a public not-for-profit organisation operating under the supervision of the Ministry of Interior, Public Administration and Decentralisation, which is charged with the administration of public call for tenders for projects seeking funding under the OPIS, while providing assistance and advice to government and other public and private institutions in the implementation of the OPIS
d) The Information Society Observatory, with the intention of cooperating with European initiatives to transfer expertise and best practice relevant with information society issues, as well as providing training tools and supervising benchmarking studies (this was put into place only in the summer of 2004)

(Constantelou 2001).

3. Current situation of the information society in Greece

Table 1 shows a series of indicators of ICT diffusion in Greece in 2000, when the OPIS had just begun. Greece was significantly behind the EU average in ICT infrastructure and use, with the exception of fixed and mobile telephones.

Indicator	Greece	EU-15
#telephone lines per 100 inhabitants	54	54
#cellular mobile subscriptions per 100 inhabitants	56	63
#personal computers per 100 inhabitants	7.1	28
#Internet users per 100 inhabitants	9.5	24.6
#personal computers per 100 teachers*	61	134
#personal computers per 100 students*	8	11

* January 2002

Table 1: Some measures of ICT diffusion, Greece and EU-15, 2000
Source: Eurostat 2003

Table 2 shows an increase in PC and Internet usage for individuals and PC and Internet possession for households between 2001 and 2003, but this increase cannot be characterised as take-off; on the contrary, falling rates are observed between 2003 and 2004 and household intentions to buy a PC and to connect to the Internet are dropping significantly. Moreover, the 2004 Internet usage (roughly 20%) is still far behind the 2004 average for the EU-15 (50%) or even for the EU-25 (47%).

Indicator	2001	2003	2004
% population over 15 using PC	20.8	27.1	25.9
% population over 15 using Internet	10.6	19.9	19.7
% population over 15 having email address	6.5	12.4	12.5
% population over 15 having personal Internet account	5.7	9.1	9.5
% households having PC	23.3	30.5	29.9
% households having Internet access	12.4*	15.2	17.1
% households intending to buy PC in next 6 months	6	7.5	4.9
% households intending to connect to Internet in next 6 months	1.1	8.6	4.3
% population having mobile phone	49.5	64.7	69.4

*in 2002

Table 2: Evolution of basic information society indicator in Greece
Source: EDET 2005

Furthermore, overall Internet use in the Greek population presents certain patterns of differentiation in terms of sex, age, educational level and geographical location:
i) The percentage of 23% for men is contrasted with 16% for women (2004).
ii) Very low use is observed in the over 55 age group, compared to 45% for men and 37% for women in the 16-24 group (2004). The group 15-17 in particular has experienced the highest increase (from 44.2% in 2002 to 53.5% in 2003), something attributed to a significant extent to the fact that the totality of secondary education units have been connected to the net according to OPIS priorities.

iii) Only 6% of men and 2% of women with primary education, and 31% of men and 25% of women with secondary education are connected, compared to 52% for men and 43% of women with higher education (2004).
iv) Only 9.7% of the population in rural areas are connected (2003).
(Eurostat 2005; EDET 2004a)

At the enterprise level, in 2003 92% of firms with 11-250 employees possessed PCs (94% in the EU), 82% were connected to the Internet (83% in the EU), while 48% had also a website (52% in the EU). These tendencies were reinforced through the "eBusiness" action of the OPIS, resulting in a 87% Internet connection in 2004 (90% for the EU-15). Very small enterprises (up to 10 employees) lagged significantly behind the EU average in 2003. The "Go-Online" programme for small enterprises, which subsidises initial purchase of ICT and also provides training, is expected to have an important contribution in this context (according to a recent survey, 60% of small entrepreneurs were of the opinion that the programme could sufficiently address their needs) (EDET 2004b; OPIS 2004).

The degree of broadband network diffusion in the EU remains low (about 5% of population according to the 2003 Summary of National Broadband Strategies of the European Commission), but in Greece it is significantly lower. Although the support of investment towards broadband infrastructures has been one of the fundamental priorities of the OPIS, in 2004 less than 1% of households and only 21% of enterprises were connected with broadband, percentages that are by far the lowest in the EU-15 and among the lowest even in the EU-25 (Eurostat 2005; OPIS 2004).

In the area of education and training, there has been considerable diffusion of ICTs and Internet in schools on a nationwide basis, with large numbers of teachers trained in ICT skills. In 2002, 100% of secondary education institutions were online (36% in 2000), while 47% of primary education institutions were online (only 3% in 2000). The national school net has been upgraded, 6204 ICT labs have been created (2002), telematic services and applications for students and teachers in higher education have been developed. With regard to training, there has been an increase in the percentage of those who have acquired IT skills in a school or university environment, from 22.8% in 2002 to 27.5% in 2003, something again linked with the progress of the OPIS in educational contexts (OPIS 2004). On the other hand, a 44% of those using a computer for professional purposes had received training in the workplace in 2002 (close to the EU-15 average of 49%).

Nonetheless, despite statistics suggesting ICT diffusion in primary and secondary education establishments, in many cases equipment was not used due to lack of education and technophobia. The percentages of those trained in ICTs remained considerably low compared to the EU average. Characteristically, the share of active population that used a computer for professional purposes was only 35% in 2002 (53% for EU-15). On the other hand, the share of computer professionals in total employment in 2002 was only 0.5% (1.7% for EU-15), something that also provides a clue as to Greece's position vis-à-vis the information society (Eurostat 2003).

In spite of the comprehensive character of the OPIS, initial results indicated that the programme was slow in its implementation. In 2004 Greece continued to lag behind and occupied the last position in the EU-15 in terms of all indicators of information

society development, with the exception of telephone lines and mobile phones. In particular, it was behind in terms of ICT infrastructures, despite recent improvements, while these infrastructures are expensive compared to EU standards. Services were also particularly expensive.

4. The Greek information society model

4.1. Initial Observations

Despite the clearly articulated vision of the OPIS, Greece is, broadly speaking, still significantly behind not only in terms of ICT diffusion, but with respect to the overall ensemble of technological, economic, social, cultural and institutional aspects of the information society project. This is not surprising, since Greece has historically shown receptiveness to the idea of modernisation at a first level, but has found difficulties in the actual absorption and deepening of new ways of living and doing (Voulgaris and Sotiropoulos 2002).

In order to understand the physiognomy of the information society, it might be fruitful to link the information society with certain characteristics of the Greek social formation in it historical evolution. Such an approach could provide a perspective to the information society project by looking into the strengths and weaknesses of the Greek economy, society and polity for possible explanations both of the forms that the Greek information society takes and of potential assets, impediments, and prospects of implementation. In particular we claim that the specific state/economy/society relation that has been historically formulated in Greece can serve as an explanatory device of current developments in the information society. We argue that these relations define several of the dimensions along which a national information society can be evaluated and contribute to what can be called a 'Greek model' of information society. Cultural issues have also to be taken into account and can also have explanatory value.

As a starting point, in the taxonomy of world system theory Greece is taken to belong neither to the capitalist centre (most developed western economies) nor to the periphery (developing countries), but rather to the semi-periphery. Moreover, it can be seen to belong to the late-late development paradigm, i.e. to the economies where industrialisation only happened after 1929 (in contrast with the late western European industrialisers like Germany, which were late only in comparison to England).

Late development has been associated with an increased role of the state or state-controlled institutions for direction. As a result, looking into the state entity and state structures can provide insights as to why late developers with similar starting points still follow different developmental paths and perform unevenly in the world economy (Mouzelis 1986). One can argue that the weaknesses of the information society project in Greece are related to the weak structure or insufficient leadership of the state, which are in turn linked with the state/economy/society relations in the Greek context.

4.2. The state, economic development and the IT sector in Greece

The gradual integration of the Greek economy into the world market and the process of urbanisation in the late 19th century gave an important role to the state for building

infrastructures, regulating prices and exports etc. Industrialisation implied the articulation of agriculture with industry, but because this took place in ineffective ways the domestic market that emerged was quite limited. Increasing urbanisation, as a result, led to rising unemployment for large segments of population drawn in urban centres. These processes coupled with the relatively early development of democracy and parliamentary institutions resulted in increasing pressures for those segments of urban population to be absorbed in the tertiary sector, particularly public bureaucracies, which in turn grew enormously. The public sector size augmented and public administration soon became complex, fragmented and inefficient. Politicians started to operate in ways that sought to build their own political capital by granting posts and favours, resulting in a vicious circle that impacted further on state mechanisms. In this manner, the state acquired a significantly anti-developmental character which prevented Greece from satisfactory industrialisation and development (Mouzelis 1995; Tsoukalas 1977).

One aspect of the Greek capitalist model refers to the relationship between the state and the state-owned, protected or subsidised industrial enterprises that developed some time during the interwar period or after WWII. When industrialisation took off in the 1930s, the already established state structures were dominant, with regard to a still weak industrial sector. This cultivated a tendency for the private economic sector to expand its protection and acquire increased subsidies, rather than improving its own capabilities and building its own momentum (Lyberaki and Tsakalotos 2002). The articulation of the private sector with the state operated through clientelistic relations, with certain economic groups enjoying privileged access to public resources. Through 'national champions' strategies, many firms were protected through high tariffs from foreign competition and most continued to enjoy state protection until well into the 1980s (Mouzelis 1986).

The Greek model of industrial capitalism that eventually emerged was one where economic rationality systematically succumbed to political imperatives and the accumulation of political capital through clientelistic relations. In contrast to western Europe in the 1950s and 1960s, Greece's incomplete industrialisation (based on light industry and consumer goods) generated an industrial structure overwhelmingly dominated by small firms. Clientelistic relations have also had an impact on the character of the state itself. In the post-1974 era, the Greek state has been considered a 'weak state', in the sense that public administration has systematically been subject to abusive interventions by successive governments, something which, in turn, has prevented the development of a public administrative culture of professionalism that could have acted as the motor of social reforms (Lyberaki and Tsakalotos 2002).

The historical characteristics of Greek capitalism and its relationship with the state are reflected in the current situation in the IT sector in Greece. The IT sector is still underdeveloped, characterised by a vast majority of small firms and only a very small number of large enterprises. The perceived absence of dynamism in the industry is put down to the articulation of the IT sector with other manufacturing branches, with the state and with the Greek society. In particular one can identify the following problematic dimensions:

- The IT firms, although private, have relied extensively on state promises for funding that either have not been materialised, or, have not been accompanied

by appropriate monitoring of industrial performance; this can be seen as an extension of the relationship of dependence of firms on the state observed in the industrial era. Furthermore, certain administrative details (e.g. procedures for acquiring funding) have continued to be quite complicated, often reflecting the enormous size and fragmentation of public administration that has been formed historically.

- The public sector itself has not been pursued adequate digitisation policies in public administration and has been inadequate both as provider and as consumer of ICTs; this has had a significant impact on the size of the internal IT market.

- A certain dynamic segment of the Greek market that tends to have an international outlook and could serve as a vehicle for attracting foreign investment has not been taken advantage of, while lack of synergies with foreign firms result in IT enterprises being limited to the internal small market.

(Voulgaris and Sotiropoulos 2002)

4.3. The state and (civil) society in Greece

The late industrialisation/development of Greece, as well as the role of the state in economic development, have also put their stamp the character of civil society[5]. The long-standing Ottoman rule, operating in despotic ways, prevented the existence of intermediate groups standing between ruler and people, as the ones that had developed in West Europe. Moreover, state mechanisms were in place well before industrial capitalist development, while the fact that they sprang during the end of the Ottoman empire inherited to the structure of the state certain authoritarian features. All the above proved detrimental to the development of formal civil society, resulting in civil society groups operating in close association with state interests (e.g. the trade unions) and in corporatist arrangements in which business and labour representatives were not equal partners in policy, as in West European corporatist systems (e.g. Germany), but in actual fact controlled by the state (Davaki 2001)

On the other hand, the political relationship between the state and civil society in Greece has not followed a universal integrative mode, but rather what has been called 'the incorporative-clientelistic mode' according to which the political rights of the population are determined through personalistic patron-client networks (Mouzelis 1995). Clientelism has had a significant impact in the lack of development of civil society, as it potentially draws each citizen towards individual political participation and thus impedes the formation of horizontal associations to promote common goals and interests (Sotiropoulos 1996). This in combination with the patronage of trade unions and employer associations by the state, the limited independence of social movements (e.g. the feminist movement) from state mechanisms, the lack of significant voluntary organisations and the close connections between the church and the state, the small number of ethnic minorities, all compose a picture of a weak civil society and of a nation underdeveloped in social capital.

[5] By civil society we denote societal interests, associations and institutions that exist outside of the state (Keane 1988).

In parallel, the prevalence of clientelism, together with incomplete industrialisation, lack of adequate social citizenship and welfare rights, weak trade unions and social movements, reliance on the family and disassociation from broader social collectivities, have contributed to social heterogeneity and have prevented the development of a universalistic and collective culture in Greece (Petmesidou 1996).

The weak civil society and the lack of collective civic spirit have had a negative impact on the evolution of the information society project. Firstly, the social networks and local communities that could help advance the information society by increasing awareness have either been absent or limited or characterised by inertia (the example of a remote village population in Norway that arranged at their own initiative excavation to facilitate the passage of fibre optic infrastructure is something uncommon in the Greek context). Secondly, the absence of a tradition of universality and the prevalence of clientelism, social heterogeneity and particularistic treatment has denied so far the possibility of an information society project implemented through broad processes of social inclusion despite the rhetoric expressed in the OPIS. Thirdly, low awareness of potential benefits and dominance of individualism and short-termism have resulted in the formation of resistance identities vis-à-vis the prospect of ICT-related social transformation. These identities are linked to some extent with technophobia, notably in older individuals, but they are overall determined by a lack of motivation to do things differently. Moreover, they can be particularly observed in public administration and bureaucracy, where reforms have been slow and difficult. Significantly, the culture of short-termism and short-sightedness has also impeded the realisation on a social level of multiplier economic and social effects resulting from the promotion of the information society. Characteristically, during deliberation procedures IT sector representatives have repeatedly reacted against the prospect of spending funds on education programmes (something that would indirectly boost demand) and have instead demanded channelling them towards direct purchases of IT equipment.

Nevertheless, the absence of strong civil society is to some extent compensated for by the strong presence of the family. The family is seen as a vehicle for the diffusion of ICTs in society, notably through young members who could form the 'avant-garde' of ICT inventiveness (something analogous to the 'hackers' in Finland).

On the cultural level, Castells and Himanen have argued that the success of the Finnish model of information society has depended on a strong national identity and a collective spirit, an orientation towards the future, a positive attitude towards technology (Castells and Himanen 2002). The Greek national identity had already developed before certain economic, political, cultural national institutions were established. Ideological inclusion thus preceded socio-political inclusion, which in any case operated through patronage networks. The identification with the nation has as a result taken an abstract and romantic form, rather than belief in national institutions. This has contributed to the formation of ambivalent national identities combining elements of patriotism with lack of collective spirit, or maintaining a romanticised view of 'Greekness' as superiority, coupled with a distrust towards Greek public institutions (Mouzelis 1995). This attitude, in combination with other cultural dimensions (e.g. the extrovert character of the people and the lifestyle) can possibly provide clues why new technologies have been deployed as instruments to

promote communication and acts of conspicuous co-consumption (e.g. showing-off latest mobile phone models in public gatherings) and not used for creative and productive purposes (e.g. infrastructures or PCs at work). The lack of a coherent national identity seems in any case to have denied a vehicle for the advancement of a broad socio-economic project such as the information society at the national level.

5. Conclusions

Greece has followed closely the tone of early EU reports in the formulation of an initial information society vision. Initial preoccupations had to do with the relative underdevelopment of the infrastructures of the country and the positioning in the development opportunities presented by ICTs. The liberalisation of telecommunications in the 1990s can be seen in the light of this initial disposition, in line with the international atmosphere. Subsequently and in parallel with the development of the eEurope initiatives, the country prepared more detailed and strategic plans with increased awareness both of the competitive potential and of the quality of life opportunities brought about by ICTs. The social and cultural dimensions of the information society were taken into consideration, as were also a number of socio-economic and cultural parameters historically endemic in the Greek reality.

The private sector is the motor of the information society in Greece, while the public sector presents inadequacies as provider of digital products and advanced applications, as well as consumer of digital products and services.

Unlike national cases where large ICT firms have acted as leading edge technological innovators (e.g. Nokia in Finland) the IT sector in Greece has been characterised by a very small number of large firms and a vast majority of small and very small enterprises. Despite adequate incorporation of the latest technologies, the sector is not competitive enough as it suffers from complex relationships with other productive entities and the public sector and follows the delays and anomalies of the Greek society and public sector (clientelistic relations, fragmentation, inefficiency and so on) (Voulgaris 2003).

The public sector in particular has been seen as a major impediment to the advancement of the information society project and its digitisation and rationalisation is regarded as a sine qua non for the ICT-related social transformation (Caloghirou 2003).

Private consumption, rather than production, drives the information society, resulting in the diffusion of simple infrastructures (e.g. for fixed or mobile telephony), while advanced infrastructures (e.g. related to Internet) are less spread.

Digital divides are observed, as ICTs are much more diffused in firms, than in households and individuals. ICTs are disproportionately diffused in large and medium enterprises in relation to small and very small enterprises. Digital divides are also observed among individuals, in terms of sex, age, education and geographical location.

The delays in the implementation of the information society in Greece are related to inadequate education and training programmes, lack of awareness, ignorance and

technophobia vis-à-vis the new technologies. The absence of significant civil society organisations and social networks has played a major role to this effect, but the family is seen as a vehicle for ICT diffusion and literacy.

These dimensions derive from specific features of the Greek historical formation, among else incomplete industrialisation, a complex relationship between the state, the economy and politics, a weak IT sector, a fragmented, over-bureaucratic, inefficient, unmotivated and resistant to change public administration, strong family and weak civil society and collective spirit, consumerist and individualist identities, contradictory cultural attitudes (traditionalism/nationalism vs. modernisation, techno-consumption vs. technophobia).

These dimensions bring forward the idiosyncracies of the Greek society and economy towards the path of the information society and give legitimacy to the term 'Greek model of information society'. They suggest that the Greek state seems to have a very important role to play in supporting and promoting the IT industry in a strategic manner that would avoid previous practices involving state-dependent enterprises that were detrimental for the economy. Political leadership seems to be overall necessary in the development of the Greek information society, since it is only through strong political will towards modernisation that the potential of ICTs can be exploited and chronic idiosyncratic weaknesses can be overcome.

The role of the Greek state has been particularly emphasised in the White Paper of 1999. Contrary to other European cases[6], characterised by an indirect mode of state intervention, in Greece it is called upon to assume a more direct role, partly due to the extensive reforms required in the state/economy relationship, as well as to the significant public administration interventions that will be required to improve public bureaucracy and services. Indeed the type of state activity and the degree of state intervention in the IT market, economy and society can be seen as a significant dimension of differentiation between information societies in Europe.

[6] The Digital Denmark 2000 report, for instance, suggests an indirect mode of state intervention, namely one seeking to improve environmental conditions by enhancing learning in society, by using state demand to boost production in certain areas and by improving communication between citizens/firms and public institutions through better organisation and administration (Falch and Henten 2000).

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"A study of Internet use by Greek and British academics. A contribution to the globalisation debate"

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1. Introduction

The rapid growth of new technologies has changed the communication process between people and has also reduced the cost of communication for individuals. The study examines the use of the Internet by a certain group—the academics, in two countries, Greece and the UK (United Kingdom), as well as find out similarities and differences in their use of the Internet. The main objectives of the study are: a) to identify the type of use of the Internet by academics, b) to examine how and if the Internet has affected the way academics work and the way they get their information[1], c) to examine the different use of the Internet among academics of different Departments and, finally, d) to compare and contrast the ways that academics use the Internet in two different countries within the process of globalisation.

Academics from Greece and the UK are part of this research. The reason for this choice is that it would be interesting to examine how this pioneer group uses the new medium in two different European countries. Has the different cultural background of these two groups affected the way that they acquire information and use the new medium? Has the globalisation process affected the academics in both countries? Do they use the Internet in the same way? Have the characteristics of each society and the differences in technology development in each country affected the use of this new medium? Some people believe that with globalisation today all people share the same experiences and use the same things, act in similar ways or they even develop the same habits. Is this really happening or is it simply a misconception that some people or certain nations try to pass on to people?

2. Theoretical Part of the Study

There is rich literature on the development of technology and a lot of theories that refer to the relation of technology and society. There are those who argue that the creation of and the need for technology are closely related to the needs of

[1] The term information includes news, communication and information that academics use for their research and teaching.

society. They see technology as a product of social process. That means that technology has developed and improved according to the needs of society, and is determined by society and its needs. From another point of view, the development of technology can be accidental (Williams, 1974:12), "but its significance lies in its wishes, which are held symptomatic of some of society or some quality of human nature, which are otherwise determined." Nobody, however, denies that when we talk about technology we should always see its uses as they relate to society. Technology is for sure closely related with society, whether it determines it or not.

Robins and Webster (1986:27) refer also to technological socialism. This projection rests on the adage that socialism is a vision, which is practically unreachable. The argument is that, thanks to IT, the dream can be fulfilled, even without the unpleasant implications of political struggle. The idea that through technology, we may produce a better society and that this can be achieved in an easy, evolutionary manner is a favoured theme of futurism. “It often merely suffuses prediction, making its presence felt in assurances that the information society will be a caring, communal, service-oriented one, but the appropriation of socialist language and vision can be quite explicit.”

The concept of technological determinism is found in all popular presentations of new technology. Technological determinism is an immensely powerful view of the nature of social change. According to Mackay (1999:46), new technologies appear as a result of an essentially internal process of research and development, which in turn triggers social change and process. Process, in particular, is the history of those inventions, which “created the modern world.” As Robins and Webster (1999:73) parallel this to “an alien, extra-social invasion, which cannot be prevented from effective massive changes in social arrangements.” The effects of technologies, whether direct or indirect, are as it were the rest of history.

According to Roszak (1998:105) "Ideas create information, not the other way round. Every fact grows from an idea; it is the answer to the question we could not ask in the first place if an idea has not been invented which isolated some

portion of the world, made it important, focused our attention, and stimulated quality." If we extend this point first comes the ideas and then according to the needs of the society the technology of the information is born.

Internet can be seen as the most recent development in communications technology. Although its development began in the 1960s- the Internet became known in the last decade. Different views have been expressed about the content and the value of the Internet. Some people think of it as a gigantic branch of computers connected to one another. Others see it as a collection of programmes, such as e-mail software and World Wide Web browsers. Another view expressed about the Internet is that it is a huge electronic resource or a network of computers that allows people to communicate. In more scientific terms, the Internet can be described as an ‘inter-network of autonomous networks built on the packet-switching pioneered in the early 1970s by ARPANET (Advanced, Research Project Agency). The development of the Inter-network Protocol (IP) enabled the true interpretability among different networks connected to the ARPANET and these inter-operating networks are collectively known as the Internet’ (Kahin, 1991:49). Most industry commentators will agree with a simpler description of the Internet as 'a network of the networks'.

The Internet allows for the international of electronic e-mail, data and text files between mainframe-based computer networks accessible through terminals and microcomputers. The Internet is in essence a computer network that links one public and private computer network and 100,000 computers around the world (Krol, 1992). It provides the users with access to information and with the use of email with access to communication. The Internet also provides information to its users through electronic publishing. The development of electronic publishing offers several advantages to the profession that traditional paper based publishing does not provide. Newspapers and radio stations have a site on the Internet where the user can find all the information he/she needs. The user of the Internet is able to read the daily news through the Internet.

With the improvement of technology today new patterns of communication have been developed. The restructuring of information and image spaces and the production of new communication geography together with the creation of global networks and an international space of information are some of the aspects of technological development. The most recent technological inventions those of radio, television and the Internet have affected the nature of human communication. According to Mohamedi (1995:122), "more and more the world is wired as a global audience with access to electronic media." The radio was the first medium—after the telephone and telegraph, that was able to transmit information all around the world. People were able to listen to what was happening everywhere. Television was another important invention of technology. Information and picture can travel in the whole world today. Although it developed in the 1960s, the Internet became known in the last decade. One of the main reasons of the fast growth of the Internet has been the ease of communication. A computer, a telephone line and a modem are enough to communicate via e-mail. The information available on the Internet is another reason for the rapid expansion of the medium. Some of the facilities available over the Internet include e-mail, Usenet discussion groups, and maybe the most important one—the World Wide Web (WWW). Different views are expressed about the content and the value of the Internet. It is referred to as a huge electronic resource or a network of computers that allows people to communicate but at times as a jargon-ridden techno-jungle.

With the development of the satellite and cable television, people around the world, have the chance, with a cost of course, to look at the same picture and the same channels, watch the same programmes, and share the same experiences. This has resulted in a tendency of globalisation.

According to Featherstone (1990:143), "as a consequence of these technological changes more and more people are now involved with more than one culture." People have the ability to see other cultures and sometimes to adopt things and values that belong to those other cultures. Waters (1995:3), defines globalisation as "a social process in which the constrains of geography on social and cultural agreements recede and in which people become increasingly aware that they are

receded". Giddens (in Curran & Gurevitch, 1991:118) on the other hand believes that "globalisation involves time-space distinction."

Featherstone and Lash (in Featherstone, Lash and Robertson, 1995:1) believe that globalisation is a term used mainly to refer to "changes that have occurred in the structure of economy. It is used to describe a new stage of historical development, whereby the authority and power of the nation is undermined since it ceases to be the key player in determining policies and regulations".

Under the term of globalisation "the nations of the states are seen to constitute a global context in which the world becomes a whole place" (Featherstone, 1990:5). The relationship between different nations has proceeded to a more complex level than simple interaction. All nations tend to form a single unity. Regulation applies at an international level and seems to be outside the control of any one nation, which cannot individually determine its individual course of action. People with different cultural backgrounds have to conform and adjust to this new reality and this is where problems begin to appear. First of all, most nations try to become more powerful and more influential in this new reality. This means that it is actually a mistake to see global and local influences as two completely separate and incompatible entities. Rather for the global to exist, it relies heavily on the local. Thus local is actually included in the notion of global (Robertson in Featherstone and Lash, 1995). A second issue concerning globalisation refers to the structure of economy. Those that believe in globalisation, believe that international companies are those which define the regulations of the market and the global economy in general. However, we should pay attention to the fact that all of these powerful companies have to first subject themselves to some national regulations and laws laid by the country they belong. It is only then, within a particular national policy framework that they can operate at an international level.

Academics have always been seen as a group of people who help the development of technology as they spend a lot of their time on research. Moreover, they are also seen as the pioneer group, a group of people in each society that is closely related to the changes that occur and also as a group of

people leading these changes. Furthermore, academics are familiar with computer facilities and the Internet as they use it for their work.

3. Related Research

One of the first research studies related with Internet services and the academic work was conducted in 1992 in Australia, examining the way academics in Australian Universities use the Australian Academic Research Network (AARNET) to support their professional roles. The study's aim was to identify why the academics use the AARNET. This exploratory study examined three aspects of the Internet use, firstly, which AARNET service the academics use, secondly for what purpose they use it and lastly what are the benefits of the AARNET use. The sample for this research was 20 academics in each Department all of them users of the Internet from 13 universities in Australia. Questionnaires were sent to the academics by e-mail and 79% of the academics responded. Most of the academics that answered had worked in the university for more than 10 years. The results of the survey showed that the service that the Australian academics used more, 99% of the responders, was the e-mail service. Most of the academics used the Internet to support their research. Finally, the majority of the sample acknowledged that they perceived a benefit for each aspect of the academic role from the Internet. Australian AARNET was an important and efficient medium for the academics both as a contact with the rest of the world and as a teaching medium. There was an increased use of the Internet by the academics, even though there were problems of training and use of the new medium.

Another study about the use of the Internet by the academics was conducted in the US in 1994. The purposes of the study were a) to fill in the lack of available literature in the area b) to test new methodological tools, since few 'formal' surveys had been conducted on the Internet c) to secure a higher response rate than from traditional survey methodology due to access to a large number of potential respondents and finally d) to do this at no extra cost since the cost of distribution would be the same for many respondents as well as for a few.

The survey consisted of 14 specific contact areas and included questions about computer experience of the academics, use of e-mail and a variety of Internet sources. The survey was sent to 231 randomly chosen distribution groups from a list of Scholarly Conference assembled by D.K. Kavacs and her directory team at Kent State University. A total of 1,536 questionnaires were completed. Most of the sample that answered to the survey had used computers for more than 13 years and had used e-mail facilities for almost 6 years. Most of the academics used their e-mail in order to communicate with other academics. Most of them did not use frequently Telnet resources that were available on the Internet but preferred to use Gopher quite often. What were the main conclusions of the survey? Firstly, that the Internet was currently a popular method among academics with computer experience to 'do business.' They believed that since business was primarily considered communication among individuals or discussion groups, this could be accomplished through using e-mail. They used the Internet for database access. The second point ensuing from this research study was that the Internet had a number of advantages over other resources being extremely fast, easily accessible, global and interactive, as it outcomes the barriers of time and distance. The main disadvantages viewed in this research were that specialised knowledge was required to access and use the Internet. Also many academics were still not aware of the Internet resources and possibilities and some countries did not have access.

A Ph.D. study about the Internet use in the academia was completed in 1995 by N. Ashley in the US. The study examined the network information retrieval (NIR) among 888 faculty members at the University of Arizona with Internet accessible computer accounts. Ashley reported that respondents from various colleges at the university used 20-39% of available NIR technologies but also indicated that NIR were at an early stage. Questionnaires were sent to all faculty members asking how and why they used the NIR technologies.

White conducted another Ph.D. study in the US, in 1995. He examined a specific segment of faculty members, but included non-users as well, distributing the survey by mail to faculty members in professional organisations related to the study of mass communication, computer behaviour advertising

and public relations. The study found that the majority of faculty members, a 73% of those that responded, used 'computer mediated communications.' Younger faculty members and female members showed a significant higher use in comparison with the rest of the respondents.

In 1994, Chu reported that an e-mail survey administered to faculty at 2 U.S. universities, showed that there were positive relationships between e-mail use and such variables as speciality and experience with computers. Negative correlation, however, existed between age and the use of e-mail. The majority of the faculty members (92%) included in the study used e-mail in scientific communication.

Another important research took place in the Hebrew University of Jerusalem in 1995. The main objective of this study was to verify the influence of a number of parameters on those uses: a) the field and research interests of faculty members b) formal training in the use of the Internet via courses and workshops c) self instruction in the use of the Internet by means of manuals d) general use of computers e) perceived need for information this network can provide. Questionnaires were sent by e-mail to faculty members. 56% of them answered. Afterwards, mail questionnaires were sent to those that had not answered via e-mail. In the study both e-mail and posted questionnaires were sent to 718 faculty members of Humanities and Social Science group (Homsoc) and to the Science and Agriculture group (Sciagr).

The first results showed that the members of each faculty used the Internet differently. For example, (Lazinger, 1997:35), the return rate from the Sciagr subgroup Mathematics, Computer Science and Physics was lower (58.6%) than the return from Humsoc subgroup Sociology, Psychology and Communication (67.4%). 80.3% of the people that answered the questionnaires claimed that they used the Internet a lot but they used it mainly for their e-mail. Another important use of the Internet for the academics in Jerusalem was communication with the rest of the academics around the world in order to co-operate with other academics either in their own country or abroad. They had the ability to conduct research with distant colleagues via the Internet. 86% of

the academics from both groups claimed that they learnt how to use the Internet without receiving any help. Academics from the Sciagr group used the Internet more for their research in comparison with the Humsoc group. Professors used the Internet less than lecturers. Almost all the academics claimed that they wanted to learn more about the Internet as all of them perceived the primary influence of the use of the Internet on their professional life.

In 1995, another research was conducted focusing on the academic use of the Internet in Australia. The research took place in the University of Cambella and its primary objective was to identify the frequency and the type of use that the academic staff made of the Internet during 1995 with a supplementary objective being to record perceptions of users towards the Internet. Questionnaires were sent firstly by e-mail and to those that had not responded through post. The final survey was carried out in two parts: an e-mail message to the academic staff of the University and a paper survey was sent to those that had not responded to the e-mail one. 324 questionnaires were sent by e-mail and post and 243 were returned.

The most important finding of the research showed that e-mail was extensively used by the University of Cambella academics. Most of the academics showed that they used the Internet on a daily basis. 53% of the academics preferred Mosaic to WWW; they found it easier to use. Only 4% of the users used the Internet to access the library services on a daily basis and 22% on a monthly basis. 1/4 of the academics used the Internet in order to participate in on-line discussion groups on a daily basis and 14% on a monthly basis. The research showed that most of the academics did not use the Internet for teaching and they did not distribute lecture notes through the Internet. The final conclusion of the research was that the academics at the time that the research took place did not use the Internet a lot. The main reasons for that were that the academics did not have a lot of free time to use it and also that they had not received any training—so they faced some difficulties in its use. Some of the academics complained about the speed and capacity and included those as some of the reasons for not using it. Members of the faculty of Information Science and Engineering were heavier users than other university staff. Another interesting

point was that older academics used the Internet less than younger ones. Finally, a very significant point was that the academics used the Internet much more in order to communicate than for their research.

In 1996, another study in this field took place in the US. Conducted by Abels, Liebscher and Denman the study explored factors that influence the adoption and the use of electronic networks and network services by Science and Engineering faculty members in small universities and colleges. The study was administered by mail, thus managing to include both non-users of computers and non-users of the Internet in its target population. It explored the use of a broad range of Internet services. The main conclusion of this study, as Abels et al (1996:154) put it, was that "further knowledge of differences in the use of electronic network among faculty by discipline would assist in determining levels of connectivity, priority in providing connection and services offered."

In 1996, Rada et al. published another survey about the WWW and the Universities in Educational Technology. The survey was organised by Washington State University (WSU), in their effort to find out how academics and students used the Internet.

The study focused on the use of the Internet on land-grand universities. Given the related disorder of course material in the WSU site and waiting to systematically assess the extent to which land-grand universities contained educationally significant WWW material a hypothesis was made. The hypothesis was that "information is randomly distributed across a particular university's WWW site" (Rada, 1996:23). 12 universities were selected. A method of randomly traversing the files at a site and evaluating the educational content of each visited file was formulated.

Another study in this field that took place in 1996-7 in Australia is described in Applebee's, Bruce's, & Pascoe's book, *Academics on line- A nation-wide Quantitative Study of the Australian Academic use of the Internet.* The main purposes of the study were to identify the frequency and the type of Internet use by academics within specific disciplines in Australian universities, to record

perceptions of these users towards the Internet together with other demographic data and finally, to explore if more of the use of the Internet was made by academics in universities that were geographically isolated rather than by academics who were in large metropolitan areas.

At the beginning of 1997 a final survey began and lasted till the middle of 1997. The main study involved around 1,054 academics from all Australian Universities. The study tried to draw comparisons between broad discipline areas and between the four larger grouping of staff—Arts and Humanities, Business, Science and Medical Science areas. The survey was conducted through e-mail questionnaires and later through post questionnaires. 51.3% of the academics that received the questionnaires replied. The results showed that most of the academics used their e-mail services a lot, maybe more than expected. Almost more than half of the academics that responded to the questionnaires were members of newsgroups. The reasons why the academics used the Internet was for their research, for personal reasons and for their teaching. Most of the academics accessed the library catalogue weekly. They used most of the facilities for searching what the library catalogue offered. Some of the academics mentioned that the Internet was a waste of time as they wasted a lot of time searching for the information they wanted. Others believed that it offered a lot of useful information. Younger academics published their work on the Internet. Some of them got very upset by system errors and older ones could not find solutions easily. The study also tried to categorise the users into beginners, components and experts without making clear the criteria according to which those categories were formulated. Academics in isolated areas used the e-mail to communicate more frequently than other academics. The main conclusion of this survey was that the academics have gradually increased their use of the Internet. Academics in rural areas used the Internet more than the ones living in metropolitan areas. The use of the Internet at each level of academics was different; lecturers used the Internet more than professors.

In 1997, Stanley published another research study for Ohio State University. This study was designed to assess the impact of the Internet on a group of the

Education faculty. The purpose of the study was to describe and delineate the personal and educational experiences of a group of faculty members who had direct and unrestricted access to the Internet from their office computers. The study explored the barriers these faculty members encountered when using the Internet, the ways they utilised the Internet, the impact the Internet had on their attitudes toward computer technology, and their preferences in connecting to the Internet. Respondents were 10 full-time faculty members who represented the four Departments and one School of the College of Education. Data sources for this study included participation in two types of interviews, ongoing e-mail correspondence between the respondents and the researcher, completion of a grounded survey, and the respondents' personal reflections in the form of a journal. The findings of the study revealed that these faculty members' experiences with the Internet were consistent with many of the reported findings involving the use of computer-mediated communication in higher education, the results of telecommunication studies involving pre-service teachers during early field experiences, and the results of emerging studies involving librarians and the Internet. Problems of comprehension, time constraints, access, and inadequate administrative support emerged as barriers to faculty members' use of the Internet. Respondents viewed the Internet in different ways. Some faculty members thought that the Internet was exciting and powerful, while others thought it was frustrating and created a system of 'haves' and 'have-nots.' All faculty members preferred direct access to the Internet over a dial-up/terminal host connection. Respondents overwhelmingly used Eudora (for e-mail) more than any other Internet-related application

Another study is the one produced by Toms from the University of Florida in 1998. The study was about the instructional use of the Internet by faculty members of the University of Florida. This descriptive correlational study explored the patterns in the stages of concern of the faculty at the University of Florida regarding the innovation adoption of the Internet for instructional purposes. Three research questions were posed. What are the relationships of the level of Internet use for instructional purposes and the level of Internet use for all other purposes to the sequence of stages of concern? Are there significant differences in the peak stages of concern of faculty members

grouped by the extent to which they modify their instructional practices based on how or what students learn? Are there significant differences in the peak stages of concern among faculty members grouped by rank, gender, age, or national origin? Findings included significant correlations between the peak or most intense stage of concern and the level of use of the Internet for instructional purposes, level of use of the Internet for all other purposes and attention to how students learn. However, the multiple regression models produced only two significant predictors of peak stage of concern: level of use of the Internet for instructional purposes and gender.

4. Methodology of the study

In this part of the paper the process whereby the data of the empirical research were collected is going to be described. Data were collected through questionnaires and interviews. A pilot study[2] had preceded the main study in an effort to test the research design and explore attitudes and intentions. After the pilot study the questionnaires and the interview questions have been revised.

4.1. The sample

The study was conducted in two Universities, University of Leeds and Aristotle University of Thessaloniki. The Departments that participate in the study in both Universities were the following: Chemistry, Law, Psychology, German, Italian, Earth Science, Theology, Mechanical Engineering, Chemical Engineering, and Institute of Communication Studies. The questionnaire, was e-mailed (Apand posted to those academics of the two Universities who did not reply to the e-mailed questionnaire. The questionnaire was sent through e-mail to all the full time academics of selected Departments[3] of the two Universities.

[2] The pilot study took place in the University of Macedonia in Thessaloniki, Greece and in the University of Kent in Canterbury, UK between November 1999-February 2000. Two Departments from each university, were involved in the study, the Departments of Business Administration and Economic Studies at the University of Macedonia and the Department of Anthropology and the School of Drama, Film and Visual Arts at the University of Kent at Canterbury.

[3] Chemistry, Law, Psychology, German, Italian, Earth Science, Theology, Mechanical Engineering, Chemical Engineering, and Institute of Communication Studies.

Only, full-time staff members were the recipients of the questionnaire and participated in the interviews. It was deemed appropriate to exclude both Professor Emeritus and part time lecturers from the study because of these slight differences in the existing regulations in the two countries for these particular two groups.

4.2. The questionnaire

Questionnaires were chosen as a relatively inexpensive and reliable tool of data collection from a wide variety and large numbers of people. On the contrary, an ethnographic study with observation was thought infeasible, as the researcher could not possibly observe academics at their work place. Moreover, the decision to use a questionnaire for the research was reinforced by the literature review, which indicated that the majority of research studies conducted in the same field used questionnaires. Nobody can deny that there are some negative implications from the use of questionnaires though. For example, all the respondents might not interpret the questions in the same way. According to Kidson (1985:137), "even if all the respondents agree in their interpretation of a question, their interpretation may not be the same as the researcher's." So if some of the sample understand the question differently the answers they are going to give might not be relevant.

The questionnaire included 22 questions, 21 closed ended and 1 open ended. It consisted of four different parts. In the first part, there were questions of general interest, i.e., questions about the age of the academics, the Department they belonged to, the time they had had access to the Internet and the time they had used the Internet. In the second part, 'The Internet and the News' the questions were about the use of the Internet as a source of news and the kind of news that the academics searched for on the Internet. The third part, 'The Internet and your work' included questions about the Internet as it related to the work of the academics. The final part 'Internet and Communications' included questions about the use of Internet as a communication medium. The questionnaire ended with an open-ended question asking the academics how they would describe the contribution of the Internet to keeping themselves informed.

The first part of the research (e-mailed questionnaires) took place in the period between February-March 2000 and the second part (posted questionnaire) took part in April-July 2000 [4].

4.3. The Interviews

Interviews were also used for the purpose of the study. It was an effort to eliminate the danger of the interviewees misunderstanding the questions. To this end interviews with some members of the university staff were thought necessary at different stages of the study. The personal communication with the academics was essential in order to discuss with them some of the results of the questionnaire. Certain issues needed further clarification, such as academics and globalisation (was globalisation that forced the academics to use the Internet in the way they use it or have they been affected by other factors?). Originally it was intended to interview one academic of each Department of both universities. However, the fact that academics from the German Department of the University of Leeds withheld their consent to take part in an interview, was the reason why the interview of a Greek member of staff of the German Department of Aristotle University of Thessaloniki was not taken under consideration. Eventually, there was an extra interview conducted with a member of the staff of the Chemical Engineering Department in both countries[5].

[4] A certain form of analysis, content analysis was chosen. According to Berelson (1971:18), "content analysis is […]often done to reveal the purposes, motives and other characteristics of the communicators as they are reflected in the content; or to identify the effects of the content upon attitudes or acts of readers and listeners." Since the purpose of this study was to examine the ways that the academics used the Internet as well as to identify their reasons of using it in a certain way, this form of analysis was deemed appropriate and therefore other possible forms of analysis, such as discourse or conversation, were not considered.

[5] The Interviews took place between May-June 2001, in Greece and the UK. They were conducted in the office of the academics after communication with them. If the academics agreed to contribute to the research study, an appointment was made and they were contacted at their work environment. The academics were asked 18 open-ended questions. They had the chance to talk and give all the details they deemed relevant and appropriate and they were given as much time as they could spare.

4.4. Comparison with other studies

It is worth mentioning that other, similar to ours, studies had been developed up to the time that this study was conducted. Most of those researches have used e-mail and post questionnaires, focusing in a quantitative analysis of their results. The following table can provide us with a clear view of the methods used by researchers that examined similar topics. The methods used to collect data in the aforementioned studies were similar to ours. What differentiates the present study from the previous studies is the combination of the use of the questionnaire and interviews.

Method / *Author*			*Interviews*
Bruce, 1994	*X*		
Chu, 1994	*X*		
Applebee, 1995	*X*	*X*	
Lasinger, 1995	*X*	*X*	
White, 1995		*X*	
Abels, 1996		*X*	
Applebee, 1998	*X*	*X*	
Mylona, 2002	*X*	*X*	*X*

Table 1: Comparison with other studies

Moreover none of the above studies examined the different use of the Internet by the academics of different countries. The different use of the Internet by academics was examined in different universities, in the same country. Analysis of the results were made taking into consideration the departments the academics belonged to, their age and gender.

5. Conclusions

The first aim of the study was to identify the type of Internet use by the academics. The evidence received from our research indicated that the academics used the Internet mainly for communication and research and not for news. Relevant research also indicated that among the services offered by the Internet, e-mail was the most favorite use. For example, 99% of the respondents in the research conducted in Australia in 1992 selected e-mail as the service they used more. Most of the academics that responded to the survey conducted in 1994 in the US declared that they had used e-mail facilities to communicate with other academics for almost 6 years. 92% of the faculty members included in the study of Chu in the US in 1994 stated that they used e-mail in scientific communications. 80.3% of the people that answered the questionnaire of the survey conducted in Israel in 1995 claimed that they used the Internet mainly for e-mail communication. The results of the study conducted in the US in 1996 showed that most of the academics used the e-mail services much more than it was expected. Our study confirms these finding as academics of both countries stated that they mainly used the Internet for communication and research.

Recent research, ours included, indicates that the Internet has facilitated communication between academics by making it easier and faster. Being easily accessible, interactive and extremely fast, it eliminates the barriers of time and distance giving academics the advantage to reach each other at almost no cost of time or money. This fast and immediate manner of communication seems to have promoted co-operation between academics. By using the new medium, academics that have never met before have chances to get to know each other, to "talk" to each other, to communicate and exchange ideas very easily contributing to the development of their discipline. Taking advantage of the development of the new technology, academics can be co-authors of papers, even of whole books, thus promoting collaboration and exchange of knowledge and experience. At the level of collaboration, the new medium has radically changed academics' habits.

So far one of the habits that according to the findings of our research has not changed yet is that of reading the press and watching television to access the

news. Academics of both countries that took part in the research expressed their preference in using the Internet as a medium strictly for work and keeping the habit of reading the paper instead of sitting in front of a computer screen and reading the e-paper. This certainly does not mean that they did not use the e-press at all. They used it, however, to reach the information quickly before buying the printed newspaper or watching the news on television. This suggests that they preferred to differentiate their work, which involved the use of computer and Internet services, from their personal leisure and social time. The latter included the comfort and joy of reading the paper or watching TV in their home or staff room atmosphere. It seems that academics wished to separate their work from their leisure. They resisted the loneliness of a strictly personal activity, namely, the reading of the news on the computer, by keeping their habit of shared experience, fulfilled through a discussion on the newspaper news with colleagues in the staff room or a family gathering in front of television.

Another finding of our research was that women from both countries acquired access to the medium later, used the Internet less, and answered the questionnaire of the research at a smaller percentage than men. This finding was in agreement with the findings of other research studies (Bruce: 1994, Applebee et al: 1998) which also suggested that men were more willing to reply but was in contrast with the result presented by the Ph.D. study conducted by White (1995) in the US. According to White, younger and female faculty members showed a significant higher use of "computer mediated communications" in comparison with the rest of the respondents. Another finding of this study was that women in both countries, Greece and the UK, behaved differently than men concerning the kind of news they selected from the Internet. They preferred cultural news while men preferred to look for political, financial and sports' news.

Another significant finding of our research was that Greek academics used the Internet less than their English colleagues. This finding cannot be examined vis-à-vis corresponding data from other research studies as there have not been other studies up to now examining the attitudes of academics towards the Internet in different countries. The difference observed between the Greek and English academics can be attributed to the fact that the medium was developed in Greece

later than in the UK. Moreover, English, the native language of the English academics of our sample, is the prevailing language on the Internet. The shorter acquaintance with the medium, on the one hand, and the necessity to use a language other than their mother tongue to communicate, can probably account for the difference in the use of the Internet between the two groups of academics.

Concerning the degree of the influence that the new medium has exercised on the work of the academics (the second aim of the study), our study indicated that the Internet affected the way academics obtained their information (other than topical news and comment). There was also found a correlation between age, rank and gender and the use of the medium. Younger academics seemed to prefer to use the Internet in order to get any kind of information. Older academics, especially in Greece, appeared keen on keeping their old habits, i.e. reading journals, physically visiting the library or attending symposiums along with the new technology. Age often coincides with rank in the profession. It can explain why lower rank academics appeared more familiarized with the medium and used it more than their higher rank colleagues. These findings are compatible with the data offered by relevant research. White (1995), for example, has pointed out that younger faculty members showed higher use of "computer mediated communications" in comparison with the rest of the respondents. Similar findings were offered by research conducted in Israel in 1995. It was found that senior faculty members (of higher rank) used the Internet less than those of the lower ranks, i.e. professors used the Internet less than lectures. The survey conducted in Australia in 1995 yielded similar findings. Older academics used the Internet less than younger ones. These findings were coupled by the research conducted in Australia in 1996. Younger academics trusted and used the Internet more than their older colleagues and lecturers used the Internet more than professors.

Another finding of our research was that male faculty members more than their female colleagues were influenced by the Internet and used it more for the purpose of gathering information. Women seemed to be more reluctant in the use of the new technology, which could be interpreted as a confirmation of the

stereotype that females are surpassed by males in areas such as Science, Mathematics, New Technology.

Another suggestion ensuing from our research was that the Internet was mainly used as a facilitator to communication with the academic community and as a source of information but was not as popular as a medium of publishing scientific work. It seems that academics are undergoing a transition period in terms of the use of the Internet. Naturally, with its advent, academics had little knowledge of the Internet advantages and no experience of its possibilities. They went through a phase of familiarization and limited use during which they were given the chance to explore its prospects and potential and become less suspicious. Nevertheless, they continued to keep their old habits as they developed new ones. In the future, in all likelihood the Internet will prevail and substitute old methods of communication, publishing and teaching. Until then, most of the academics hesitate to publish on the Internet or to publish only in the Internet. An interesting research agenda could include recording of the habits of young academics brought up in the Internet era as well as detecting the degree to which they preserve and practice old habits and routines.

According to the data of our research, Internet was even less used as a medium of teaching. The students' unequal access to the medium was considered by the academics as a decisive factor for this phenomenon. The use of the Internet as a teaching tool could put at a disadvantage those students who could not afford to buy a personal computer given that the Universities do not provide computers for student use.

Turning now to the different use of the Internet in different University Departments (the third aim of the study), according to the data of our research, the academics of the different Departments used the Internet differently. Academics from the Departments of Engineering dedicated more time to the use of the Internet than academics from any other Department. Academics from the Departments of Science came next with academics from the Humanities and Language Departments following. These findings agree with the data of other research such as the study conducted in 1995 in Israel that suggested that

academics from the Sciagr (Science and Agriculture) group used the Internet more than their colleagues of the Humsoc (Humanities and Social Science) group. Similar suggestions were made by an Australian study, in 1995. Faculty members in Science and Engineering Departments were heavier users of the Internet than the rest of the University staff.

In our study, it was also found that academics from the Department of Communications seemed to use the Internet more than all the other academics in the Humanities Departments. Academics in some Language Departments, i.e., German, Italian did not use it at all as a medium of teaching and finally academics in the Humanities and Language Departments used it mainly for communication with colleagues and students. We should stress here, however, that academics who did not belong to the Engineering or Science Departments started to use the Internet later than their colleagues in those Departments. Again age appeared to be an important factor in the use of the Internet. Younger academics, members of the Humanities and Language Departments, seemed to be keener on using the new medium.

As to the final issue, that of comparing and contrasting the ways that academics use the Internet in two different countries in the context of globalisation, academics in the two countries of our sample presented both differences and similarities in the use. Despite the fact that Greece and the UK certainly have different cultural and historical backgrounds, they still have some relevant common characteristics. One factor which is likely to be of increasing importance in promoting a convergence in the academics' use of the Internet is that both countries are members of the EU. Indeed, according to our research evidence, academics in the two countries already revealed substantial similarities in their use of the Internet. Even though academics in Greece started to use the Internet later, it seems that academics in both countries had similar reactions to the medium as far as getting their everyday news and using the Internet as a research tool were concerned. Differences appeared, however, in the way that the academics used the medium in order to communicate. Academics in the UK used it more and this difference could be due mainly to the fact that they used it for communication with students. Academics in the UK used the Internet much more

for this purpose in contrast with their Greek colleagues who hardly used it at all. This difference is more than likely changing though, as laboratories in Greek universities are becoming better organised partly due to the pressure from the EU for common standards in new technologies and education.

Because of the framework advocated and supported by the EU, academics from both countries are forced to follow common policies on some issues. Academics are encouraged to take part in European projects, to exchange students and ideas, and are obliged at the same time to follow standards that are set by the EU. The result is the development of common habits. Local characteristics still exist within the framework of developing common habits but these too have been influenced and are acquiring European or even global characteristics.

The intrinsic characteristics of academics, those that flow from the value-system which orientates academics towards a global scholarly community, coupled with the policies and practices of the EU, the general trends of technological development, and the impact of specific social policies and economic changes contribute to ensure that both knowledge and the proximate environment of the individual academic may become more global.

The Interviews taken for the purposes of the present study revealed that global orientation had already been present in academic life before the advent of the Internet. As an academic claimed during the Interviews "globalisation in science has existed for years before the Internet, it is not something new. Science is international, global; what the Internet did was to make things move faster." Science, knowledge was ‘global’ long before the invention of the Internet and at each and every moment 'local' knowledge has always been part of the 'global.' Periodicals, conferences and communication through media other than the Internet have always placed science and scholarship at a global sphere. The exchange of ideas and the dissemination of new developments in every discipline have always been at the disposal of academics through periodicals, books, conferences, and academic visits provided, of course, academics could afford all these. Therefore ‘globalisation’ is not something new in that respect, the only difference being that with the advent of the Internet, access to information is not

as restricted by inequalities in resources, as was the case before. The immanent ‘global’ concerns have taken a new form in the light of the imposition of standards and the role of the Internet in acquiring and managing access to resources—funds, as well as information and co-ordination functions. One should not underestimate the likelihood of colonisation of Internet publishing by powerful publishers and the implications ensuing from copyright issues. In that case, the promise of equality of access made by the Internet may turn to a threat of "globalisation at a price."

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Web-based News Consumption: The Case of Greek Journalism Students

by

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In less than a decade, the Internet has been transformed from a technological curiosity to the place where millions of people shop everyday, socialise, read news and get information, to the place where people get entertained and do serious business. The Internet's growth and penetration has been remarkably high. Its roots run deepest in the United States where penetration in April 2002 reached 68.8 percent[1] of the population presenting a use growth of 111.5 percent[2] between 2000 and 2005, while within the European Union penetration amounts to 44.8 percent[3] and use growth during the same period is estimated at 121.3 percent[4].

It is argued that modern society is information-oriented and is moving away from traditional mass media exposure, and towards a lifestyle marked by the more interactive collection of communication media and commercial interfaces represented by the Internet (Stafford & Stafford, 1998)[5]. In 2004, for instance, it was found that one in five people under 30 view the Internet as the main information source, while it was estimated that *Google* gets 138,000 requests per minute in 90 languages (The Media History Project, 2004).

The popularity of the world wide web seems to be going hand in hand with increasing demand for online news. In the United States, the UCLA reports 'Surveying the Digital Future' demonstrated that 'reading news' has been in the third position of the most popular online activities reaching 55.6 percent, 47.6 percent and 51.9 percent in 2000, 2001 and 2002 respectively. In Western Europe, online users placed retrieval of news second from the top (after e-mail) in the list of their favourite online activities[6]. According to the same survey over 70 percent of Internet users surf the Net to keep abreast of important developments relating to business and world affairs.

YOUNG PEOPLE AND THE NEWS

Media analysts claim that people rely a great deal on the Internet for retrieving information and that those aged 18 to 34 are indeed the most avid user group of this technology (OPA, 2004). College students, in particular, not only are they early adopters of the world wide web, but also heavy users of it compared to the general population. Use of the Internet is part of the college students' educational experience and daily routine (Leung 2001; Pew Internet & American Life, 2002; Metzger et. al, 2003). This should come as no surprise since young people take up modern technology and incorporate it in their everyday lives more rapidly and more unceremoniously than others. Youths are generally more 'open' to the latest developments because they are more curious and eager to learn (Tully, 2003).

Apart from being a functional academic tool, as well as a serious communication and entertainment platform (Pew Internet & American Life, 2002), the Internet is the medium having the most success attracting young people to news, something that traditional media were having trouble with before the Internet even existed (The Project for Excellence in Journalism, 2004). The *Newspaper Association of America* (2000) reported that the percentage of 18-34 year-olds who go online to get news four to five times a week has tripled in the last three years[7]. In Europe, according to *Eurobarometer* (2001), Internet usage rate was estimated to be 81 percent among the 18-25 age group, 64 percent among the 25-39 age group and only 17 among users aged above 55.

According to a study by Dallas-based *Belden Associates*, online news sites did better in the 18 to 34 age range[8]. Researchers found that young adults preferred the web mainly because they liked the control it gave them over their media experience[9]. It was also revealed that instead of being intimidated by a wide variety of media offerings, as older adults tend to be, today's young adults welcome the influx and are more likely to use multiple media sources at one time than any other generation[10]. Those aged between 18 and 24 show a unique preference for the Web over traditional informational media: 59 percent said they consider the Web 'more useful than newspapers' and 53 per cent find it 'more useful than TV for receiving information'[11].

Compared to traditional sources web-based news appear to be more appealing among the members of Generation X and Y, who having developed the necessary skills and familiarity with the Internet, obviously prefer online news. However, few of them comprise regular news consumers, but rather 'news grazers[12]' (The Pew

Research Center, 2004). Nowadays, the creation of cynical and sceptical attitudes about politics and the media have resulted in the moral claim of the informed citizen to have been diminished. Such a development was reflected in the Pew Survey (2004) which recorded a decline in the amount of time people spend consuming news at all age levels, but the steepest drop is among the 18-24 year-olds. 19 percent of those aged under 30 watch news regularly compared to 53 percent of senior citizens. Poindexter and McCombs (2001) argue that the younger people are, the less likely they are to believe that they have a civic duty to stay informed about public affairs. This finding is confirmed by the news habits of young people aged 18-24, who are considerably more disengaged from the hard news category than their elders (The Pew Research Center, 2004).

Generations X and Y not only do they contemn newspapers and view less television news than earlier generations (Raeymaeckers, 2004), but overall they feel less connected to traditional institutions, both government and media, and less well-served by conventional definition of news; they view journalism as dishonest and clueless (Step, 1996).

THE CLAIM FOR THE INFORMED CITIZENRY

Contemporary versions of democracy theory suggest that citizens have a duty to acquire information about events in the public domain and to use that information in their political decisions (Schudson, 1998)[13]. There is abundant experimental evidence demonstrating that exposure to information in the media can cause information gain. Eveland and Scheufele (2000) found a positive correlation between news media use and political knowledge. Reversely, aggregate-level media variables, such as rising rates of TV viewing and declining figures in newspaper readership, have been offered to explain the downward trajectory of the civic culture indicator (Shaw & Jenkins, 2001).

"Having relatively equal amounts of information assures neither a consensual nor a particular outcome, but it does assure that whatever decisions are reached provide the most democratic approximation of the public will" (Delli Carpini & Ketter, 1996:6)[14]. In reality, however, the attentive audience for political, international and financial news tends to be better educated and middle-aged, while young people demonstrate a very low interest in political affairs (The Pew Research Center, 2004).

According to early proponents of new communication technologies the new media would raise the quality of democracies. The chief mechanisms for democratisation

would be the wide availability of information in the new media and audiences' consequently decreased reliance on centralised content producers (Corrado, 1996[15]). Given that political knowledge is stratified by socioeconomic resources, and that traditional media are known for their lack of detachment concerning political and economic interests, the Internet as an additional avenue to political knowledge, stands out to compound this gap (Riedel et. al, 2003). Besides the promise of increased knowledge, the digital world contains the promise of increased political interest and engagement (Katz, 2001; Shaw & Kwak, 2001; Tumber, 2001; Riedel et. al, 2003).

JOURNALISM STUDENTS AND ONLINE NEWS CONSUMPTION

Journalists, as Joseph Pulitzer made it clear, whether reporters, writers or critics, are first and foremost, citizens[16]. In that sense, journalism students should be exposed to political information not only as part of their civic obligation, but also in order to be fully equipped to make essential contributions as analysts and brokers of news.

Journalism education should embody the notion of journalism as "a practice of knowledge production" (Skinner et. al, 2001:353). In order to produce that knowledge, a journalist must be fully aware of the social, political, economic and cultural situation on a national and international level. Research indicates that there is a strong predictive correlation between social understanding and online news consumption and newspaper reading (Patwardhan and Yang, 2003). Shaw et. al. (2001) concluded that the relationship between new media and social capital is dynamic and highly contextual, especially among members of the Generation X.

Journalism education cannot be confined to college years. Being a journalist requires an education for a life, which calls for an immersion in news and news judgment. The coordinates of a good journalism education comprise, like the practice of journalism, a fundamental concern with 'news', and a corresponding concern with the acquisition of complex methods of knowing, representation and analysis. The aim is to shape not just reporters, but 'reporters, writers and critics'. The reporter in the journalist is concerned fundamentally with the news as it is discovered, breaks and unfolds, and with the gathering of fact to support its description; the writer in the journalist creates faithful documents with superior literary skill; the critic in the journalist judges the significance of things and adds layers of meaning and explanation to their description (Adam, 2001).

It all comes down therefore to the doctrine that journalism professors have asserted to formally: journalists-to-be benefit from general study and extensive news consumption and thus should engage in them (Adam, 2001). As De Burgh (2003) put it succinctly, "journalism education should incorporate simulations of real working experience and engagement with the world" (p.95).

The journalists' role in the new era may be transforming from the role of the gatekeeper to that of the trusted guide (Bardoel, 1996; Tumber, 2001). For that reason the journalist of the future must have -maybe even more than in the past- deep knowledge and social understanding and be very comfortable with the tools, material and infrastructure of the trade.

ADOPTING THE INTERNET AS A NEWS MEDIUM: A THEORETICAL FRAMEWORK

Within the mass communication literature two major media theories have mostly been engaged to determine the profile of Internet users, to explain the motives for which people use the Internet and investigate the specific uses of the new medium. On one hand, the *diffusion of innovations* model stands out as a theoretical tool since it enables researchers to explain the variables that influence how and why users adopt a new information medium, such as the internet (Lin, 2001). Diffusion theory provides tools for assessing the likely rate of diffusion of a technology, and additionally identifies numerous factors that facilitate or hinder technology adoption and usage.

Classical diffusion theory, as proposed by Rogers (1985), focuses on five elements: First, innovations possess certain characteristics, which as perceived by adopters, determine the ultimate rate and pattern of adoption. Those characteristics are summarized as relative advantage, compatibility with one's existing values, beliefs and current needs, complexity, observability and trialability[17]. A branch of this perspective is the *technology acceptance model* –known as TAM. TAM emphasizes two specific attributes of the information technology saying that adoption of an information technology is a function of individuals' perceptions that the technology is easy to use and useful to them (Davis, 1989)[18]. TAM predicts that favorable perceptions of the ease of use and usefulness of an information technology strongly influence subsequent intentions of use (Stafford & Stafford, 2004).

Second, when individuals consider adopting an innovation, a decision-making process occurs. The adoption unfolds as a series of stages (flowing from awareness of the innovation through persuasion, decision, implementation and confirmation). Third, the individuals-adopters have certain characteristics, which make them

likely to adopt an innovation. For instance, some potential adopters are more innovative than others, and can be identified as such by their personal characteristics (cosmopolitanism, level of education, age, income, 'openess' to new channels of communication and media exposure). Fourth, opinion leaders exert influence on audience behavior via their personal contact, but additional intermediaries called *change agents* and *gatekeepers* are also included in the process of diffusion. Fifth, the diffusion process usually starts out slowly among pioneering adopters, reaches 'take-off' as a growing community of adopters is established and the effects of peer influence kick-in, and levels-off as the population of potential adopters becomes exhausted, leading thus to an 'S-shaped' cumulative adoption curve. The adopters during these stages are classified into five types: the innovators, the early adopters, the early majority, the late majority and the laggards.

It is important to note that adopters, rather than making a binary decision to simply adopt or reject, may very well choose differing levels of IT use (Bayer & Melone, 1989)[19]. As far as web usage is concerned, such an observation would explain the different patterns of use, both in time and content. For instance, drawing upon Roger's model, Conway (2001) extended the theory on the subject of online news and concluded that the process of diffusing the innovation can be separated into three different arenas. The first innovation is computer use. The second stage is access to the Internet, and the latest innovation is using the Net as a news medium. Applied to the internet in general, the adoption is just the beginning, not the end of the process. Adoption involves more than acceptance or rejection; the post-adoption process (i.e. use) involves an even larger number of motivations, such as information-seeking, relaxation, social networking, ego actualization and so forth (Zhu and He, 2002).

Besides the diffusion of innovations model, the *uses and gratifications theory* is of relevance here since it is considered particularly robust and useful in the development of theoretical dimensions representative of consumer motivations for media use (Stafford & Stafford, 2004). It focuses on individual use and choice by assessing why people use media and the gratifications obtained from that media.

Researchers of this approach are specifically concerned with the social and psychological origins of individual needs, which generate expectations of the mass media, which lead to differential patterns of media exposure, resulting in need gratifications and other consequences, perhaps mostly unintended ones (Katz et. al, 1995). The core concept of the uses and gratifications tradition is that people

are intentional and selective in their use of media and make distinct selections across a multitude of media channels and content choices. Underlying this perspective is the assumption that people evaluate their available media options and choose among media on the basis of those evaluations. To the extent that a medium is perceived as superior for meeting a particular need or serving a particular function, people should be likely to choose that medium over another for fulfilling their needs or achieve their goals.

Practically, the uses and gratifications perspective incorporates the concept of the media substitution theory, according to which functional displacement can occur when a new medium is introduced. A condition for displacement is similarity in functions between the new and existing media. A new medium competes with an existing medium that serves the same functions, resulting in either one becoming irrelevant or secondary since audiences choose between them by determining which one better satisfies particular needs. Evidence of functional displacement is decreased use of the displaced medium. Typically displacement occurs under three conditions: content superiority; technical superiority; greater cost efficiency. Lin (2002) added that in order for a newer and more functionally efficient medium to displace an older medium, the necessary economic and social conditions for such displacement have also to be met. Since the web can be seen as a functional alternative to traditional news sources, the potential for media substitution by the web hinges on identifying the particular constellation of needs currently supported by its functional equivalents (Althaus and Tewksbury, 2000).

Within the uses and gratifications perspective, media use derives from a conscious effort to fulfill certain social or psychological needs (Rubin 1994). Previous research on the gratification of computer-mediated technologies suggested a broad range of motivations, such as surveillance, information seeking, education, entertainment, personal identity, social interaction, companionship, escape and diversion, reassurance, fashion and status, communication medium appeal (Leung, 2001). More specifically, research has concluded that there are two main reasons people are surfing the web: to look for information and to be entertained (Papacharissi & Rubin, 2000). In particular, it can be used as mediated interpersonal technologies, which are for social bonding, relationship maintenance, problem solving and persuasion. The Internet can also be used as a mass communication medium, which is for informational and leisure purposes (Flanagin & Metzger, 2001). Motivations for using the Internet for the former are isolation, dislocation, long-distance, social networking, lack of satisfaction of current

situation and sense of belonging. As far as the latter use is concerned researchers attribute it to motives of surveillance, economic security and self-education (Papacharissi & Rubin, 2000).

In an attempt to identify the relationship between motivations and media content from the uses and gratifications perspective, Rubin (1984) argued that a variety of motivations can be divided into two types of media usage orientations: ritualised and instrumental orientation. He maintained that each media usage purpose is related to the consumption of different media content. On one hand, ritualised orientation (or medium-centered usage) indicates a more habitual use of a medium and is prompted by more 'emotional' motives and needs such as entertainment and escapism (Rubin, 1994). On the other hand, instrumental orientation is a purposive use of media content through which the person seeks information (Conway and Rubin, 1991). Therefore, this type of orientation relates to greater exposure to news and information content.

FACTORS AND MOTIVES FOR CONSUMING ONLINE NEWS

Forming the hypotheses and research question

Several studies have been conducted offering more specific insights regarding a) the profile of the Internet user, b) the various reasons why an individual chooses the Internet as a news medium, and c) the expected and obtained gratifications resulting from using web news.

As far as why a person selects the Internet as a news tool, a number of influential factors can be identified. The demographic characteristics of the audience, such as age, education, gender and income, are widely perceived as predictive of web news consumption (Shaw et. al, 2001; Anderson & Tracey, 2002; Lin, 2002; Zhu & He, 2002; Chang 2003; Li, 2003). Bibliography describes the Internet user as affluent, better educated than average, male and below the age of 35 (The Pew Research Center, 1999; O'Donnell, 2003). Literature suggests that when a technology has not reached its critical mass of the diffusion curve, demographics exert an important influence on the adoption likelihood of the technology. But when the adoption phase passes its early stages, the role of demographics is diminished. However, research shows that despite earlier findings of the online population going mainstream (The Pew Research Center, 1999), the online news audience still comprises of young, affluent and well-educated people with the exception of the gender gap which has narrowed significantly (The Pew Research Center, 2004).

Based on the above findings we can pose the first hypothesis as follows:
H1: demographic attributes will have an impact on online news reading

Second, in order to develop an online news habit, one has to overcome a financial barrier (Althaus & Tewksbury, 2000; Havick, 2000; DiMaggio & Hargittai, 2001). Online news consumption requires an investment in equipment, such as a personal computer, a modem and a server connection. Moreover, a fast connection, a high resolution screen and a powerful computer can induce the consumption of web news since the user can take full advantage of the web's possibilities. It has been found that high-speed users expanded their web activities to a large extent, doing seven things online (Horrigan & Rainie, 2002[20]). Accordingly, in a US based survey it was revealed that 23 percent of the broadband audience relied on the web as a primary source of breaking news, while only six percent of dial-up users did so (MSNBC, 2001).
The second and third hypotheses therefore are formed as follows:
H2: Ownership of the necessary equipment is a predictive factor of online news consumption
H3: A fast connection is likely to induce online news reading

Owning the necessary equipment is one thing; having a descent level of comfort using the technology is another. "The electronic newspaper is obviously not a piece of computer equipment as much as it is a media product, but knowledge of computer systems seems a reasonable way to assess an individual's likelihood of adopting such a product" (Weir, 1999:64). Scholars argue that digital literacy[21] represents more than the ability to expertly surf the Internet, but the ability to critically analyse the information individuals find there (Gilster, 1997)[22]. Studies have asserted that experienced users are more likely to consume news online (Havick, 2000; Nguyen, 2003). They have learned which sources to trust for information and have identified effective search strategies. Althaus and Tewksbury (2000) found that higher levels of computer anxiety were significantly and negatively related to time spent using the web for any purpose. The choice, thus, between the web and traditional news outlets is likely to be mediated by a person's familiarity and level of comfort with computer technology and Internet familiarity.
The fourth hypothesis, therefore, can be posed as follows:
H4: Likelihood of reading online news is closely associated with net proficiency.

The more familiar people become with different media channels, the more likely they are to weigh the advantages and disadvantages of each (Riedel et. al, 2003). To the extent that the internet becomes perceived as superior to traditional media for particular tasks or activities, it seems that individuals valuing those attributes will increasingly turn to new media and away from traditional news outlets (Althaus & Tewksbury, 2000). It is widely argued that the Net is the medium where people can turn to in order to get a richer news experience. That richness stems from the Net's immediacy, its depth and from its most powerful feature, interactivity (Althaus & Tewksbury, 2000; Riedel et. al, 2003). In addition to that, the web caters for a creed of individualism that allows people to get the information they want, when they want it (Nozato, 2000). Besides its asynchronous nature, people like the convenience of the web, its availability at work, its speed for delivering breaking news and the appealing modes of presentation through multimedia features (Chan 2003; The Project for Excellence in Journalism, 2004). It was found that the pervasiveness of the web is a key contributor to the prominent role it plays in the lives of 18-34 year-olds, particularly as their lifestyles underscore the importance of media use on their own time (OPA, 2004).

A significant and differentiating factor of web news is that it provides audiences with substantially more control over the flow and delivery of information than they enjoy with traditional media. With enhanced control, and in front of a theoretically limitless news hole of up-to-date information as well as background material, much of it in raw form and not previously digested by journalists, online readers are particularly likely to pursue their own interests and they are less likely to follow the cues of news editors and producers (Chan 2003; Tewksbury, 2003). More importantly, the Internet, operating almost unfettered, offers users the opportunity to find interpretative material. It contains a wide range of views, attitudes and beliefs. "The Internet possesses a freedom of activity and thought that minimises norm enforcement. In fact, it offers a habitat for views and activities that differ from conventional views and behaviors" (Havick, 2000:280).

Attitudes about the web indicate a growing reliance on the medium as an intrinsic source of news and information with online users increasingly coming to trust the accuracy of the information they receive online (The Project for Excellence in Journalism, 2004). Research suggests that people are generally skeptical of news emanating from all three media channels, but do rate newspapers with the highest credibility, followed by online news and television news respectively (Kiousis, 2001). Other studies concluded that Internet users judged online political

information sources as more credible than traditional media counterparts (Johnson & Kaye, 2004). Those developments come as no surprise since newspaper and television audiences have begun shrinking, while the credibility of traditional media has been put in serious question (Guido et. al, 2000).
According to the above evidence the fifth hypothesis can be formed as follows:
H5: The comparative advantages of online news will be positively associated with online news reading

Most research has focused on comparing users and non-users. However, at times of serious Internet penetration, it is important to pay attention to the different patterns of usage between newcomers (newbies) and veteran users. The length of Internet experience may play a critical role both in online behaviour and evaluation of information. The more experienced a user gets, the more familiarised he becomes, and consequently is more capable of navigating in a more efficient way. Studies found that the web was the most preferred surveillance medium for daily users of the Internet (Althaus & Tewksbury, 2000).
We can assume therefore that:
H6: More experienced users are more likely to consume online news

The amount of news that people consume from traditional media can also be indicative of a person's tendency to use online news sources. Data suggest that online news readers are also regular consumers of traditional news media. They may be getting ample public affairs news offline and supplementing it with other information online (Althaus & Tewksbury, 2000; Tewksbury, 2003). Rathmann (2002) argued that frequent print readers also read online newspapers more frequently in order to obtain additional and timely information. In general, a correspondence between the amount of online and offline news consumption has been identified. Heavy consumers of online news are also heavy consumers of newspapers. Similarly, medium consumers of online news report midlevel usage of newspapers (UCLA, 2002; The Project for Excellence in Journalism, 2004). On the other hand, light users of the Internet are more likely to watch TV for current affairs, while Internet users watch less TV than non users (Neustadtl and Robinson, 2002). This finding confirms the fact that an important component of the Internet value to a user depends on the user's literacy-based interests (Havick, 2000). Information in TV news may be more accessible to those with weaker cognitive skills and less background information, while media (i.e. newspapers and the

Internet) which present stories with greater depth, analysis and complexity should favour citizens with greater information processing abilities and more complex preexisting structures that allow them to process information more quickly and efficiently (Eveland & Scheufele, 2000).
Therefore, the seventh hypothesis comes as follows:
H7: Increased news consumption will be positively correlated with online news usage

The level of political knowledge a person maintains is another significant determinant of media choice. People with higher levels of political knowledge typically follow news of public affairs much more closely than those with lower levels of political knowledge. Furthermore, individuals with high levels of political knowledge seem to be drawn toward relatively more information-rich news sources, like newspapers, and away from relatively information-poor sources like television. This tendency has been used to suggest that higher levels of political knowledge may be associated with a 'need for information' best satisfied by news outlets such as newspapers or online news that contain high levels of public affairs coverage and are amenable to active information-seeking strategies (Althaus & Tewksbury, 2000).
Prior knowledge has been shown to facilitate the processing and recall of information (Eveland & Scheufele, 2000). It is argued that those with prior knowledge have probably developed more advanced schemas, which, on one hand, facilitate interpretation, storage and recall of new information, and on the other hand increase political interest. The level of political interest is considered to be a predictive factor of hard news consumption from information-rich news sources. Poindexter and Heider (2001) in their research on non-users of Internet news concluded that the primary reason for avoiding news on the Internet is lack of interest.
In this light the following hypotheses can be made:
H8: Online news sources are to be particularly appealing, and therefore adopted by those with relatively high levels of political expertise and sophistication
H9: Increased political interest should be predictive of online news consumption

Finally, in consistence with the uses and gratifications perspective, an individual's motivations and gratifications can affect greatly his/her decision to adopt a particular news medium. As mentioned in the literature earlier, there cannot be an

inherent predetermined direction for a medium's development, but rather an ongoing give-and-take between psychological needs, social needs and technological possibilities (Avigdor & Wilzig, 2002). Bentley (2001) identified curiosity and interest as motives of reading online news, while Mei Lu (2002) argues that usage of web news can originate from psychological factors such as habit and addiction, social interaction with other people, situational encounters with media information as well as information seeking motivations.

Papacharissi and Rubin (2000) found that the most salient use of the Net reflected an instrumental orientation, often having to do with information seeking, and characterised by utility, intention, selectivity and involvement. Weir (1999) argues that perceived benefits are important indicators of online news consumption. The term can include a variety of benefits starting from social approval and leading to more concrete benefits such as self-education and awareness of what is happening on a national and international level. The gratifications that are mentioned here comprise a part of the range of possible gratifications that one could derive from online news usage, and were chosen as being –according to the literature- of particular relevance in the case of journalism students.

The surveillance gratification seems particularly important for understanding audience choices among available news media (Lin, 2002). Similar to the surveillance gratification is the social understanding dimension; it refers to one's need to know about and interpret the world or community and evolve as a person (Patwardhan and Yang, 2003). Identification of strong surveillance and social understanding goals would lead individuals to increased information seeking behaviour, and therefore we can hypothesize its predictive relationship with online news reading.

Parallel to the above is the 'information need' concept. The basic idea is that there is a perceived, i.e. subjective, difference between the available knowledge and the knowledge that is needed to perform an activity. The size and type of the difference between available knowledge and knowledge that is required determines the type and size of the information need (Bouwman and Van De Wijngaert, 2002). As mentioned earlier, journalism calls for a life education and for immersion in news. The information need thus for young journalists-to-be is substantial, and we can assume that their news diet will include regular use of online news as an information-rich source of hard news and political knowledge. Self-education, in terms of not merely following the news, but also monitoring in detail the way news are written and presented (as if simulating a real job

experience) in the medium that seems to be prevailing in the near future, is an important reason for journalism students to consume online news.

Studies have indicated personality traits (Stromer-Galley, 2002), lifestyle orientations (Chan, 2003) and fashion (Anderson & Tracey, 2001) to influence one's media usage and consumption. Young people, and in particular students are usually technology-situated and accustomed and need to experiment. A significant element which can provoke the adoption of online news is the trait of innovativeness (Rogers, 1995; Li, 2003).The term signifies an individual's tendency to seek novelty and to be more receptive to new ideas and new technologies.
In western civilisations in general, transformation of the media world has given birth to a new culture that combines different media as a sign of social inclusion or exclusion (Morrone & Zannella, 2004). So, beyond instrumental uses, media can be chosen due to their symbolic value, such as status enhancement, to feel important and/or to impress people (Flanagin & Metzger, 2001). In order for young journalists to satisfy their social integrative needs and feel part of the journalistic group, they need to familiarise themselves with the necessary tools of the trade. In this light, journalism students are more likely to engage in regular use of online news.
The last hypothesis, therefore, can be formed as follows:
H10: Perceived gratifications of online news usage should motivate online news consumption

THE RESEARCH

Extending past research on the uses and gratifications model as well as the diffusion theory in relation to the Internet, and having reviewed the predictors of online news usage, the present paper attempts to shed light on if, to what extend and why greek journalism students consume online news. Before moving on, it would be useful to sketch the news situation in Greece. Television remains the main news source, although only 39 percent of the audience claim to actually trust television news (Eurobarometer 1998:18). This comes as no surprise considering firstly, the interplay between media owners and politicians, and secondly the main features of the television journalistic approach: a shift away from hard news, convergence with a tabloid agenda, emphasis on human-interest stories and journalists acting as interpreters and professional mediators (Papathanasopoulos, 2001a).

The above approach begun from television, but soon became a model for all media. The printed press is relatively more objective, yet identification with a partisan camp is clearly seen. The crisis of the greek press reflects not merely the outcome of competition with other media, or structural changes such as stagnating incomes and low political interest, but it also reflects newspapers' failure to attract young readers. Newspapers have been unable to defend their comparative advantage in providing comment and in-depth analysis and the net result is a serious decline in readership (Papathanasopoulos, 2001b).

As far as Internet use is concerned 19.7 percent of the population claim to be users and a percentage of 4,3 percent is seriously considering getting a connection in the near future. The most avid user group is those aged 15-17 where Internet usage reaches 50.8 percent, followed by those between 18 and 24 years-old with 38.5 percent. Autonomy of web use prevails as 41.7 percent claim to surf the web only at home.[23] 16.8 percent are newbies, while 18.9 percent have been using the Internet for over five years. E-mail ranks first in their favourite online activities with 21.5 percent, while reading news comes third with 11.7 percent (V-PRC, 2004).

In general terms, the dysfunctional newsmedia environment in combination to the rise of cynical and alienated attitudes towards politics have resulted in a serious decline of political interest, especially among the younger generations, and subsequently to decreased consumption of hard news. According to a survey Greek citizens claim to distrust both politicians and journalists (PRC, 1995[24]). Mouzelis (1995) argues that the greek society constitutes an atrophied civil society in which individualistic attitudes as well as a clientist manner of doing things have dominated.

In this light, it is interesting to investigate what role do 'perceived utility' as well as other motives and predictors play in greek journalism students' decision to overcome certain cultural and political traits, and indulge in an 'adequate' journalism education which entails systematic consumption of hard news from information-rich sources.

Drawing upon the various hypotheses that were posed, as well as the main features of the newsmedia situation in Greece, the research question comes as follows:

R.Q: To what extent can demographics, ownership of the necessary technology, net proficiency, experience, perceived advantages and positive attitudes on online news, level of news consumption, level of political knowledge and perceived gratifications of online news usage, predict online news consumption?

METHODOLOGY

Research data was collected through a structured questionnaire with pre-determined options and was processed by SPSS. The sample[25] consisted of 85 journalism students. 51 study at the Department of Journalism & Mass Communication of the Aristotle University (corresponding to 12 percent of the student body of the Department) and 34 study at the Department of Journalism at the public Institution of Professional Training of Epanomi (I.E.K) (corresponding to 80 percent of the total number of students), both based in Thessaloniki.

OPERATIONAL DEFINITIONS OF VARIABLES

Demographics: this section included elements such as gender[26], age, income and education.

Ownership of equipment: availability of home connection and type of connection were used to assess ownership of equipment.

Net proficiency: a question referring to one's ability to efficiently surf the web and find the information he/she needs, was used to measure net proficiency.

Perceived advantages of online news: respondents were asked to rank their agreement with a series of eight characteristics describing the appealing properties of online news.

Online experience: online experience was measured by asking respondents a) how many years have they been Internet users and b) how many hours do they spend surfing the web on a weekly basis.

News consumption: students were asked to state the frequency of news attendance in any medium.

Political knowledge: respondents were asked to grade their level of political knowledge on an international and national level.

Political interest: political interest was measured by asking students to determine their degree of political interest.

Perceived gratifications and motives: respondents were asked to rank their agreement with eleven statements describing the perceived gratifications a journalism student could derive from using online news.

The above data was correlated with the question which sought the frequency of news attendance on the Internet. Four options were available: 1) every day, 2) 3-5 times a week (which both referred to systematic use of online news), 3) 1-2 times a month, 4) never (which referred to non-systematic consumption of web news). Of

course, as it will be shown in the following sections, supplementary elements were also investigated in the questionnaire in order to draw a more complete picture of the findings.

RESULTS

In order to assess the contribution of the variables under investigation, a principal components factor analysis was run to determine the exact influence of each on likelihood of online news consumption by journalism students. The data extrapolated is shown in the following tables.

Table 9: Strongest Predictors on Online News Consumption

		FREQUENCY OF ONLINE NEWS ATTENDANCE
1	TIME SPENT ON THE INTERNET ON A WEEKLY BASIS	.483
2	READING ONLINE NEWS IS A QUICK AND EASY WAY TO GET INFORMED ON CURRENT EVENTS OF MY INTEREST	.399
3	DEGREE OF POLITICAL INTEREST	.393
4	LEVEL OF KNOWLEDGE ABOUT POLITICAL, SOCIAL AND ECONOMIC AFFAIRS	.370
5	FREQUENCY OF NEWS ATTENDANCE IN GENERAL	.354
6	ABILITY TO SURF THE WEB EFFICIENTLY	.342
7	LEVEL OF EDUCATION	.310
8	READING ONLINE NEWS CONSISTS AN IMPORTANT TOOL FOR MY JOB AS I FAMILIARISE MYSELF WITH A NEW TYPE OF JOURNALISM	.303
9	READING ONLINE NEWS OFFERS VALUABLE KNOWLEDGE BY PROVIDING IN-DEPTH AND MULTI-FACETED PRESENTATION OF EVENTS	.302

At this point it ought to be mentioned that the results suggest that none of the variables of the present study reached the score of 0.5. The only block that almost scored the benchmark figure was online experience when assessed by 'time spent on the Internet on a weekly basis', which got 0.483. However, the results demonstrate some dominant trends, which we will show by ranking the most powerful blocks as they have been formed in the research. So, the next most significant predictor belongs to the perceived gratifications and motives category under the label 'reading online news is a quick and easy way to get informed on current events of my interest', which scored 0.399. Next in line, scoring slightly less, is the 'degree of political interest' with 0.393, followed by the 'level of

political knowledge' with 0.370. 'Consumption of news in general' proved to be another factor likely to induce online news reading with 0.354, followed by 'the ability to surf efficiently the web' that scored 0.342. The seventh position was occupied by the level of education which scored 0.310. The last two variables to be mentioned because they scored over 0.300 are included in the perceived gratifications and motives category, and are the following: a) 'reading online news consists an important tool for my job as I familiarise myself with a new type of journalism', and b) 'reading online news offers valuable knowledge by providing in-depth and multi-faceted presentation of events', that respectively got 0.303, 0.302. In more explicit terms, the following results came up:

Hypothesis one is partially confirmed as education was found to be the only variable influencing online news consumption, demonstrating that the higher the level of education, the more likely students are to resort to the web for news retrieval. The finding is of upper importance here since the sample consisted of students majoring in the same field, and indeed in a field in which students are 'obliged' to be exposed to news as part of their studies and supposedly interests.

As far as the age block is concerned the study showed no significant correlation between online news reading and age, while the income variable proved to have no effect on web news consumption. A first explanation would be that when it comes to money, most students are financially supported by their parents rather than earning that money themselves. In that sense they cannot be treated as professionals of an upper economic status, but rather as students getting a higher allowance.

Table 1: Demographics

	FREQUENCY OF ONLINE NEWS ATTENDANCE
LEVEL OF EDUCATION	.310
AGE	.183
INCOME	.075

The findings for the second and third hypothesis contradict the relevant literature as no significant correlation was found between the dependant variable and ownership of equipment. The type of connection proved to be more important than home autonomy in access, probably because students enjoy free access from university. Overall, it turned out that autonomy and a faster connection do not seriously affect systematic use of online news reading of journalism students.

Table 2: Ownership of equipment

	FREQUENCY OF ONLINE NEWS ATTENDANCE
HOME ACCESS	.038
AVAILABILITY	
TYPE OF CONNECTION	.162

Advanced surfing ability turned out as predictive of web news reading, confirming the relative theory that the more experience a user gets, the more likely he/she is to engage in online news consumption.

Table 3: Internet proficiency

	FREQUENCY OF ONLINE NEWS ATTENDANCE
ABILITY TO SURF THE WEB EFFICIENTLY	.342

Surprisingly online news attributes proved to have no effect when students decide upon their news sources. None of the eight attributes are present in the list of the most influential indicators. Easiness of navigation and ability to find quickly current issues stand out, but overall do not influence web news consumption. The result is noteworthy given that journalism students out of all people should be aware of the comparative advantages of online news over traditional outlets. Apart from the ignorance explanation, the result can also be attributed to the fact that respondents may be aware of the positive attributes of online news in theory, but probably have not confirmed them yet in practice. As the diffusion of innovations model suggests most respondents have not yet reached the stage of 'confirmation', and subsequently, 'reject' online news' theoretically seductive characteristics. In that sense the fifth hypothesis is contradicted by the study.

Table 4: Perceived comparative advantages of online news

		FREQUENCY OF ONLINE NEWS ATTENDANCE
1	INTERACTIVITY	.127
2	IN-DEPTH ANALYSIS	.003
3	POSSIBILITY TO SEARCH FOR TOPICS OF INTEREST	.165
4	PLURALISM OF SOURCES IN ONE MEDIUM	.088
5	EASY TO NAVIGATE AND FIND QUICKLY CURRENT ISSUES	.261
6	CREDIBILITY	.105
7	24-HOUR NEWS CYCLE	.135

8	INTERESTING PRESENTATION OF NEWS THROUGH MULTIMEDIA	.193

Online experience in terms of 'time spent on the Internet on a weekly basis' turned out to be the most influential factor for online news consumption, supporting evidence that the web is the most preferred surveillance medium for daily users of the Internet (Althaus & Tewksburry, 2000). Yet, the sixth hypothesis was not verified totally as being a newcomer or a veteran user does not seem to affect online news retrieval of young journalists-to-be.

Table 5: Online experience

	FREQUENCY OF ONLINE NEWS ATTENDANCE
YEARS OF INTERNET USAGE	.125
TIME SPENT ON THE INTERNET ON A WEEKLY BASIS	.483

The amount of news consumption proved to be a pretty influential predictor confirming the relative literature that regular users of news (and especially print readers) are more likely to be frequent users of online news as well (see hypothesis number seven).

Table 6: Consumption of news

	FREQUENCY OF ONLINE NEWS ATTENDANCE
FREQUENCY OF NEWS ATTENDANCE IN GENERAL	.354

Hypotheses number eight and nine were both supported by the data of the research. Both the degree of political interest and the level of knowledge on political, social and economic affairs are correlated with news consumption from information-rich sources such as the web.

Table 7: Political knowledge and Political interest

	FREQUENCY OF ONLINE NEWS ATTENDANCE
LEVEL OF KNOWLEDGE ABOUT POLITICAL, SOCIAL AND ECONOMIC AFFAIRS	.370
DEGREE OF POLITICAL INTEREST	.393

Out of eleven blocks included in the 'perceived gratifications and motives' category, three of them were present in the dominant nine-items list that was formed in the research. 'Reading online news is a quick and easy way to get informed on current events of my interest' is the second most influential predictor of the study. Considering the form of the research, we can say that the uses and

gratifications theory is verified as perceived gratifications of online news proved to be indicators of web news consumption proving our last hypothesis to be correct. However it ought to be mentioned that four statements received a negative sign, and the rest scored very low, demonstrating that the range of possible gratifications and motives for online news reading is very limited.

Table 8: Perceived gratifications and motives

		FREQUENCY OF ONLINE NEWS ATTENDANCE
1	READING NEWS ONLINE IS IMPORTANT FOR MY JOB	.185
2	ONLINE NEWS IS MORE USEFUL THAN THOSE PROVIDED BY TRADITIONAL SOURCES	.166
3	ONLINE NEWS READING IS NECESSARY FOR SURVEILLANCE	.040
4	CONSUMPTION OF WEB NEWS CONSISTS AN IMPORTANT METHOD OF SELF-TEACHING	-.076
5	READING ONLINE NEWS IS A CONSTRUCTIVE WAY OF PASSING TIME	-.001
6	READING ONLINE NEWS OFFERS VALUABLE KNOWLEDGE BY PROVIDING IN-DEPTH AND MULTI-FACETED PRESENTATION OF EVENTS	.302
7	MY POLITICAL INTEREST IS ADEQUATELY SATISFIED BY READING ONLINE NEWS	.267
8	READING ONLINE NEWS CONSISTS AN IMPORTANT TOOL FOR MY JOB AS I FAMILIARISE MYSELF WITH A NEW TYPE OF JOURNALISM	.303
9	READING ONLINE NEWS IS A QUICK AND EASY WAY TO GET INFORMED ON CURRENT EVENTS OF MY INTEREST	.399
10	BY READING ONLINE NEWS I CAN IMPRESS OTHERS	-.335
11	IT IS IMPORTANT TO EXPRESS MYSELF AND COMMUNICATE WITH OTHERS VIA WEBLOGS AND NEWSGROUPS	-.047

CONCLUDING REMARKS AND DISCUSSION

As penetration of online sources into the news diet of young adults has increased dramatically worldwide, it is worth investigating the factors that induce or hinder consumption of online news and identify the possible contribution of each in the Greek audience. The study referred to a very special group that of journalism students, aiming at further examining if, and to what extent, can particular attributes of population groups, differentiate online news usage patterns.

Exploratory factor analysis failed to clearly identify some indicators of online news usage, but provided some clues as to which factors can facilitate regular consumption of web news among journalism students.

The first conclusion to be drawn is that 34 percent of the young journalists-to-be make systematic use of online news compared to the 11.7 percent of the greek population (V-PRC, 2004). The percentage is pretty high in comparison to the general statistics, although it was expected to be higher considering: a) that the sample consists of young people aged mainly between 18 to 24 years-old, an age group where the web is regarded particularly popular as a news medium reaching approximately 50 percent (Media Awareness Network, 2000), and b) that the respondents, as future analysts and brokers of news would immerse in information-rich sources. This finding demonstrates that the claim for the informed citizenry among the greek youth is pretty weak. The general feeling of indifference towards politics documented in the greek population (Tsagarousianou, 1994) as well as a sense of incapability to bring about any major changes to a media system of severe corruption (Papathanasopoulos, 2001a) seems to prevail among journalism students, resulting in the surveillance gratification to rank very low. Reversely, a high level of political interest and knowledge were found to be among the strongest indicators of online news retrieval. Furthermore, it is important to note that the first seven out of the nine-items list of predictors indicate that the main factors why journalism students read online news are not differentiated from the factors inducing an average user to resort to online news outlets (see Table 9).

Secondly, as expected, the diffusion of innovations model is firmly verified. The research proved that using the Internet as a news medium is not simply a matter of adopting or rejecting the web, but has to do more with patterns of usage. As such, the more time young journalists-to-be spend surfing the web, the more likely they are to become regular readers of online news. The results also demonstrate that those possessing certain characteristics (i.e. higher level of education, increased degree of political interest and knowledge, tendency to be regular consumers of news, and are capable of surfing the web efficiently), are prone to systematic consumption of online news. Thirdly, it was found that likelihood of online news adoption is associated with favourable perceived attributes[27] of web news, such as being a quick and easy way of getting informed upon one's news interests, or offering in-depth and multi-faceted presentation. From that perspective, the TAM theory is confirmed as perceived easiness and usefulness of web news induces usage among students.

The uses and gratifications theory is also supported since perceived gratifications were proven to be indicators of online news adoption. Respondents claim to resort to web-based news outlets, firstly, due to perceived easiness and speed of getting customised news, and secondly due to reasons of gaining knowledge as well as familiarising themselves with a new tool of their future job. In other words, students choose the web as a news source in order to satisfy specific needs and goals. In that respect online news usage is considered to be superior when seeking speed, control in selection, in-depth and multi-faceted presentation of news, willingness for self-teaching.

It is interesting to note that the motive of surveillance, which according to literature consists a major and very common determinant of instrumental usage of the web, was almost absent receiving 0.040. An explanation would be the rise of cynical and skeptical attitudes among young people, who lack any kind of institutional trust, and thus choose to abstain from active civic engagement. As such they feel like getting informed systematically from information-rich sources, but in no case do they perceive this activity as enabling surveillance of the government or other institutions.

Despite the fact that online news are perceived to gratify specific needs of journalism students, no displacement effect was documented in regard to newspapers, confirming our hypothesis that a higher level of news consumption from information-rich sources, is indicative of a person's tendency to use online news. In particular, it was shown that frequent readers of online news to a percentage of 66.7 resort to newspapers 'very often'. Conversely, there is evidence of decreased use of television news among regular users of web-based news; 22.2 percent of everyday consumers of online news choose television 'very often' as their main information medium, 42.5 percent of medium users choose television, while 60 percent of online news grazers select television 'very often' as their main information source.

Financial barriers seem to be out of the picture since both socio-economic variables with the exception of education, as well as superior technical apparatus, were proven relatively weak in predicting online news adoption behavior. It turns out that the money issue is of minor importance, while the amount of social capital plays a decisive role. The term social capital is used here to describe the level of education, the degree of political interest and knowledge and the level of political engagement as expressed by the amount of news consumption in general. Also it is worth mentioning that experience either in terms of substantial time spent on the

web per week or measured as ability to surf the web efficiently, consists a significant indicator of online news reading.

Finally, it would be interesting to add some supplementary elements upon the news habits of the respondents in order to draw a more complete picture. For instance, foreign news sites are visited 'very often' or 'often' by 31.8 percent of the students, a percentage almost equal with the number of regular online news readers. This result conforms to the finding that increased levels of political interest and knowledge provoke a frequent and multifaceted need for information. People who look for a complete news diet are not confined to greek sites, but search for more news in foreign outlets as well. Yet, it ought to be mentioned that when choosing their news sources, whether greek or foreign, journalism students are going for the brands, confirming relevant research that brand loyalty is a strong determinant of website usage (Thorbjornsen & Supphellen, 2004). Thus, as newspaper sites are concerned *To Vima* came first with 28 hits[28], second was *Eleuferotypia* with 25 followed by *Ta Nea* with 23. In the portals section, *in.gr* ranked first with 47 hits, second was *flash.gr* with 17, and third came *mpa.gr* with 9. Regarding foreign sites[29], established brands also monopolised the students' preferences with *cnn.com* ranking first with 17 hits, followed by *bbc.com* with 16, while *reuters.com* received 11 hits. However, journalism students were expected to combine both well-known and alterative sources when searching for news.

Concluding it would be safe to claim that greek journalism students could be classified into the 'early adopters' category; yet conventional determinants, rather than factors corresponding exclusively to the sample, proved to be significant indicators of online news adoption. Apart from the financial barriers factor (corresponding to access, home autonomy and a fast connection) which was probably eliminated due to constant, free access from the university, the findings demonstrate no serious differences from any other sample.

LIMITATIONS OF THE STUDY AND FUTURE RESEARCH

The study proved that young people majoring in journalism present relatively low figures of systematic online news reading. However, the study did not escape sampling problems as a larger number of respondents coming from the other two University departments located in Athens and other private IEK would yield more enlightening results. To sum up it would be interesting to compare the results with the news habits of students majoring in other disciplines in order to figure out whether the new medium has contributed to decrease the loose attachments of

young adults with news. Also, insights regarding the reading choices of young people from online sources would be useful so as to investigate 'what do they really look for' and how they feel about these choices.

NOTES

[1] source: Internet World Stats (2005a)
[2] source: Internet World Stats (2005a)
[3] source: Internet World Stats (2005b)
[4] source: Internet World Stats (2005b)
[5] cited in Stafford & Stafford (2004), p. 266
[6] data source: eMarketer Survey (2001)
[7] source: Bentley, C. (2001)
[8] source: Trombly, M. (2003)
[9] source: Bowman, L. (2003)
[10] source: Bowman, L. (2003)
[11] source: Media Awareness Network (2000)
[12] the term 'news grazers' refers to those people who check in on the news from time to time. Grazers are usually younger, less dedicated to news and have an eclectic news diet
[13] cited in Tewksbury, D. (2003), p. 697
[14] cited in Eveland & Scheufele (2000), p. 215
[15] cited in Tewksbury, D. 2003 p.695
[16] cited in Adam, S. (2001), p. 333
[17] *Relative advantage* is the degree to which an innovation is thought to be better than its precursor. The more the perceived advantages, the higher the rate of adoption; *compatibility* is the degree to which an innovation is perceived as being consistent with the existing values, past experiences and needs of potential users; *complexity* is the degree of an innovation being viewed as difficult to understand and use. The more complex the idea is perceived to be, the longer it will take to be adopted. 'New ideas that are simpler to understand are adopted more rapidly than innovations that require the adopter to develop new skills and understandings' (Rogers, 1995:18); *trialability* is the degree to which an idea can be experimented with before adoption. An innovation that is trialable represents less uncertainty to the individual who is considering it for adoption.
[18] source: Metzger et. al. (2003), p. 174-5
[19] cited in Fischman R. (1992), p. 1
[20] cited in Rathmann, T. (2002)
[21] Internet users vary in their possession of at least four kinds of relevant knowledge: recipe knowledge about how to log on, conduct searches and download information; background knowledge (i.e. of Booleaian logic for designing search algorithms); integrative knowledge about the way the web operates that can enable users to navigate more effectively; and technical knowledge about software, hardware and networks necessary for troubleshooting the problems that invariably emerge, or for ensuring that one acquires the most up-to-date resources available. Taken together these four kinds of knowledge constitute what might be called 'Internet competence' (see DiMaggio and Hargittai, 2001, pp.9-10)
[22] cited in Johnson & Kaye (2003), p. 308
[23] the term autonomy in web use signifies access with no restrictions imposed such as time (when to use), time limits (how much time), monitoring (i.e. at work) or to compete with other users for using the PC (see DiMaggio and Hargittai, 2001, p. 8)
[24] source: Papathanasopoulos, S. (2001b), p. 119
[25] In Thessaloniki (Greece) there are two public institutions to study Journalism: the Department of Journalism and Mass Media of the Aristotle University, which is a four-year course and where one obtains a Bachelor Degree, and the Institute of Professional Training (IEK) of Epanomi, which is a two-year course from where one obtains a certificate. In order to study at the Aristotle University one has to take exams, which take place at panhellenic level, while in order to study at the IEK, people simply apply and are accepted according to

their CV as well as criteria of unemployment. The former has approximately 430 students, while the latter has 42 students.

[26] In the end the gender variable was omitted because the sample was not representative as it comprised of 20 male and 65 female students. It turned out however that this type of gender proportion exists in those departments.

[27] The respondents' answers are a bit contradictory in the sense that when asked separately upon web news characteristics, the option 'easy and fast to find news of one's interest' did stand out above the other options, but did not reach the benchmark figure. However, when asked again in the perceived gratifications and motives category the option scored .399. Yet, the authors think that the trend is clear.

[28] The term 'hits' corresponds to how many times a name was mentioned. Respondents were asked to name freely (no list existed) from one up to three choices. The research found a substantial number of missing answers to these questions.

[29] As far as foreign news outlets were concerned no distinction was made in the questionnaire between newspaper sites and portals. Students simply wrote if, and which news sources they prefer.

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Title:

Internet and Social Perceptions in Greece: Digital or 'Cultural' Divides into Shaping?

The role of regulation in the closing of divides

by

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ABSTRACT

This paper investigates the ways in which the Greek society makes use of the Internet. The paper is based on the latest figures that show that the Internet is not yet broadly diffused throughout the Greek society because of the lack of people's interest in using the Internet, articulating, thus, 'cultural' rather than purely digital divides. The research aims to explore those divides and look at the role of regulation accordingly by interviewing four key stakeholders and analyzing their theses through discourse analysis and reflexivity. The research confirms the bibliography on the Internet in Greece and identifies the existence of a techno-phobic culture within the Greek civil society, stressing, at the same time, the liability of political authorities of the country, as a similar culture prevails in the institutions that design policies on the Internet as well. Hence, the report concludes that regulation on the Internet fails to encourage the more widespread Internet usage, calling for more human-centered Internet policies and regulations.

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Background

Greece in the Information Society: a distinct case for study

The first official concern of the Greek authorities regarding the Information Society was manifestly expressed in 1995 by the then Minister of Industry and afterwards Prime Minister Mr. Costas Simitis through a text entitled 'Greek Strategy in the Information Society: A tool for Employment, Development and Quality of Life'. This text set out four main goals of the Information Society Strategy regarding the decrease of the gap between Greece and other EU Members[1].

Indicative of this gap and the way in which Greece is positioned within the international Information Society is the following table of data comparing Greece with the EU as well as with other EU and OECD Member States on a number of ICT indicators:

Table 1: Greek Information Society in comparison to the EU & OECD Members

COUNTRIES	INDICATORS						
	Secure Web Servers[1]	Percent of people online[2]	PCs per 1000 Inhabitants[2]	Mobile phone lines[3]	Internet Connection[4]	Modem[4]	Fax[4]
Germany	0,68	6.4%	362	15.9	7,1	10,2	22,9
UK	1.41	9.5%	441	18,6	10,7	9,3	19,7
Austria	1.30	4.5%	346	23,9	6,8	9,6	24,3
Norway	1.47	14.3%	515				
Finland	1.58	14.6%	505	57.3	17,2	17,7	27,3
Ireland	1.71	4%	404	22,8	8,4	9,0	16,6
Netherlands	0.95	9%	450	19,4	19,6	24,7	39,5
Spain	0.67	2.2%	202	17,1	5 (E?)	4,6 (E?)	17,9 (E?)
Portugal	0.32	1.9%	160	28.3	3,4	4,2	10,9
Belgium	0.51	4.7%	405	17,1	8,2	10,1	19,1
Italy	0.34	2.4%	297	35,8	6,1	7,0	16,8
France	0.43	2.6%	368	19,2	3,9	5,5	17,1
Denmark	1.01	13.1%	510	27,5*	24,6	24,5	44,8
Sweden	2.08	15%	509	43	39,6 (S?)	34,3 (S?)	49,5 (S?)
Switzerland	2.42	10.6%	444				
Luxemburg	2.88			24,2	14,0	15,0	34,5
Greece	**0.14**	**1.1%**	**125**	**14.3**	**2,9**	2,4	7,0
EU-15		**6%**	**352**	**22.1****	**8,3**	9,3	20,8
OECD average	**2.04**						
USA	**6.13**	**16%**	**580**				

[1] So far some of these goals have been achieved, whereas other aims and actions have been abandoned due to the fact that 'implementation has always been the weak point in many governmental initiatives in Greece' (Greek Ministry of Economy and Finance, 2002: 13).

1. For Electronic Commerce per 100 000 inhabitants, August 1998. Source: Greek Initiative 'Information Society': *Telecoms Infrastructure.* Available at: http://en.infosoc.gr/content/downloads/securewebservers.gif. Figures taken from OECD – Communications Outlook 1999.

2. Technology penetration indicator. Source: Greek Initiative 'Information Society': *Telecoms Infrastructure.* Available at: http://www.infosoc.gr/content/downloads/tables1.pdf. Figures taken from Forbes.[2]

3. Total number of mobile phone lines per 100 inh – End 1998. Source: GSI, *Telecoms Infrastructure.* Available at: http://en.infosoc.gr/content/downloads/mobilelines.gif. Figures taken from ESIS-ISPO.

4. In households, % of population, 1998. Source: *Greek Information Society: Telecoms Infrastructure.* Available at: http://www.infosoc.gr/content/downloads/tables1.pdf. Figures from Eurobarometer 50.1, at http://www.ispo.cec.be/polls/EB98.htm.

*end 1997

**82,3 millions of mobile phone lines

Hence, Greece is, according to the White Paper of 2002, 'relatively behind in the course towards the emergence of the Information Society', as 'inactivity, lack of appropriate initiatives and of preparation for the circumstances of the new emerging society risks cutting us off from European and global developments' (Greek Miinistry of Economy and Finance, 2002: 9)[3]. Therefore, the White Paper acknowledges the necessity for 'new rules for the protection of data, the protection of privacy, the commercialization of material protected under intellectual property rights, etc' (ibid), as well as the need for 'citizens participation' (ibid)[4].

At the same time, Greece presents an increasingly improved picture in terms of ICT diffusion throughout the Greek society. More specifically, the 2001, 2002 and 2003 GRNet surveys (GRNet, 2001; GRNet, 2002 & GRNet, 2003) point out the increasingly improved picture of ICT diffusion and usage in Greece over the last few years, contrasting, thus, manifestly the Flash Eurobarometer 125 survey for the year 2002, as the latter argues the relative increase in the digital gap between Greece and the EU (EC, 2002a). A comparative examination of the use of new technologies, such as WAP services, Internet use, computer use and a five-layered

[2] The same results concerning the number of PCs per 100 inhabitants were obtained from the European Commission and ESIS in 1998, as Greece has the lowest number of PCs per 100 inhabitants both at home and at the office among twelve other EU member states, followed, in order, by Spain, Italy, France, Portugal, Belgium, Austria, Germany, Finland, Sweden, Holland, Britain and Danish (Greek Initiative *'Information Society', ICT Use.* Available at: http://www.infosoc.gr/content/downloads/pcper100habitants.gif).

[3] Furthermore, the dynamic nature of the Information Society sets new requirements for the Greek policy, economy, culture and society to develop and for Greek public and private sector, citizens and the research community to keep up with the rapid international ICT evolution.

[4] Citizens' right to participate in the Information Society is proclaimed in the Article 5A/par. 2 of the revised Greek constitution which ordains further that the state has an obligation to facilitate production, exchange and dissemination of and access to electronically handled information.

indicator of new technologies use, can illustrate the gradual and increasing diffusion of ICTs in Greece for the years 2001-2003:

Table 2: Greek citizens and ICT use (2001-2003)

YEARS	INDICATORS							
	Usage of WAP Services[1]	New Technologies Use (%) [five layered use] [2]					Internet use (%)[3]	Computer use (%)[4]
		– –	–	+	++	+++		
2001	0.8%	38	27	20	8,7	6,3	10,6	20,8
2002	1.2%	32,1	26	21	10	10,9	17,2	25,8
2003	2.3%	29,1	27,4	19,6	10,9	13	19,9	27,1

1. Source: GRNet, 2003: 49
2. Source: GRNet, 2003: 80
3. 'Do you use the Internet?' Source: GRNet, 2003: 21
4. 'Do you use the Computer?' Source: GRNet, 2003: 5

Hence, Greece presents a mixed picture, illustrating that although it still lags behind other European countries, it is currently catching up:

> …Greece has had to fight with several problems from the past, such as poor network infrastructure, inflexible bureaucratic structures, largely ineffective State apparatus and distortions in competition…With the Community Support Framework (CSF III) for 2002-2006 and the preparations for the 2004 Olympic Games, the Greek economy has great potential for future growth, which in turn will also contribute to supporting the digitization of networks in the ICT sector (DDSI, 2001:1).

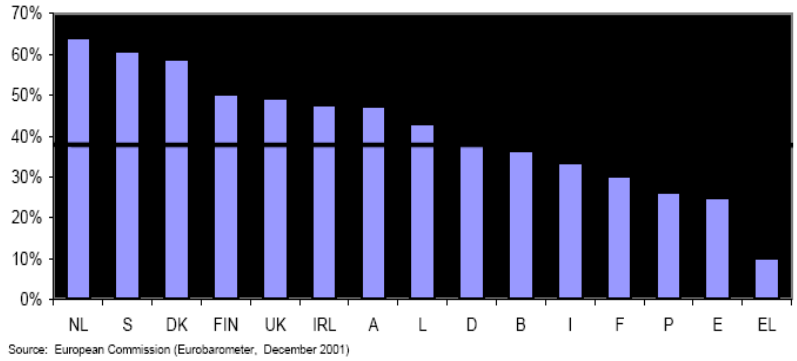
Internet use in Greece: the off-line Greek civil society

The above extract on the mixed picture of the Greek Information Society is also confirmed by the 2001, 2002 & 2003 national GRNet surveys (GRNet, 2001; GRNet, 2002; GRNet, 2003) on Internet usage and culture of non-adoption in Greece.

More specifically, these surveys illustrate the serious delays that Greece experiences compared to other EU Member States in terms of Internet diffusion and usage. In some sense, Greece fails to take advantage of the eEurope initiative, as,

while the Internet's penetration in December 2001 in the European households was 38%, Greece is an outlier with Internet penetration of less than 10%[5]:

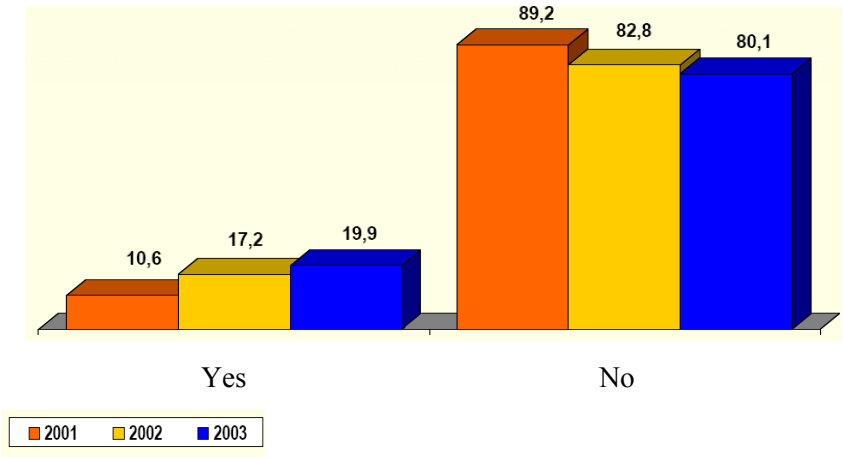
Graph 1: Internet Penetration[6] (% EU Households connected, December 2001)



Source: EC, 2002b: 5. Figures are based on Eurobarometer, December 2001

However, while in 2002 Internet usage increased by almost 7% (10.6% in 2001 and 17.2% in 2002), as more than 1 out of 3 Greeks was a computer user and almost 1 out of 5 was an Internet user, the picture was even better in 2003 with Internet usage increasing by 2.7% and reaching 19.9% of the population (73.3% of computer users) (GRNet, 2003: 21).

Graph 2: Internet use 2001-2003. 'Do you use the Internet?'



Source: GRNet, 2003: 21

[5] Internet penetration is a significant indicator relating to technology penetration and the Information Society, indicating that, although substantial advances have been achieved in Greece over the last years, the Internet and ICTs have not yet penetrated substantially Greek citizens' everyday life settings.

[6] Moreover, the Flash EB 112 survey illustrates the weak relationship between Greek citizens and the Internet. Indicatively, to the question 'does your household have access to the Internet?' only 10% of Greek respondents answered yes, presenting, thus, a decreasing rate of access to the Internet from 12% in October 2000 to 10% in November 2001 (EC, 2002c: 6). According to the same survey, Greece has the lowest percentage of citizens accessing the Internet from their household among all EU Member States, followed by Spain and Portugal where only one quarter of the population has Internet access in their households (ibid). On the other hand, Nordic countries (Denmark, Finland, Sweden and Iceland), Netherlands and Austria had the highest percentages of positive responses to that question (ibid: 16).

Another illustrative finding of the GRNet survey is that in 2002 computer and Internet usage expanded in all geographic regions throughout Greece (GRNet, 2002: 10), whereas the sub-categories with the lowest Internet penetration tended to have higher penetration rates than the average measured rate of the same year[7]. Moreover, Internet users in Greece engage with the passing of time in Internet usage of wider breadth, as, according to the GRNet 2002 & 2003 surveys, Greek users use the Internet for an increasing number of applications:

Table 3: Online activities (2002-2003)

ACTIVITIES	YEARS	
	2002	**2003**
E-mail	20,6	20,6
Information searching	19,1	17,5
News	13,4	13,6
Entertainment/games	10,6	10
Entertainment/music	8,4	8,7
Education	8	7,2
Information on public services	3,3	4,8
Chat rooms	4,3	2,9
Purchases of products/services	1,6	2,8
Entertainment/TV, Video	2,4	2,5
Job searching	1,5	2
Online banking	1,2	1,7
Access to free software	1,6	1,5
Online public admin. services	1,6	1,5
Information on health	1,3	1,4

Source: GRNet, 2003: 31

The 2002 and 2003 GRNet surveys have also illustrated a noticeably rising frequency of usage, as 27.9% in 2002 and 31.9% of users in 2003 use of the Internet daily (GRNet, 2003: 12)[8]:

[7] This finding is very indicative of the decreasing digital gap in different demographic categories of the Greek population, since, as far as Internet use in categories with income inequalities is concerned, 'the dynamism of the rates of development in this year has moved from the higher to the lower income layers of population, creating, thus, appropriate conditions for decreasing the digital gaps and massive penetration of new technologies' (GRNet, 2002: 28-9).

[8] Furthermore, the average weekly time spent in using a computer and the Internet increased in the period 2001-2003, with an average of 14.2 hours of computer usage in 2002 and 15.5 hours in 2003, and 6.3 hours of Internet usage in 2002 and 6.6 hours in 2003 (GRNet, 2003: 30).

Table 4: Frequency of Internet use 2001-2003

	2001	2002	2003
	INTERNET USERS		
	N=664 respondents	N=423 respondents	N=558 respondents
Daily (6-7 days)	33.7	27.9	31.9
Many times a week (3-5)	27.0	29.1	25.6
1-2 times a week	25.4	32.9	31.8
More rarely	13.2	9.2	10.0
I don't know/answer	0.7	0.9	0.7

Source: GRNet, 2003: 29

In June 2002, the average Internet use for people over 15 years of age in the EU was 51%, achieving a growth rate by 11% in comparison to 2001. Although Greece lags behind with a 19.3%, it appears to have a 91.1% increase in comparison to 2001, namely a multiple increase rate of the EU rate, entailing, thus, a significant convergence with EU standards. Finally, this survey predicted that in 2004 Internet use in Greece would reach either 49.6% or 67.5% (GRNet, 2002: 23).

Greek society and the Internet: Digital or 'cultural' divides in shaping?

Although the above figures present an optimistic picture of the future of the Internet in Greece, the large majority of Greek citizens still remain off-line. The 2002 and 2003 GRNet surveys attempted to go further and investigate why the majority of Greece citizens reject, either directly or indirectly, ICTs in general and the Internet in particular.

More specifically, the obtained data in 2002 indicate that it is the lack of interest by the majority of Greek citizens and the sense of not needing to use the Internet, rather than any particular fear or the cost of this technology, that lie behind the decision of people in Greece not to use the Internet. Hence, 1 out of 6 Greeks who do not use either computers or the Internet say that they do not need them or that they are not interested in them (GRNet, 2002: 11). Similar results were obtained about computer users who do not use the Internet, as 5 out of 10 do not use the Internet either because they are not interested in it or because they have never used it before and they do not need it, whereas just more than 3 out of 10 do not use the Internet because they do not have an Internet connection (ibid: 12)[9].

[9] Nevertheless, computer- and non-Internet users show by far a more positive attitude towards the prospect of using the Internet than non-computer and non-Internet users, as in 2002 10 out of 11 of

Likewise, in 2003, even more computer users (30.7%) than in 2002 (23.1%) stated that they do not need the Internet, whereas the concern about the cost of connecting to the Internet appears smaller (4.2%) than in 2002 (9.2%) (GRNet, 2003: 32). Equally important, the lack of Internet connection was articulated in 2003 (25%) as a less frequent reason for people not using the Internet than in 2002 (30.8%) (ibid), justifying the claims about a decreasing digital divide in Greece over the last few years, on the one hand, and a persistent culture of a low degree of interest and involvement of the Greek society with the Internet, on the other.

Table 5: Reasons for not using the Internet (2002-2003)*

REASONS	YEARS	
	2002	**2003**
I do not need it	**23,1**	**30,7**
No Internet connection	30,8	25
I am not interested	**16,2**	**15,6**
I have never used the Internet	10,9	14,6
No available PC	2,5	4,3
It is very expensive	9,2	4,2
Other reason	3,4	3
Its usage is difficult	2	1,1

*Respondents are computer users that do not use the Internet

Source: GRNet, 2003: 32

Therefore, what is more illustrative than the actual numbers of Internet usage and technology penetration are the measures of public attitudes towards the new communications technology, as Greeks present a lack of interest in ICTs in general, displaying, more specifically, the highest percentage of non-interest in the Internet at the office and the second highest at home among all other Europeans in the EU (Greek Initiative 'Information Society*: ICT Use.* Available at: http://en.infosoc.gr/content/downloads/imginter1.gif).

The most recent survey conducted in Greece in the first quarter of 2004 by the National Statistical Service (ESYE) also confirms the above figures and

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the former argued about their positive predisposition to using the Internet in the future for a number of reasons. Also, 1 out of 12 households that do not own a PC declared their intention to buy one within the next six months, which entails an increase in the percentage of PC occupation in Greek households by 8% in only six months, namely from 29% to 37% (GRNet, 2002: 19). Likewise, 1 out of 10 households that did not have an Internet connection declared their intention to obtain an Internet connection in the next six months, leading to an increase in the respective percentage by 9% (from 13.4% to 22%) in only six months (ibid: 20).

concludes that the non-appreciation of the Internet is the main reason for people not using it, as the majority of the respondents, 52.62%, stated that the main reason for not accessing the Internet is the belief that the information provided online is not of particular usefulness and interest (ESYE, 2004).

In conclusion, it seems that Greek citizens suffer from a lack of familiarization with new technologies and electronically mediated ways of communication, pointing, thus, to new challenges and bringing to the fore the existence of 'cultural' rather than purely 'digital' divides:

> In our country today there is a tendency to distinguish the few (but rapidly increasing in number) users of computers and communication networks such as the Internet from the **many who treat the new technologies at best as a mystery and at worst as a danger for their future** (emphasis added) (Greek Ministry of Economy and Finance, 2002: 12).

Implications and challenges for policy and regulation on the Internet

The above shaping of divides within the Greek civil society poses, therefore, the question of whether those divides are purely digital or 'cultural' in nature, and stimulates further research regarding cultural, economic, historical and socio-political factors into play. This study questions the nature and character of those divides, and investigates the way they challenge existing policy and regulatory frameworks on the Internet requiring, possibly, more flexible, mediating and socio-culturally oriented Internet regulatory and policy schemes[10].

More specifically, Greek regulation on the Internet covers a range of distinct policy and regulation areas, often, however, in an incomplete, partial and at many points a-social way, while, in many instances, not particular or specialized regulatory provisions are put in action[11]. This drawback might explain to a degree the lack of familiarization of Greek people with the Internet, stressing, furthermore,

[10] Furthermore, up to this moment, Greece is one of the countries appearing problematic, in terms of compliance and adoption of the EU policy and regulation on the Internet, raising, thus, the role of the cultural particularities and of the national ICT environment to the degree in which EU law and policy on the Internet can be fully and effectively implemented. The core of the problematic is that the failure and only partial applicability of the EU Information Society (EC, 2003a; EC, 2003b; EC, 2004) are fundamentally rooted in the absence of substantial and constant consideration of socio-cultural particularities of EU Member States such as Greece and of the fundamentally 'cultural' character of the persistent divides.

[11] In some sense, the problematic for the existing policy and regulatory frameworks on the Internet stems from the insufficient account of the Greek civil society and in particular of the society of ICT users, making, at the same time, the two-sided goal of the regulation itself harder; namely the protection of the Greek Internet users, on the one hand, and the development of the market economy of new products and services in the Information Society, on the other (Greek Ministry of Economy and Finance, 2002: 76).

the need for more culturally adjusted policy and regulatory provision on the Internet in Greece.

In other words, Greece is an illuminating case for study regarding the underlying reasons for the low ICT and Internet adoption and usage rates, on the one hand, and for the further examination of the role that regulation might play in the boosting of the Internet and the possible alterations that the current policy and regulatory frameworks need to undergo, on the other.

Research Questions

Consequently, the questions to be explored are:

1. Whether the decision of most people not to use the Internet in Greece is derived from digital divides or from a culture of a lack of interest in the Internet and insufficient familiarization with ICTs in general.
2. How the current regulatory frameworks on the Internet in Greece respond, facilitating or hindering the diffusion of the Internet throughout the Greek society.

These two questions are investigated by interviewing key policy makers, market players and regulators in Greece, and analyzing the interview texts through discourse analysis and on the basis of reflecting on the epistemological implications of the research situation, as well as of my own position as a researcher.

Rationale for the method used

The method applied to address the above research questions is a small-scale qualitative study of interviewing Greek key-stakeholders, in accordance with the principles of discourse analysis and bearing in mind the simultaneous task of reflecting on my own position as a researcher and the epistemological implications that this position might entail for the research process. This multi-layered qualitative analysis and the employment of different research tools will work in combination with the initial exploration of the most recent documents and surveys on Internet

adoption and usage in Greece[12] in order for the two main research questions to be investigated.

In-depth Interviewing: the research tool for data collection

On the one hand, **in-depth individual interviewing** is the appropriate research tool for addressing the two research questions, as it has the potential to operationalize a number of concepts and topics, whereas devising a semi-structured questionnaire has the advantage of 'openness', where new issues or concepts can be raised, leading the researcher to new paths of analysis (Gaskell, 2000)[13].

On the other hand, a quantitative approach could be charged of inappropriateness, as the goal of this essay is not the strictly quantitative approach to people' s patterns of online behaviour. Rather, the aim of this study is to investigate Greek people's perceptions and evaluations of the Internet and the respective role that Internet regulation plays in accordance with stakeholders' views. From this perspective, quantitative research fails to analyse the open meaning of words and the various ways in which this meaning can be interpreted. Finally, a quantitative analysis is inappropriate for small sample research and in particular for the investigation of a group of people with its own professional particularities and interests at stake, such as the stakeholders of the Internet in Greece[14].

Nevertheless, there are a number of limitations in pursuing this qualitative research. One limitation is that the participants will be selected by some unavoidably arbitrary criteria and by using purposeful sampling. Generalizability

[12] The findings obtained from the multi-layered empirical research will afterwards be compared with the results and conclusions of those documents and surveys outlined in the background section of the essay.

[13] In this respect, the strength of the in depth-interviewing is that: 'It goes beyond the spontaneous exchange of views as in everyday conversation, and becomes a careful questioning and listening approach with the purpose of obtaining thoroughly tested knowledge… it is in fact a strength of the interview conversation to capture the multitude of subjects' views of a theme and to picture a manifold and controversial human world' (Kvale, 1996: 6-7).

[14] However, a combination of qualitative and quantitative research tools is justified in many cases, as, according to Webster's (1967) view, a qualitative analysis is a kind of chemical analysis designed to identify the components of a substance, while a quantitative analysis is a chemical analysis designed to determine the amounts of the components of a substance. Research often requires a combination of qualitative and quantitative methods, as the whole research process involves the interaction of qualitative and quantitative approaches (Mayring, 1983). By using multiple sources for data collection, the researcher is able to use different data sources to validate and crosscheck findings. By securing the 'objective' quantification of the data obtained on the one hand, and the 'openness' of the qualitative data on the other hand, new issues and concepts can be raised, which can lead to new paths of analysis (Bauer and Gaskell, 2000).

should not be assumed. Another limitation relates to the validity and reliability of the research, as although these parameters of verification of the knowledge obtained are always one of the goals of qualitative research (Kvale, 1996: 235-6), such interviewing validity and reliability are heavily dependent on structural limitations and individual restrictions, with the latter being very much formed around the interviewer and interviewee's subjectivity and possible pre-dispositions.

Nevertheless, I will attempt to overcome these limitations by conducting tests of reliability and validity throughout the research. Furthermore, an analysis of the data obtained will be carried out in accordance with the questions asked and the goals of the research, namely the identification, from a policy aspect, of the underlying factors creating divides on the Internet and the respective role of regulation[15].

Discourse Analysis: the analytical means for interpreting interview texts

Discourse analysis employs a sort of constructivist approach, according to which what we are interested in looking at is not only the denotations of the texts (descriptive and value-free meaning), but also, and even more importantly, the connotations of them (construction of meaning and the role of ideology)[16]. By constituting part of the general epistemological concern, discourse analysis deals more with the unsaid, implied or contradictory arguments and the 'significance of silences' in the texts (Gill, 1996), rather than with the said, explicit and manifest words (Berger, 1998: 65-76). In this respect, discourse analysis helps this essay to go beyond the 'obvious', and to draw more sophisticated conclusions from 'implied meanings and tacit codings in language use' (Deacon et al, 1999: 311), working on

[15] Qualitative data analysis consists of coding the interview transcripts and analysing them in a systematic and ordered way. Themes and patterns are then compiled according to the research question, and suggestions about future prospects and considerations are made. In-depth interviewing can be essentially functional for this task, as it is, as Robert Farr (1982) argues, '…a technique or method for establishing or discovering that there are perspectives or viewpoints on events other than those of the person initiating the interview'.

[16] Having its theoretical roots in structural linguistics and Sapir's work (1949), that is in the post-structuralist principle that there is no reality which is accessible other than through systems of representation, as well as in Saussure's legacy of semiotics (1974), the above epistemological position leads this study to focus on how people construct their views in relation to their self-identity as social objects, and the linked process through which they engage in the issue at stake.

latent meanings, sometimes unconsciously and intended for the interviewees themselves[17].

What is worthwhile for this study is that the discourse analysis is, according to Gill (2000: 173), epistemologically based on skepticism about the unproblematic reflection of the 'truth' on the world as this is experienced[18]. Hence, by identifying the possible textual conventions and codes in the process of 'decoding' (Eco, 1977), the polysemantic and polysemic interview texts can be identified throughout the analysis of the data. This point is particularly valid in this study where the language and views of stakeholders on the Internet in relation to citizens and ordinary people will be investigated, and as social and cultural discrepancies and differentiations might have an effect respectively[19].

However, discourse analysis is a kind of craft, consisting of sophisticated and vague principles of text analysis[20]. This makes the whole endeavour very ambitious, as while trying to reflect on interviewee's language the researcher comes across his/her own language and analytical predispositions, demanding, therefore another research tool to trade-off: this is the tool of self-reflection as the epistemological choice for addressing the pursuit of neutral knowledge of the issues at stake.

Reflexivity: addressing the epistemological question of the objectivity of knowledge

Generally speaking, social research is faced with epistemological concerns regarding how social scientists might gain knowledge of social life and what should count as knowledge in the social sciences. This raises the question of "where does our knowledge come from and how reliable is it?" (Williams and May, 1996: 5;

[17] Indicatively, discourse analysis is concerned with 'extended samples of talk or text, with the structural, stylistic and rhetorical features of these samples, and with the form of dialogue or communicative interaction that occurs through talk and text…' (Deacon et al, 1999: 310).

[18] In this respect, this essay takes into account that knowledge is socially constructed and reliant on social processes, and, that any investigation of it must be historically and culturally related and contextualized.

[19] This is why the unit of analysis will be fundamentally the discourse/text itself, whereas the language will be viewed as constructive and constructed at the same time, and the discourse will be treated as a form of action in its own right. Nevertheless, the interviewees can sometimes be the informers of 'true' situations, and they can constitute the unit of analysis for a moment, as their 'real' parameter of life can be of central interest to the study.

[20] We should also be cautious of the difficulty in judging how: 'a discourse had constructed its object validly' (Eagleton, 1991: 205).

quoted in Lazar, 1998: 8). These epistemological concerns[21] have at their centre the question of objectivity, which gave in turn space to the tradition of relativism and the view that different theories construct their own conception of reality and promote their own claims for knowledge[22].

This study had to review the main debates regarding both the means of research and the objects of knowledge, deciding where it stands exactly. Thus, this research ended up with a rather interpretivist thesis and the application of qualitative methods of research, instead of a naturalist position and the employment of quantitative methods. Regarding the second dilemma on the claims about objective or relativist knowledge, this study resulted in an account of the problems that social research faces concerning objectivity, acknowledging the importance of the question:

> Social scientists…are individual with personal characteristics, are situated in a certain class, ethnic group, gender, religious group and live in a particular historical period. How, when each researcher is embedded in prejudices, values and specific cognitive frameworks, can we move, however tentatively, towards something which might be called objectivity?' (Lazar, 1998: 17).

The question of the objectivity of knowledge sheds light on Bourdieu's 'reflexive sociology' (1992, 1999) which goes beyond the biases of the researcher in terms of social class and biographical idiosyncrasy, and emphasizes the role of the position that the researcher occupies in academic space and the possible biases existing in the view that s/he is "off-sides" or "out of the game" (1992: 71-2)[23]. Bourdieu's 'reflexive sociology' suggests, therefore, the construction of theories that contain within themselves a theory of the gap between theory and practice (ibid: 70)[24]:

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[21] The main epistemological debates took place between rationalists, such as Popper, and empiricists, between naturalists, such as Durkheim, Parsons and Merton, and interpretivists, such as Geertz, Taylor and Schutz, while others, such as Weber, attempted to reconciliate naturalism and the interpretive tradition (Lazar, 1998: 7-22).

[22] Kuhn's standpoint of paradigms represents a moderate relativist thesis, while Feyerabend's rejection of research method(s) expresses a radical relativist position instead (ibid).

[23] On the view that reflection might correct this bias, Bourdieu states: 'There is thus an intellectualist bias inherent in the position of the social scientist who observes from the outside a universe in which she is not immediately involved. For you, it is this intellectualist relation to the world, which replaces the practical relation to practice…that must be objectivized to fulfil the requirement of reflexivity' (1992: 73).

[24] Bourdieu considers that reflexivity might prove very helpful for the novice researcher, as it 'encourages him or her to take into account, in the definition of her project, the real conditions of its realization, that is, the means she has at her disposal…and the possibilities of access to informants and to information, documents and sources, etc' (ibid: 252)

Bourdieu's 'reflexive sociology' is used in this research for the frequent relativism of knowledge to be illustrated and the necessity of reflecting on the researcher's own scientific and intellectual status to be indicated, so that the objectivity of knowledge is ensured as much as possible[25]. Bourdieu's 'reflexive sociology' is an appropriate tool for methods of research such as open-ended individual interviews (1999), as it allows open discussions between the researcher and the subjects of research and constant reflections on the researcher's own positions concerning his/her own performance throughout the interviewing and collecting data process.

However, I do not adopt the claim that objectivity through reflexivity can be thoroughly ensured, as the influence of personal values and preconceptions cannot be entirely eradicated from the research, due to structural limitations and self-consciousness restrictions[26].

Method

In order for the research questions to be operationalised, I had to make a range of decisions regarding not only the main research tools employed but also the research procedures followed until the data was obtained.

Decisions made on the research subjects

Firstly, I had to choose between the investigation of ordinary people's perceptions on the Internet and the study of key stakeholders' views on how people incorporate the Internet in their lives and the reasons lying behind it. My final decision to interview key stakeholders derives from the fact that in the literature on the Internet in Greece the only side presented is that of ordinary people. The policy and market side's views on the character of the existing divides on the Internet in Greece and the factors into play are entirely absent. Moreover, this study aims to

[25] However, even reflexivity itself has been the object of various debates and perceptions among social researchers. However, the conceptual framework that this research takes into account is Bourdieu's reflexive sociology, in the sense that the latter emphasizes the scientific importance of a reflexive return on the researcher throughout research, due to the importance of mediation provided by the relatively autonomous space of the field of cultural production, as well as the influence of the invisible determinations inherent in the intellectual posture itself (ibid: 68-9).

[26] From this perspective, Bourdieu's ambition that a researcher should be aware of his/her dispositions so as to get a grip on those dispositions and resist them (ibid: 253), cannot, scientifically speaking, be certain.

confront the challenge of relating the so far available data about Greek people's attitudes to the Internet with the respective views of policy makers and experts on the Internet in order for discrepancies and contradictions, if any, to be identified.

Finally, policy-makers, regulators, researchers and official institutions in charge are the only bodies which are able to answer questions regarding the role of regulation and policy on the Internet and the way that existing policy and regulatory frameworks fight persistent divides, either digital or cultural, on the Internet.

Research Sample: characteristics, recruiting and access

This qualitative study is based on open-ended interviews with four Greek stakeholders in Greece: the Secretary of the Operational Program 'Information Society', Professor Vassileios Assimakopoulos; the President of the Greek Hotline, Safeline, Mr. Nicolaos Frydas; the Officer of the Federation of Hellenic Information Technology & Communications Enterprises (SEPE) and Product Manager of FORTHnet, Ms Sofia Parissi; the Director of Telecommunications at the Hellenic Republic National Telecommunications and Post Commission (EETT) – that is the Greek NRA - Mr. Costas Balictsis [27].

This selection was based on a list of public, private and research bodies on the Internet in Greece, attempting to represent the main spectrum of Greek institutional bodies currently working and deciding on the Internet. The interviewees were selected according to their role within each body and their usability for the purposes of the study. The exact process of administering the drawn sample was based on the publicity of those bodies and persons, as well as on some professional networks that I still maintain as a journalist in Greece.

However, the difficulty in getting access to these institutions remained an important problem that took me more than one month to resolve[28]. More specifically, I started with getting as much information as possible and I then tried to get access by contacting the selected interviewees over the phone and introducing my research and myself to them. Afterwards, I e-mailed them with some more

[27] The number of four interviews cannot be regarded as sufficient to enable us to trace themes and social factors at work. However, the accountability of the research subjects allows us to come to useful conclusions regarding stakeholders' understanding and analysis of the Internet in Greece and the way that regulation responds accordingly.

[28] This is perfectly understood if we take into account the unwillingness and reluctance of most policy-makers to be interviewed even for academic reasons because of the fear of information distortion by the interviewer

details about the research and the purposes of the interviews[29]. Two weeks later, three of them had not responded. Thus, I had to phone them up again and request an answer. In two cases, I had to resend the e-mails because they had lost them! Finally, I managed to arrange all four interviews by the end of March.

Interview Schedule

Four interview topic guides were constructed following the objectives and narrative of the research, so that the variables used, the questions asked and the particular conceptual frameworks employed to become operationalized for the aims of the study (Appendix B)[30].

Furthermore, the interview guides' thematic frame was based on a reflective approach to the knowledge sought and the social processes intervening, while following the principle that 'when conducting an in depth interview, you can adapt as the situation changes. If a promising topic comes up, you can pursue it' (Berger, 1998: 57). In other words, in order for the discourse analysis to become an efficient tool of analysis, it is imperative for the question and coding categories of the data obtained to reflect the main research interests and to allow changes of question and coding units, if such a need comes up, while allowing reflection on my own position as individual, Greek citizen and social researcher.

Finally, the interviews which were conducted in the first week of April in the capital of Greece, Athens, were all face-to-face discussions, whereas some notes were taken while the interviews were being recorded. Further notes on the atmosphere of the interviews, on the different feelings of the interviewees at different phases of the interview and on things that were said after the recorder was switched off were taken after each interview was over. Finally, some notes were taken via reflecting on my own position throughout the empirical research.

Ethics and consent

I was seriously concerned with the issue of ethics throughout the research process. More specifically, I was required to make a range of decisions regarding

[29] At this point, I had to face the dilemma of how much I should reveal, something that I cover in more detail in the ethics section.

[30] Although the basic thematic framework was the same for each interviewee, some different questions were asked according to the expertise of the interviewee and the role that the institution where s/he belongs plays in the Greek Information Society. Therefore, four different interview guides were constructed addressing, however, the same key questions.

the extent to which the interviewees should be informed in advance about the rationale and aims of my research; the way I should treat them while interviewing them; the manner in which I would transcribe the interview texts; whether I had to go back and inform the interviewees about the way their views were presented in my final report; and, finally, the extent to which I should take the interviewee's feedback seriously into account, allowing it to affect my final report.

In my effort to overcome all these ethical dilemmas I addressed the LSE regulations on ethics of research and tried to position myself within those regulations. I ended up with a consent form (Appendix A) that ensured the full consent of the participants, the mutual trust between me and the participants and the principle of confidentiality, although not the anonymity of the interviewees. This decision helped me to confront in an efficient way the main ethical issues posed at least at the fist stage of the research process, namely the point up to the conduct of the interviews, whilst I kept struggling with ethical issues concerning the analysis of the interview texts and the role of the interviewees in my research after the recorder was off until the very end of the research process.

Analysis and Findings

Decisions and procedures for analysis of the interview material

Firstly, I had to make some decisions regarding the procedures for analysis of the interview material obtained. Since the number of the interviews was rather small, only four, I decided that the use of software for a qualitative analysis, such as the ATLAs or ALCESTE, would be of minor practicability. Therefore, I read and re-read the interview transcripts and went through the main obvious points made in relation to the research questions. Afterwards, I compared the main points, while trying to identify possible contradictions, common patterns or divergent theses within the interview texts, in order to come to some conclusions and answer the articulated research questions.

Furthermore, I employed a discourse analysis strategy of the used linguistic equipment in order to investigate the role of the social, ideological, professional and cultural capital of the interviewees in the formulation of their theses through the usage of particular linguistic vehicles. The discourse analysis helped me to the

further discussion of the findings and the illustration of things that cannot be discerned at first sight. Finally, throughout the analysis and writing of the findings, I constantly reflected on the interview situation and format, on the research relationship between the respondents and me, as well as on my own cultural capital as a researcher in comparison to the interviewees' cultural capital, thus, ending up with a self-critical account in the discussion section.

Key findings

The key findings focus on the respondents' representations of the Internet in Greece and the role that citizens and Internet regulation might play respectively.

All the interviewees confirm the disappointing picture that the surveys and official figures show about the Internet in Greece, maintaining characteristically:

S.P: Unfortunately, it is broadly known that Greece has one of the lowest ICT and Internet penetration rates not only within the EU but also globally. The problem is even more acute as far as broadband Internet is concerned, as only 1% of the total population has access and uses broadband Internet.

Generally speaking, the 'techno-phobia' of the Greek society is viewed as one of the main factors obstructing the development of the Information Society. This characteristic is also present in a culture of non-modernization of the bureaucratic and non-technocratic public administration in Greece, where members of the government are not fully aware of the importance of new technologies for the country.

Therefore, the stigma of a culture of techno-phobia and non-modernization prevails in both social and political life in Greece, leading to policy delays, social resistance and lack of initiatives in the public administration for the further development of the Information Society. From this perspective, Indicative are the words of the Secretary of the 'Information Society' program, Professor Vasilleios Asimakopoulos:

- What is the role that the Greek society plays in the way in which the Information Society evolves?

V.A: *Yes…the difficulties, beyond…the lack of modernization of the Greek public administration, are also related to the fact that we talk about technology in a society that is marked by techno-phobia. In other words, if the same program was about roads and not technology, then we could say that it would be easier because it would be more comprehensible to people.*

- Can you tell me in more detail how this phobia about technology has affected the program itself?

V.A: It has influenced the program in terms of occurred delays, as even staff members of public authorities in charge, such as Ministries…do not put as much effort as they should do, possibly because they do not understand the benefits of new technology or because they are afraid of it.

- Therefore, it has to do with culture…

V.A: *(interrupts) Yes!*

- …of the authorities as well…

V.A: *(interrupts) Yes!*

Regarding the Internet in particular, the issue of techno-phobia, as a parameter affecting significantly the decision of Greek people not to use the Internet, is emphasized, accompanied by the recognition of the role that the traditional, off-line, way of living in Greece plays, since the Internet is not yet part of people's daily life. At the same time, reference to the lack of sufficient infrastructure, governmental initiatives on the Internet and availability of a wide range online services is made, while the low level of awareness is also mentioned:

- In other countries, however, where the Internet appeared in the same period as Greece, we see far higher penetration rates. How do you explain that?

N.F: *…there is no sufficient infrastructure, no significant offer of e-government services, as the people in the public sector are negative towards the development of online public administration, while the high amounts of ignorance does not allow citizens to develop a rational perception and usage of the Internet.*

On the other hand, there is a phobia about technology…I do not know why in Greece this phobia is higher than in other countries.

Also, there is the predisposition of Greek people to act more face-to-face than online; there is a more traditional attitude towards offline activities.

All the interviewees, however, did not omit to underline the liability of the official authorities of the country that do not offer to citizens the alternatives that would make the Greek civil society modernized:

C.B: … people in Greece are tired and need to make some changes and adopt new things…People in Greece are still attached to this traditional life-style because they are not informed or because they have not seen other examples of people in other countries using new technologies successfully.

At the same time, there is no particular optimism about the potential for dramatic changes of this culture in the immediate future:

- How are you planning to change this?

N.F: *I do not think we can do lots of things about that, because it would be like wanting to change the Greek society for the sake of the Internet and this cannot happen.*

Furthermore, all the four respondents admitted to the lack of sufficient regulatory and policy schemes on the Internet in Greece, emphasizing the role of culture in terms of political inaction and bureaucracy, and arguing that the existing regulatory frameworks are incapable of stimulating interest in the Internet in Greece. Thus, the issue of culture goes beyond the mass of ordinary people, and concerns the political authorities of the country as well. At the same time, the solution proposed by the four interviewees is about more socially responsible policies and initiatives on the Internet. Indicative is the following extract of the interview with Sophia Parissi who is, in strict terms, the representative of the market:

- To what extent do the policies and regulations on the Internet reflect the concerns of the Greek society, contributing, thus, to the rise in Internet penetration in our country?

S.P: No, I do not think that the efforts of the political authorities of the country are able to contribute to the diffusion of the Internet throughout the Greek society…In Greece there is no such efficiency of the policy and regulation making process on the Internet.

- What are the reasons for the ineffectiveness of the existing regulatory schemes on the Internet?

S.P: The policies and regulation on the Internet need to be very close to the end user and clear to him/her, so that the user receives their impact. From this perspective, we are still behind other European countries.

Although the social insufficiency of the policies on the Internet is acknowledged, the four respondents do not think the active participation of the civil society in the policy making process is likely, as no active social organizations and institutions exist, whereas the lack of conscious citizenship that the Greek people are marked by does not help either:

- Tackling this last issue, do you not think that Greek citizens might play an essential role in the way in which regulation and policy on the Internet is decided and put in action?

N.F: In other countries maybe, but I do not think that this is the case in Greece…we do not have the mass social organizations and institutions that could play an active role in decision-making. I do not see how citizens might have some influence unless new social organizations and other institutions emerge.

Discussion

Background, research questions and given answers

All the interviewees confirmed the fundamental assumption about the non-diffusion of the Internet in the Greek society.

More specifically, ignorance and low awareness levels, a culture of not advanced technology in the Greek society, lack of familiarization and non-integration of the Internet in people's everyday life, the traditional life style, backward and un-technocratic public administration, as well as lack of appropriate political initiatives, were all mentioned as factors shaping the picture of an undeveloped Greek Information Society, where people still refuse to use the Internet. Even though every interviewee stressed the role of culture from a rather different perspective, all the above factors allow us to answer the first research question by underlying the role of culture, at both societal and political level, as the force determining the present disappointing picture of the Internet in Greece.

Concerning the second question, the interviewees maintained that existing policy and regulation schemes do not contribute to the diffusion of the Internet, while they suggested that policy makers and regulators must come closer to citizens, allowing the development of more human-centered and social policies and regulatory models. In this sense, all the interviewees propose more human-centered policies on the Internet as the means through which Internet usage will be further stimulated, whereas representatives of the market forces, such as Ms Sophia Parissi and Nikos Frydas, do not forget to underline the role that the further empowering of the market can play in the more dynamic presence of the Internet in Greek society.

Related findings in the field

A first point of interest is that all interviewees attempted to restrict the focus of the discussion to their own expertise, showing a particular reluctance in talking about people/citizens. Most of the interviewees preferred the term consumer(s) indicating that the public and private authorities in Greece view citizens from a rather political economy point of view.

At the same time, although each interviewee followed a different direction of thinking, all the interviewees agreed on the importance of economic development and re-regulation – they all rejected de-regulation – and the significance of more

human centered regulations and policies on the Internet. All the interviewees also emphasized the political and economic strategies of development, rather than the societal ones, whereas they underestimated the dynamism and influential action that the Greek civil society could develop, addressing, complementarily, the issue of the liability of the central governmental authorities regarding the persistent weaknesses of the Greek Info-Society.

By employing discourse analysis, we identified contradictions in the interviewees' arguments concerning the way in which the cultural particularities of the Greek society and politics might affect the Information Society and the insufficiencies and unsocial character of Internet regulation, on the one hand, and the clearly market-driven linguistic tools that the interviewees employed from a rather political economy perspective. Hence, they explicitly follow the approach market ⟶ regulation ⟶ society, even though their concerns frequently indicated a rather sociological point of view.

Concluding, all the interviewees were very reluctant to talk about issues outside their expertise, stating 'I am not an expert, but…'. Hence, they used a rather a-social language that made them feel more secure in professional terms. In this sense, there was discrepancy between my sociological language and their more technical and professionally restricted language, leading sometimes the whole discussion to underlying tension.

Self critical assessment

Although the conducted research answers the formulated research questions to some extent, a reflexive look throughout the research process and in particular during the interview and writing process might shed light on the flaws in the implementation of the project.

On the one hand, every single interview demanded a different type of treatment not only at the stage of collecting the data, but also throughout the analysis of the obtained data. This is related to the fact that all the interviewees spoke from a different position, in terms of profession, expertise and interests. On the other hand, all the interviews needed to be viewed in accordance with the purposes of the research. This often challenged the focus of the research and the language used by me as a researcher throughout the interviews, while, in many

cases, it made me re-orient the direction of the discussion and integrate the interview material according to the research questions and goals of the report.

An implication of the complexity of the interview process was that in many cases I revealed some of the research purposes and expressed some of the predispositions and hypotheses articulated about the issues at stake affecting, thus, the interviewees to a certain degree. More specifically, I did not avoid the distortions embedded in the very structure of a research relationship, as the relationship between me and the respondents brought to the surface a frequently conflicting interaction between two divergent views: the research/academic view of my self and the political economy view of the interviewees. From this perspective, I rather prompted the articulation of other things by stressing the societal and cultural parameter in the discussion about the Internet in Greece.

Furthermore, the existing asymmetry in the linguistic capital used by me and the respondents brought to the fore the contrast between an academic and a political economy language, creating an interview identity marked by a range of inconsistencies. I tried to reduce these discrepancies, as well as the 'symbolic violence' (Bourdieu, 1996: 609) exerted through the interview relationship, by attempting to bridge the gap between these two divergent linguistic vehicles[31].

At the same time, a more procedural kind of difficulty, namely the translation of the interview texts from Greek into English, and the use of two different linguistic mechanisms with different syntax and grammar rules, challenged the quality of the final report, affecting, in some cases, the accuracy and originality of the language transcribed and, therefore, the reliability of the findings reported[32].

Therefore, what I concluded is that the aim of this project should not be the utopian objectivity of knowledge, but rather the realist construction of it, as my theoretical predispositions as a researcher brought to the fore the risk of the 'imposition effect' and jeopardized the 'neutrality of the project itself (Bourdieu, 1996: 620).

[31] As an outcome, I faced the difficulty in following what the respondent was saying and, at the same time, in thinking ahead to the next questions that should come into the discussion smoothly and following the decided 'line' of the interview. Therefore, many times, my follow-up questions were not the expected outcome of the previous answers given by the interviewee, while I purposefully oriented and re-oriented the discussion, catching, thus, up the respondent by surprise.

[32] The process of recording the interviews also played a role in the research, as all the interviewees seemed to be reluctant to express their thoughts and theses freely, since the tape recorder put a kind of limitation by exerting a more psychological censorship on them.

Conclusion

In conclusion, the report confirms the bibliography on the Internet in Greece and the existence of a techno-phobic culture in the Greek civil society, attributing this culture to non-awareness, lack of integration of the Internet in the everyday life and persistence in a traditional life style. At the same time, the research went further, stressing the liability of the political authorities of the country, as a similar culture prevails in the bodies and institutions that design policies and regulations on the Internet. Hence, the report concludes that, according to all four interviewees, regulation on the Internet fails to encourage the more widespread Internet usage, calling for more human-centered Internet policies and regulations.

These findings entail wider implications for both policy makers and regulators, as they challenge existing regulations on the Internet, calling for more social policies that will confront the more 'cultural', rather than just 'digital', divides in Greece. Additionally, the findings challenge the character and culture of public administration and calls for its modernization through the assumption that the issue of culture goes beyond the mass of ordinary people and concerns in an imperative way the political authorities of the country as well.

Finally, this research brings to the fore the consideration of further research questions for future researchers regarding the possible role that social institutions and civil associations might play in the shaping of the Information Society, as well as the new procedural and principal issues that policy makers and regulators should take into account when making decisions about the Internet in particular.

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APPENDICES

A. Consent Form

Internet and Social Perceptions in Greece: Digital or 'Cultural' Divides into Shaping?

The role of regulation in the closing of divides

By agreeing to take part in an interview I demonstrate that I have read the attached document detailing the Internet Regulation and Social Concerns: Regulation to be Regulated by Users? project and that I am happy to put forward my views as invited by the researcher.

I am aware that my interview will be audio-recorded for purposes of accuracy, and will later be transcribed. I also understand that I will have an opportunity to review my transcript and correct any inaccuracies if necessary.

I understand that the information that I make available will be handled confidentially. In addition, I understand that transcripts will only be handled by the researcher, who will abide by high standards of confidentiality.

I understand that the final findings of this research will be reported or published for purely academic reasons.

I agree to participate in this study

Name _____

Signature _____

Date _____

B. Interview Guides

1. Professor Mr. Vasilleios Asimakopoulos, Secretary of the Operational Program 'Information Society' - The Greek Ministry of National Economy and Finance

A. The Greek Information Society

- Main conclusions about the way the Greek Information Society is positioned within the European Information Society; particular emphasis on Internet indicators;
- Persistent weaknesses and areas for further development, according to numbers and official data;
- Factors affecting the course of the Greek Information Society and Internet usage in Greece in particular;
- The role of culture respectively;
- Main areas of interest and concerns on the Internet; Are citizens taken into account (officially, unofficially, at all?);

B. Greek civil society and the Internet

- How the Greek civil society perceives the Internet, the main social concerns regarding the Internet, as expressed in the feedback that the Operational Program 'Information Society' receives, and the main forces at work regarding those concerns/perceptions (cultural, technological, societal, economic, political, etc);
- Time evolution of how Greek citizens 'feel about the Internet';
- Whether and the extent to which governmental policies, initiatives and regulation respond to this 'feel on the Internet';
- The role of civil society in the designation of regulation and policy on the Internet in particular.

C. Telecoms and Internet policy and regulation in Greece

- Greek Internet policy and law in action; current governmental initiatives and future plans implemented by the Operational Program 'Information Society';
- Areas that are still – legally and institutionally - uncovered by policy and regulation (such as Freedom of Expression and Information era);

- The character of ICT and Internet policy and regulation and the extent to which citizens and the associations of ICT users are taken into account and through which mechanisms (e.g. public consultation or complaint mechanisms); comparison to the past; emphasis on the initiatives and policies implemented by the Operational Program 'Information Society' (the main forces driving those initiatives and policies);
- Regulatory and policy process, problems and internal obstacles in comparison with the EU reality (possible divergence, delays, correspondence and reaction of the Greek society of Internet users); the possible role of historical legacies, structural and bureaucratic limitations and cultural particularities;

2. Mr. Costas Balictsis, Director of Telecommunications at the Hellenic Republic National Telecommunications and Post Commission (EETT) – The Greek NRA

A. The Greek Information Society

- Main conclusion about the way in which the Greek Information Society is positioned within the European Information Society; particular emphasis on Internet indicators;
- Persistent weaknesses and areas for further development, according to existing research and available data;
- Factors affecting the course of the Greek Information Society and Internet usage in Greece in particular;
- The role of culture;
- Main areas of interest and concerns on the Internet; Are citizens taken into account (officially, unofficially, at all?);

B. Greek civil society and the Internet

- How the Greek civil society responds to the Internet, and which are the main forces of influence at work (cultural, technological, societal, economic, political, etc);
- Time evolution of how Greek citizens 'feel on the Internet';
- Whether and the extent to which regulation responds to this 'feel on the Internet';

- Role of civil society in the designation of regulation and policy on the Internet in particular.

C. Telecoms and Internet policy and regulation in Greece

- The overall regulatory provisions on telecoms and the Internet, focusing more on issues of privacy, universal service, control, freedom of expression and security;
- The main areas that the Greek Internet legislation covers;
- Areas that are still – legally and institutionally - uncovered by legislation (such as Freedom of Expression and Information era); problems and delays at the forefront;
- Rationale of the regulatory process and the role of public consultations; Market-driven or socially concerned regulation? Mapping out the process of ICT regulation and identifying the main forces at work;
- Role of public consultations and their possible contribution to overcoming those problems;

D. Comparison with the EU

- Evolution of Greek regulation on telecoms and the Internet in comparison to other EU countries;
- Evaluation of the transposition and implementation of the EU telecoms law; identification of forces (social, cultural, political, structural, economic, etc) that might hinder the whole process;
- To what extent can we talk about Greek distinctiveness and in what terms?

3. Ms Sophia Parissi, Officer of the Federation of Hellenic Information Technology & Communications Enterprises (SEPE) and Product Manager of the Hellenic Telecommunications & Telematics Applications Company (FORTHnet).

A. The Greek Information Society

- Main conclusion about the way the Greek Information Society is positioned within the European Information Society; particular emphasis on Internet indicators;

- Persistent weaknesses and areas for further development, according to existing research and available data;
- Factors affecting the course of the Greek Information Society and Internet usage in Greece in particular (technological, economic, structural, cultural, etc);

B. Greek civil society and the Internet

- How the Greek civil society responds to the Internet, and which are the main forces of influence at work (cultural, technological, societal, economic, political, etc);
- Time evolution of how Greek citizens 'feel on the Internet';
- Whether and the extent to which regulation responds to this 'feel on the Internet';
- Role of the Greek civil society in the designation of regulation and policy on the Internet in particular.

C. Telecoms and Internet policy and regulation in Greece

- The overall policy provisions on telecoms and the Internet, focusing more on issues of privacy, universal service, control, freedom of expression and security;
- The main areas that the Greek Internet regulation covers;
- Areas that are still – legally and institutionally - uncovered by legislation (such as Freedom of Expression and Information era); problems and delays at the forefront;
- Rationale of the regulatory process and the role of public consultations; Market-driven or socially concerned regulation? Mapping out the process of ICT regulation and identifying the main forces at work;
- Role of public consultations and their possible contribution to overcoming those problems;
- What is the particular role of SEPE in those public consultations?;

D. Technology & Communications Enterprises and the Internet in Greece

- The position of Greek online enterprises internationally and factors affecting it accordingly (political, economic, technological, cultural, etc);

- How Internet enterprises in Greece perceive the current policy and regulation on the Internet;
- Is there any possible contradiction between enterprises' and users' interests on the Internet and how does policy in Europe and Greece respond to?;
- How are enterprises going to protect the users' interests on the Internet?;
- Strategies of developing cooperation with citizens and Internet users – feedback from users;
- Self-regulation and new challenges for online enterprises: how are the Greek online companies going to correspond to those challenges? Relevant initiatives and their scope so far;
- Is self-regulation the solution to the risks that Internet users face online and a sufficient alternative to the existing public policy and regulation?;

4. Mr. Nikos Frydas, President of SAFELINE (the Hellenic Hotline)

A. The Greek Information Society

- Main conclusion about the way the Greek Information Society is positioned within the European Information Society; particular emphasis on Internet indicators;
- Persistent weaknesses and areas for further development, according to existing research and available data;
- Factors affecting the course of the Greek Information Society and Internet usage in Greece in particular;

B. Greek civil society and the Internet (security issues regarding harmful and unwanted content on the Internet)

- How the Greek civil society responds to the Internet security risks in terms of unwanted and harmful content, and which are the main forces at work affecting (cultural, technological, societal, economic, political, etc);
- Time evolution of how Greek citizens 'feel about the Internet' in terms of security;
- Whether and the extent to which regulation responds to this 'feel about the Internet';
- The role of the Greek civil society in the designation of regulation and policy on the Internet content in particular;

C. Greek Internet users and regulation/policy on the Internet

- The overall policy provisions on the protection of users from unwanted and harmful online content; efficiency/sufficiency and areas still unregulated;
- How users perceive and evaluate the current Greek Internet policy and regulation on online content and the way in which the latter responds to the raised social concerns;
- What factors affect these perceptions and evaluations (level of awareness and culture as crucial parameters into play);
- Possible areas for further legal provision and suggested measures to be taken – in terms of security and control over the online content;

D. SAFELINE, Users and the Internet in Greece

- How the Greek Hotline coordinates with the European Association of Hotlines Network;
- How Greek citizens respond to the Greek Hotline;
- Evaluation about whether the Greek Internet users are informed enough about the Hotlines Network and the policy and regulation initiatives on citizens' protection from illegal and harmful content on the Internet in general;
- Main social concerns about online content and the way it is regulated according to the recorded cases;
- Insufficiencies and possible gaps in the Greek law – areas of particular interest;

C. Interview Transcript

Interview with the Secretary of the Operational Program 'Information Society', Professor Vassileios Asimakopoulos

- How would you evaluate the present phase of the Information Society in Greece?

V.A: The Information Society in Greece is implemented under the umbrella of the Operational Program 'Information Society' which is funded by the 3rd EC Structural Funds and includes a range of horizontal actions involving almost all the Greek Ministries, whilst the Secretary of the program is the supervisory and leading body. The program aims at the introduction of the Greek economy, enterprises, education, and society to the Information Society.

- What are the priorities and goals of the Operational Program 'Information Society'?

V.A: The program is based on the fundamental EU strategies on the Info-society, such as e-Europe 2005 and now the i2010, entailing that the program is entirely compatible with the priorities of the European Union. Of course, there is some differentiation for national purposes, but the whole program is structured around the EU Directives and policies on the Information Society.

- How would you evaluate the efficiency of the program and the way it has affected the course of the Information Society in Greece?

V.A: So far there has been a tremendous difficulty in the implementation of the program because of its horizontal character. The fact that many bodies and authorities are involved in the implementation of the program at many different levels, creating a horizontal structure of implementation, as well as the lack of previous experience, contribute to the persistent difficulty in the harmonious cooperation of various authorities involved and the drawing of a common policy line on the Information Society.

However, these problems have recently been confronted satisfactorily, as the political authorities have started to realize the importance of the Information Society for the development of the country. The new government has established a Coordination Committee on the Internet with the potential of influencing the official governmental authorities of the country.

- Do you think that these difficulties are also related to the character and culture of public administration in Greece?

V.A: Yes, of course, because the public authorities in Greece are not used to cooperation and the implementation of policies concerning more than one policy body. Besides, the time-consuming bureaucratic processes in our country and the lack of modernization of the public administration in general are significant barriers to the timely and efficient implementation of the program on the Information Society.

- However, you mentioned that something has changed since last year and the elections of 2004

V.A: Yes there is some activity. More specifically, the rates of implementation of the program last year in comparison to the previous three years have tripled. Namely, the work carried out over the last eight months of 2004, since the time that the government changed, equals the work carried out over the years 2001-2004. Of course this is not enough. We have to be even more efficient. This year we have to double our efforts because the program is structured in a way that allows the results to be increasingly escalated.

- What is the role that the Greek society plays in the way in which the Information Society evolves?

V.A: Yes…the difficulties, beyond the horizontal character of the program and the lack of modernization of the Greek public administration, are also related to the fact that we talk about technology in a society that is marked by techno-phobia. In other words, if the same program was about roads and not technology, then we could say that it would be easier because it would be more comprehensible to people.

Thus, the horizontal character of the program plus the tradition of techno-phobia are the factors creating the main difficulties in the implementation of the program.

- Can you tell me in more detail how this phobia about technology has affected the program itself?

V.A: It has influenced the program in terms of occurred delays, as even staff members of public authorities in charge, such as Ministries, who should implement the sub-programs in a more dynamic way, do not put as much effort as they should do, possibly because they do not understand the benefits of technology or because they are afraid of it.

- Therefore, it has to do with culture…

V.A: (interrupts) Yes.

- …of the authorities…

V.A: (interrupts) Yes.

- …which, however, does not express the culture of the Greek society itself?

V.A: This culture is reflected on the Greek society, although the latter gradually changes. We see that it changes and we think that our work contributes to that. At the level of citizens, we believe that if the Greek citizens are told about the Information Society in simple words, without technocratic terms and in a language that fits their standards, and become the recipients of work in this direction, then, I think, we can move closer to the ordinary people.

- How do you work in this direction?

V.A: There is already a dramatic change in the way that citizens perceive the Information Society and, towards this goal, we make really important efforts through simplifying terminology and avoiding jargon. Practically speaking, we design all our future activities in accordance with existing social concerns and needs. Namely, we do not give our approval to any new proposal for action, unless this proposal benefits citizens in an essential way.

- How would you evaluate the diffusion of the Information Society in the Greek society, and in accordance with the goals of the program 'Information Society'?

V.A: It is very low, it is very much low (emphasis)! I would say that it is disappointingly low. In our last survey in March 2004, which measured the impact of the Information Society on citizens and the way they understand the concept itself, the findings showed that nobody understood what the Information Society means. When we interviewed some focus groups, again nobody knew what it means both as a notion and as part of their lives.

- What does this mean for the policies and regulations on the Information Society in Greece?

V.A: We attempt to change the whole concept of the Information Society and the strategies followed on it. This, however, cannot happen through advertising or any such kind of launch. Instead, we decided to act more drastically and practically in order to move closer to the citizen through making decisions and designing policies that would have a practical impact on the everyday life of the citizen.

- Can you mention some of those policies?

V.A: For instance, very recently we designed an invitation for a sub-program concerning the geographic areas outside the urban regions and corresponding to the needs and particularities that the citizens in different localities present. You see, the importance of regional policies was another parameter that had been neglected in the past. Although this subprogram will be implemented throughout Greece, it will take different directions in different regions. More specifically, what we did was to offer a whole range of services and give the option to the local authorities to pick up the services that correspond to the needs and preferences of the particular region. A follow-up action program will be afterwards designed according to the services and preferences that different geographic regions will have indicated. In this way, we achieved both the regional dimension of our policies and the satisfaction of different local societies with different needs, abandoning the past enforcement strategy of uniform policies and maintaining, at the same time, the fundamental central designation and control of these policies. Until very recently, what happened was the uniform enforcement of all policies and programs to all regions throughout Greece, without negotiating in advance the decided measures with local authorities and action bodies.

- Is this, in your opinion, the main flaw of previous policies on the Information Society?

V.A: The main mistake was that the local particularities were not taken into account. What we now attempt is to take them into consideration, as we intend our decisions and policies to be even more comprehensible at the level of everyday life and understandable by citizens not only in terms of language but also in terms of action.

- Have you, therefore, identified a lack of social considerations in the designation of policy and regulation on the Information Society?

V.A: There was such a lack…but this is something that does not change within a single day, but….

- Would you say that this is a kind of Greek particularity?

V.A: No, no. It is a broader problem. Simply speaking, to a different degree in Greece. I would say that all Mediterranean countries, Spain not so much though, face the same problem. It is not only a Greek phenomenon.

- Which are the forces affecting and contributing in the policy-making process?

V.A: In all our actions, and before we publish final proposals, we conduct some public consultations. Therefore, all the involved authorities and interested bodies participate in the process. However, we go even further, as we ask from all interested parties to participate in the designation of our policies and before the public consultations take place. This makes the whole process more participatory. Furthermore, an ex post evaluation takes place once every year allowing us to alter and improve past policies and actions.

- It sounds like you evaluate the current policies on the Information Society in Greece in a rather positive way…

V.A: I could not say that yet. The citizens are those who will judge the work on the Information Society. We try to change many things, but unfortunately huge delays took place in the past. Indicatively, in 2004, in the middle of the program, the implementation rate was just 11% of the total budget, namely the proportion between the duration of the program and implementation level was extremely low. This means that we are not satisfied at all with the impact of the program so far. And we cannot say that we will change the overall picture of the program in just one year.

- Tackling you last point about the low impact of your policies on the citizens' everyday life, what do you think is the role that the Greek civil society plays in this respect?

V.A: Very good question but there are many different arguments in this direction. There are those who say that the Greek civil society is a traditional society and those who say that Greeks enjoy the sunny weather, questioning the potential of Greek people for using the Internet and broadband Internet, in particular, and in contrast to other European countries, such as Sweden. The answer is that Greece does not differ in anything from other countries. For instance, in Spain there is sunny weather and sea as well, in Italy there are also traditional families, while Portugal also has very nice coffees. All these countries have made progress on broadband Internet though. We believe that if the appropriate conditions - not only economic but also regulatory and in the area of new ideas and proposals coming to the fore - take place in our country as well, there is no reason why Greek citizens would not want to use services, such as those provided by e-government.

- In other words, you maintain that the authorities in charge have to come closer…

V.A: (interrupts) Exactly….

- …to the citizens and offer them a range of useful ICT services…

V.A: (interrupts) Exactly, that is right….

…under the appropriate conditions?

V.A: Exactly, that is right, otherwise we will get in a vicious circle saying that since there is nothing at this moment, the citizen should not bother, while the state can say, in turn, that since the society is traditional, it is pointless working on it. However, we believe that we can break this vicious circle and make the first step in the right direction.

- However, the surveys conducted so far show that most of the Greek citizens do not use the Internet because they are not interested in it and they feel that it is not part of their life….

V.A: (interrupts) This is very basic…

- … not so much because of the cost…

V.A: (interrupts) Broadband is very expensive…

…what if we talk about a dial-up Internet connection?

V.A: There is a very sensitive balance between pursued cost and pursued value. When the pursued value is bigger than the cost, everyone will proceed to the purchase of any product. At this point, we have two major problems regarding the Internet in Greece: the first is the very low pursued value of the Internet and the reason lying behind this is that possibly the offered online services are not such that would make citizens decide to obtain an Internet connection; the second problem is the high cost, as in order for many Internet services to be available a broadband connection is needed, while the cost of such a connection is 55 EUROS per month for every average Greek family, an amount that is very high, particularly in comparison with other European countries.

- Is, therefore, the high cost the main factor affecting negatively broadband Internet use in Greece?

V.A: It is the cost, as well as the irrational way in which broadband Internet has developed in Greece, as, until last year, there was no political and institutional legal frame in favour of market competition. Thus, with the lack of competition, the smooth operation of the market was undermined and the very high cost of broadband services persisted. If the market works properly, a goal that we currently

work on, the cost will get gradually lower and converge with the EU average, increasing, therefore, the very low penetration.

- Apart from the cost, have you identified other parameters affecting people negatively when going online, such as issues of privacy security, control, etc?

V.A: This would be a very interesting observation, but we have another technological example undermining this picture: mobile telephony which, although it engenders a number of security and privacy risks, is broadly diffused throughout the Greek society.

- Do you not think, however, that telephony is a different case because people are familiar with the use of this medium since the age of landline telephony?

V.A: That is right, but I think that mobile telephony gradually entered people's life introducing step by step the multiple potentials of the medium. I believe that the same will happen with broadband Internet. Namely, at this stage we perceive broadband just as fast Internet and only as such, while broadband, if it enters the Greek society in the right content and cost terms, the Greek citizens will be able to afford it, being provided with telephony, video on demand, fast Internet and a range of other services, integrating, thus, many services provided by different means and networks. Broadband is something more than just Internet; it is new services.

- In the Greek case, however, all the Flash EUROBAROMETER surveys have shown an extremely low level of awareness about the Internet in Greece and in comparison with the EU-15 even with the EU-25

V.A: We are the worst! The Internet and broadband Internet in particular were not treated as a tool for development by the responsible Greek authorities. The authorities of the country realized the importance of the Internet just in 2002, when the whole world had changed because of the Internet. We first need to have results and then to design some awareness campaigns.

- In this respect, does Greece attempt to adopt and incorporate the dominant European model or to develop its own policies, regulations and initiatives on the Internet?

V.A: It is a mixture, it is a mixture…

- How would you evaluate the new policies and regulatory framework on the Information Society decided by the EC?

V.A: Very good. For us it is a vision. We are happy that Europe understands new technologies in such a way. In particular with the new plan of the Commission, the

i2010, which replaces the e-Europe program, the directions of the European policy are, in our opinion, absolutely compatible with our perception of the Operational Program 'Information Society'. For us the Information Society is not just technologies, as technologies are the means. For us the Information Society is a society that works more pleasantly, faster and more efficiently. We do not want ready solutions enforced equally everywhere. We want a more human-centered policy on the Information Society that will identify the different needs and demands of different groups within society.

- In this sense, do you not think that the EU should treat its Members differently and that a uniform EU strategy on the Information Society might not benefit all Member States equally?

V.A: Not exactly. What we say is that every Member State can pick up some policy priorities that correspond to its particularities and needs. The European Commission is absolutely agreed on that, giving, thus, options to its Members.

- In one of your presentations in the European Commission, you talked about the necessity for more extroversion in the way that Greece works on the Information Society. Is there introversion in our country?

V.A: Yes, there is introversion in relation to new technologies and, therefore, we try to follow the example of other EU Members running and looking at the interior situations in our country. We believe that there is space for far more extroversion.

- However, Greece still presents weakness in the transposition and implementation of the EU policies and regulations on the Information Society…

V.A: That is right, but the Ministry of Transportations and Communications has proceeded to the formulation of a telecommunications regulation that transposes the new EU framework. Essentially, within 8 months the new government corrected omissions of the previous government.

- Are you, then, optimistic about the way that Greece will correspond to the requirement for full and efficient implementation of the EU law on telecommunications?

V.A: Yes, I am.

- Thank you very much

V.A: Thank you.