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## Media time use among adolescents and young adults: analysis of differences (\*)

### *Tiempo dedicado a los medios de comunicación por los jóvenes y los adolescentes: análisis de las diferencias*

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**ABSTRACT:** This study looks at the amount of time young adults and adolescents spend using different media. Based on survey data we find that they spend an average of 184.6 minutes per day consuming media. TV viewing continues to be the dominant form of media consumption and we find significant differences in the use of the Internet based on age. As age increases we also find differences linked to gender and socioeconomic factors. In addition, we carry out a cluster analysis and obtain four groups clearly differentiated by the amount of time spent on consuming different media.

**RESUMEN:** *El estudio aborda el uso de jóvenes y adolescentes de los diversos medios de comunicación a través del tiempo que dedican a ellos. Un total de 184,6 minutos dedican a la relación con los medios de comunicación durante las veinticuatro horas*

*de un día medio. El consumo de televisión sigue siendo dominante, apreciándose diferencias notables en el uso de Internet según la edad. A mayor edad aumentan también las diferencias entre los distintos tipos de jóvenes. Finalmente el estudio ha llevado a cabo un análisis cluster, obteniendo cuatro grupos claramente diferenciados según su tiempo de consumo de medios.*

**Keywords:** Young audience, teen audience, media time use.

*Palabras clave:* público joven, el público adolescente, el uso de medios de comunicación.

### 1. Introduction

In this study we analyse the daily media use of adolescents and young adults in Spain, looking at the amount of time they spend using different forms of media. Through this measurement we obtain an initial picture of this population's media use and their preferred forms of media.

We first look at the total population and then at the population of particular interest here –adolescents and young adults from 10 to 34 years of age<sup>1</sup>. Afterwards, we look at the differences within this population regarding their relationship to the media. The search for these differences arises from the research hypothesis: the existence of differences among young people in their time use of different forms of media. This also serves as the criteria for specific objectives of the study: identifying the factors which account for the main differences found among this population, and what categories or groups of young adults and adolescents can be established based on their different relationships with the media and the different socio-demographic profiles of these groups.

Initially, we look at the differences between the following age groups: 10-12 years of age, 13 to 15, 16 to 24 and 25 to 34 years of age. The first age group results from the conceptualisation that establishes a structural change in the evolution of personality beginning at 12 years of age<sup>2</sup>. At 16 years of age there is a change in the education cycle in Spain and at this age adolescents can begin to work. Lastly, beginning at 25 years of age, the economic activity rate is over 80 percent, similar to the rate found among older adults<sup>3</sup>.

The primary resource used for this study is the Time Use Survey carried out by Spain's National Statistics Institute (INE) between the years 2009 and 2010. This type of survey

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<sup>1</sup>Young adulthood is considered to be until 34 years of age, which is considered to be the beginning of independence. If we use marriage to mark the beginning of independence, we find that the average age at first marriage is 36.2 for men and 33.1 for women (34.6 for both sexes) according to the most recent data: INE: basic demographic indicators, marriage, average age at first marriage, June/2011 to June/2012 period ([www.ine.es](http://www.ine.es)).

<sup>2</sup>Erikson's research has been taken as the main reference for the different phases of the life cycle: ERIKSON, Erik H., *Sociedad y adolescencia*, Paidós, Buenos Aires, 1972; ERIKSON, Erik H., *Identidad, juventud y crisis*, Paidós, Buenos Aires, 1974.

<sup>3</sup>Eighty four percent in the third quarter of 2012 according to Spain's Labour Force Survey ([www.ine.es](http://www.ine.es)).

\* I would like to thank the anonymous reviewers for their comments, both for their relevance and for the connections they made.

provides two advantages over other surveys commonly used on the media. First, in addressing activities respondents do throughout the day, recorded in the form of a journal, the measurement of time spent using different media is not based on responses to questions asking how much time is commonly dedicated to watching TV or using Internet or other media, or how much time was dedicated to it in the previous day or week. Responses to such questions can be affected by the symbolic image a type of media has, as a positive or negative image can lead respondents to attribute greater or lesser time to it, respectively. In the Time Use Survey the relationship is the reverse, the focus is on time and not on the media; in this way reference is made to all forms of media, both as main and secondary activities, which is what this survey takes into account. Secondly, given the broad sample, the survey's high degree of institutionalisation and the rigorous work of the INE interviewers, it provides a high level of statistical representativeness. In addition, there is a low substitution rate of the randomly selected participants, among other reasons because participation in the surveys of the public statistics institute is obligatory for residents in Spain. However, as will be discussed in the section on methodology, it also has its drawbacks.

Following the explanation of the methodology behind the time use survey, this study focuses on analysis of the different distributions of frequencies of variables that reflect the use of different media –differences in the times of the day when they are used and rates of use, and in the socio-demographic profiles of their users, in particular, age and gender.

The analysis of the data from the survey ultimately leads to the construction of groups of adolescents and young adults based on the different uses they make of the media. This is done using cluster analysis. Once these groups are identified, we can look at the relationship they have to indicators such as household structure and social structure, revealing the relationship between socioeconomic status and consumption of the different forms of media<sup>4</sup>, undermining the homogeneous image of young people in regard to media use.

## 2. Background

The study of the relationship between adolescents and the media has been at the centre of research on the media<sup>5</sup>, generally with more bias than empirical justification<sup>6</sup>, as it has often been in response to the common fear of the harmful effects of television on

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<sup>4</sup> VAN DER VOORT, Tom H.A. et al., "Young People's Ownership and Use of New and Old Forms of Media in Britain and the Netherlands", *European Journal of Communication*, vol. 13 (4), 1998, pp. 457-477.

<sup>5</sup> We can consider the Payne Fund studies as an important effort to promote empirical research, focusing on the effects of movies on children. See JARVIE, Ian, JOWETT, Garth S. and FULLER, Kathryn H., *Children and the Movies. Media Influence and the Payne Fund Controversy*, Cambridge University Press, Cambridge, 1996. Regarding television, the studies led by Schramm should be mentioned, compiled in SCHRAMM, Wilbur, LYLE, Jack and PARKER, Edwin B., *Televisión para los niños*, Hispano Europea, Barcelona, 1965. An early important critique of initial research is found in LOWERY, Shearon and DEFLEUR, Melvin, *Milestones in Mass Communication Research Media Effects*, Longman, Nueva York, 1985.

<sup>6</sup> MAIGRET, Eric, *Sociología de la comunicación y de los medios*, Fondo de Cultura Económica, Bogotá, 2005, p. 96.

children<sup>7</sup>. Greater attention has been placed on what the media does to young people than on what young people do with the media<sup>8</sup>. This perspective is gradually changing as more and more studies of a descriptive empirical nature have been carried out<sup>9</sup>, although generally focused on the relationship with one single medium. However, for some time now, there has been recognition of the need to study the consumption of the media as a whole, in particular, taking into account the use of the Internet. This is Livingston's approach (2004) in her proposal for a research programme on the audience of the future, recognising a context dominated by the Internet. More recently McCombs (2012) has emphasised the challenge for communication theory of a context in which subjects do not use only one form of media, nor do they –if they ever did– do so in an individualised manner. We can thus say that an approach to current reality requires empirical research focused on the use of various media, given the theoretical overlapping in their uses<sup>10</sup>, and involves significant methodological and technical issues.

Until now, the most important studies have focused on how the very users of a medium, who may behave passively with respect to it, become actively involved in the defence of their consumption of it through the use of another medium. Thus, for example the study by Campbell (2011) shows how consumers promote “their media products” on the Internet, an activity he refers to as a “labour of devotion”; while a study by Smit and Neijens (2012) looks at the comments, dialogues and discourses that the *fans* of television series produce on the Internet.

The initial assumption – and subsequent empirical observation – that the use of multiple media is greatest among young people seems to be widely held. First, because these age groups have been socialised in the so-called digital world<sup>11</sup>, the broad access they have in economically developed countries to different media from their own bedrooms often emphasised<sup>12</sup>. Secondly, because they follow media consumption patterns that are different from the adult population, once they are understood to be active subjects and not *innocent victims*, as Kinder (1999) pointed out. This has served as a starting point

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<sup>7</sup> For a broad account see BRYANT, Jennings, and ZILLMANN, Dolf, *Los efectos de los medios de comunicación. Investigaciones y teorías*, Paidós, Barcelona, 1996.

<sup>8</sup> BUCKINGHAM, David, "Introduction: Young People and the Media", in BUCKINGHAM, D. (ed.), *Reading Audiences. Young People and the Media*, Manchester, Manchester University Press, 1993.

<sup>9</sup> BUCKINGHAM, David, *After the Death of Childhood. Growing Up in the Age of Electronics Media*, Polity Press, Cambridge, 2000.

<sup>10</sup> WEBSTER, James G., KSIAZEK, Thomas B., “The Dynamics of Audience Fragmentation: Public Attention in an Age of Digital Media”, *Journal of Communication*, 62 (1), 2012, pp. 39-56; YUAN, Elaine, “News Consumption Across Multiple Media Platforms: A repertoire approach”, *Information, Communication & Society*, 14 (7), 2011, pp. 998-1016.

<sup>11</sup> See among others, RUBIO GIL, Ángeles, “Generación digital: patrones de consumo de Internet, cultura juvenil y cambio social”, *Revista de Estudios de Juventud*, 88, 2010, pp. 201-221; FEIXA, Carles, “Unidos por el flog: ciberculturas juveniles”, in CALLEJO GALLEGO, Javier and GUTIÉRREZ BRITO, Jesús (eds.), *Adolescencia entre pantallas*, Gedisa, Barcelona, 2012, pp. 69-87. This socialisation into the digital world has led to young people being referred to as “digital natives”: PRENSKY, Marc, “Digital Natives, Digital Immigrants”, *On the Horizon*, 9 (5), 2001, <http://www.marcprensky.com/writing>; PISCITELLY, Alejandro, *Nativos digitales*, Santillana, Buenos Aires, 2009; MERINO, Lucía, “Jóvenes en redes sociales: significados y practicas de una sociabilidad digital”, *Estudios de Juventud*, 95, pp. 31-43.

<sup>12</sup> LIVINGSTONE, Sonia, “Mediated childhoods : a comparative approach to young people's changing media environment in Europe”, *European Journal of Communication*, 13 (4), 1998, pp. 435-456

for broad research projects, such as that directed by Livingston and Gaskel (1998)<sup>13</sup>, in which they took into account the use of different media by young people.

In addition, the 2011 Information Technology in Households Survey carried out by the INE, reveals that the highest percentage of Internet users by age, as measured by use in the three months prior to the survey, were those 16 to 24 years of age (95% were users). The difference with other age groups is clear and statistically significant: from 87.8% among those between 25 and 34 years of age to 15.6% among the oldest in the survey, those between 65 and 74 years of age<sup>14</sup>.

From a methodological perspective, the preferred instrument is a survey which asks a representative sample of young people about their media use<sup>15</sup>. However, there is no lack of qualitative approaches<sup>16</sup> aimed at capturing how young people construct their “world” or “media ecosystem”, a specific symbolic world that separates them from other generations<sup>17</sup>.

The use of time as the preferred perspective for analysing the relationship a population group has with the media has produced interesting results. Thus, the study of Jordan et al. (2007), based on the use of a self-administered questionnaire, concludes that the patterns of media use by adolescents are different from those of adults. It is noteworthy that Grunij (1979) used a time use survey more than 30 years ago to observe the level of media use by different sectors of society. Suzuki, Hashimoto and Ishii (1995) also used such a survey in Japan and concluded that the average amount of time dedicated each day to so-called “information behaviour” was approximately seven hours, 45% of which was spent watching television. At that time the relationship of consumers to the computer had barely begun to displace the relationship with television, although differences could be seen in the consumption of television between those that used computers and those that did not. More recently, Westerik, Konig and Huysmans (2007) concluded, contrary to the thesis of the individualisation of media use, that household structure is important in determining the total amount of time spent watching television, listening to the radio and reading newspapers.

In other words, the time use survey has proved to be an important basis for studying the relationship of society to the media, although with the shortcoming that studies based on

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<sup>13</sup> The project, initiated by the EU, initially involved 12 countries. A good summary of the study is the book written by Livingstone herself, LIVINGSTONE, Sonia, *Young People and New Media*, Sage, Londres, 2002; as well as LIVINGSTONE, Sonia and BOVILL, Moira (eds.), *Children and their Changing Media Environment: A European Comparative Study*, Lawrence Erlbaum Associates, Hillsdale (NJ), 2001.

Specific results for different countries can be found, such as for the UK and Holland in VAN DER VOORT, Tom H.A. et al., “Young People’s...”, *op. cit.*; for Spain, in GARITAONANDÍA GARNACHO, Carmelo et al., “Las relaciones de los niños y los jóvenes con las viejas y las nuevas tecnologías de la información”, *ZER Revista de Estudios de Comunicación*, nº 4, 1998, pp. 131-159; and GARITAONANDÍA, Carmelo; FERNÁNDEZ, Emilio and OLEAGA, José Antonio, “Las tecnologías de la información y de la comunicación y su uso por los niños y adolescentes”, *Doxa Comunicación*, nº 3, 2005, pp. 45-64.

<sup>14</sup> The micro-data for the survey can be found at : [http://www.ine.es/prodyser/micro\\_tich.htm](http://www.ine.es/prodyser/micro_tich.htm).

<sup>15</sup> See among others, LIVINGSTONE, Sonia, “Mediated childhoods...”, *op. cit.*; VAN DER VOORT, Tom H.A. et al., “Young People’s...”, *op. cit.*; BRODDASON, Thorbjörn, “Youth and New Media in the New Millennium”, *Nordicom Review* 27 (2) 2006, pp. 105-118.

<sup>16</sup> Regarding Spain see, GARITAONANDÍA GARNACHO, Carmelo et al., “Las relaciones de los niños...”, *op. cit.*

<sup>17</sup> FEIXA, Carles, “Unidos...”, *op. cit.*

these surveys have looked at young people as a homogeneous group, focusing on this population as a whole. However, we also have studies addressing media use among young people that have used other approaches or other sources or that have focused on only one medium.

### 3. Methodology

The data that constitute the core of this study were obtained from the INE 2009-2010 Time Use Survey<sup>18</sup> (referred to as the EET09). This is a survey with a standardised and harmonised questionnaire carried out –although in different periods– in different countries of the European Union following Eurostat guidelines.

The EET09 has the structure of so-called time budget surveys in which participants write down the activities they carry out throughout the 24 hours of the day in an “activity diary”. In the EET09, participants record their activities in periods lasting 10 minutes, the first period beginning at 6 in the morning and the last at 5:50 on the following morning. The basic units of analysis are household members 10 years of age or older, households that reside in main family dwellings and the days of the week. Thus, all persons 10 years of age or older in the selected households must fill out the diary of daily activities.

The essential data analysed in this study is gathered through individual self-completed questionnaires and an activity diary. In the initial visit to the household, questionnaires are left for household members and the instructions for their completion are provided by the field surveyor so that in a second visit they can be collected and completed through a direct interview if any information is lacking.

To avoid seasonal differences, which can impact on daily activities such as the consumption of media, field work was carried out throughout the year: from 1 October 2009 to 30 September 2010. Two-stage sampling with stratification<sup>19</sup> of census units was used in the first stage, with the main family dwellings constituting the units in the second stage. The final sample obtained was 9,193 households<sup>20</sup>, producing information on the daily activity of 25,895 individuals –of the 27,335 surveyable individuals in the households selected– together representing the Spanish population 10 years of age or over that lives in main family dwellings. However, the population that our study focuses on, individuals between 10 and 34 years of age, results in a sample size of 5,198 individuals.

The categories of activities related to the consumption of media are almost all grouped under code 8 in the survey: reading newspapers, reading books, other reading, watching

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<sup>18</sup> The first installment of micro-data was available in July 2011 on the INE website: [www.ine.es](http://www.ine.es).

<sup>19</sup> Once the number of census units for each autonomous region is determined, a sample for each region is designed. Stratification is based on the size of municipalities, ranging from municipalities with more than 500,000 inhabitants (strata 0) to municipalities with less than 10,000 inhabitants (strata 6).

<sup>20</sup> We find that on the national level the total effective sample represents 82.4 percent of the theoretical sample, while the effective sample of incumbent households represents 50.9 percent of the total households. These figures indicate that 50.9 percent of the total of incumbent households were surveyed, and that 31.6 percent were replaced, raising the effective total sample to 82.4 percent of the theoretical sample (11,164 homes). For more information see: <http://www.ine.es/daco/daco42/empleo/evalfr09.pdf>.

television, watching DVDs or videos, listening to the radio, listening to recordings<sup>21</sup>. Cinema is under code 5, referring to entertainment and cultural activities. Computer games are under code 7, hobbies and computers. Studying, which can include use of media, is under code 3.

An important innovation in the ETT09 in comparison with the previous 2002-2003 survey is that for each period participants were asked if they used the Internet, whether as the main activity they were involved in, or as a secondary activity accompanying the main activity. This innovation is in response to one of the problems of time use surveys –the invisibility of “minor” or secondary activities that tend to be carried out simultaneously with other activities. This is an issue that affects measuring media consumption.

As with all social research methods, this tool has its limitations. We will limit our discussion here to just four of them, as this is not a study specifically of methodological issues. The first is that it does not tell us directly about the intensity of a practice, the practice in relation to the meaning given to it. Individuals can have practices that are brief and intense and others that are more lasting but that they consider boring, which is a way of negating their meaning. From this perspective, it should be pointed out that a time use survey tends toward a certain time-centeredness, in which the duration of an activity is confused with its importance, something which researchers must be aware of. The second is that the survey gathers information from participants on the activities they carry out in ten minute periods. The effort to record these activities can be tiring if there is a succession of many activities; therefore, participants may have a tendency to privilege those activities that cover several of the ten minute periods with only one response, such as work, study, cooking, etc., avoiding mention of so-called “minor” activities. Third, because the data is based on the statements of the participants and not on direct observation of their behaviour, the possible penchant to give preference to activities judged to be socially “more acceptable” must also be considered. In this sense, an interesting relationship is established between the activities that are actually practiced and those activities which have greater symbolic value. Lastly, the EET09 asks about both main and secondary activities; however, to reduce the effort needed to provide this information, participants tend to not include secondary activities, resulting in a low level for secondary activities other than watching television. Thus, television is named as the secondary activity of 30% of the population at 2:30 in the afternoon and between 9:30 and 10 at night.

Despite these limitations, this tool has played an important role in the production of knowledge about society and has grown in importance over the years<sup>22</sup>. Initially, its main purpose was to establish a map of a society’s existing lifestyles<sup>23</sup>, especially in societies with a tendency toward the reduction of the time spent working and the extension of leisure time. Although methodological issues have been raised since its

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<sup>21</sup> The codes are the following: personal care (0), paid work (1), studying (2), household and family care (3), volunteer work and meetings (4), social life and recreation (5), sports and outdoor activities (6), hobbies and computers (7), media (8) and journeys made and unspecified time use (9).

<sup>22</sup> DURÁN HERAS, M<sup>a</sup> Ángeles and ROGERO GARCÍA, Jesús, *La investigación sobre el uso del tiempo*, Centro de Investigaciones Sociológicas, Madrid, 2009.

<sup>23</sup> GERSHUNY, Jonathan, “Estilo de vida, estructura económica y uso del tiempo”, *Revista Española de Investigaciones Sociológicas*, 38, 1987, pp. 163-191.

initial adoption by the statistical institutions of the developed countries<sup>24</sup>, its potential to provide an image of a society through the activities of its population has won out. Given that there are other sources for the measurement of working time, surveys on time use have been particularly useful in analysing leisure time<sup>25</sup> and time dedicated to domestic tasks and care. Regarding the latter, these surveys allow us to look at the division of labour in the home<sup>26</sup>. Of special interest as references for our research are those studies that have focused on specific activities, such as the preparation of meals and eating at home or outside the home, which allow for the observation of the degree of institutionalisation of these practices<sup>27</sup> and their relative resistance to change in changing contexts<sup>28</sup>, in addition to the previously mentioned studies by Grunij (1979), Suzuki, Hashimoto and Ishii (1995) and Westerik, Konig and Huysmans (2007) on aspects of the use of the media.

#### 4. *Media time use*

An initial overall approximation of the time spent using media by the population being studied shows that 12% of every day is dedicated to the use of media<sup>29</sup>. The majority of this time (77.6%) is spent watching television, while the Internet occupies 6.3% of the time (including looking for information and communicating), followed by reading books (3.6%), reading newspapers (3.2%), listening to the radio (2.7%), and activities such as watching DVDs, listening to CDs, other uses of the computer and listening to recordings from other sources with much lower percentages.

<sup>24</sup> DURÁN HERAS, M<sup>a</sup> Ángeles, “La investigación sobre el uso del tiempo en España: algunas reflexiones metodológicas”, *Revista Internacional de Sociología*, 18, 1997, pp. 163-189; LEGARRETA IZA, Matxalen, “Cuantificación de la cotidianidad: las Encuestas sobre el Uso del Tiempo como instrumento de medida”, *Inguruak*, 41, 2005, pp. 87-98.

<sup>25</sup> BITTMAN, Michael, and WAJCMAN, Judy, “The Rush Hour: The Character of Leisure Time and Gender Equity”, *Social Forces*, 79 (1), 2000, 165-189, looking at Australia show that despite the amount of leisure time being similar for men and women, when we look at the meaning given to this time gender differences emerge; JAECKEL, Michael and WOLLSCHIED, Sabine, “Time is money and money needs time? A secondary analysis of time-budget in Germany”, *Journal of Leisure Research*, 39 (1), 2007, pp. 86-108; VAARA, Matti and MATERO, Jukka, “Modelling Daily Outdoor Recreation Participation and Time-Use as a Two-Stage Choice Process: A Finnish Example”, *Leisure Sciences*, 33 (4), 2011, pp. 269-289.

<sup>26</sup> ROMANO, Maria C. and BRUZZESE, Dario, “Fathers’ participation in the domestic activities of everyday life”, *Social Indicators Research*, 84 (1), 2007, pp. 97-116; PRIETO, Carlos, RAMOS, Ramón and CALLEJO, Javier, *Nuevos tiempos del trabajo*, Centro de Investigaciones Sociológicas, Madrid, 2009.

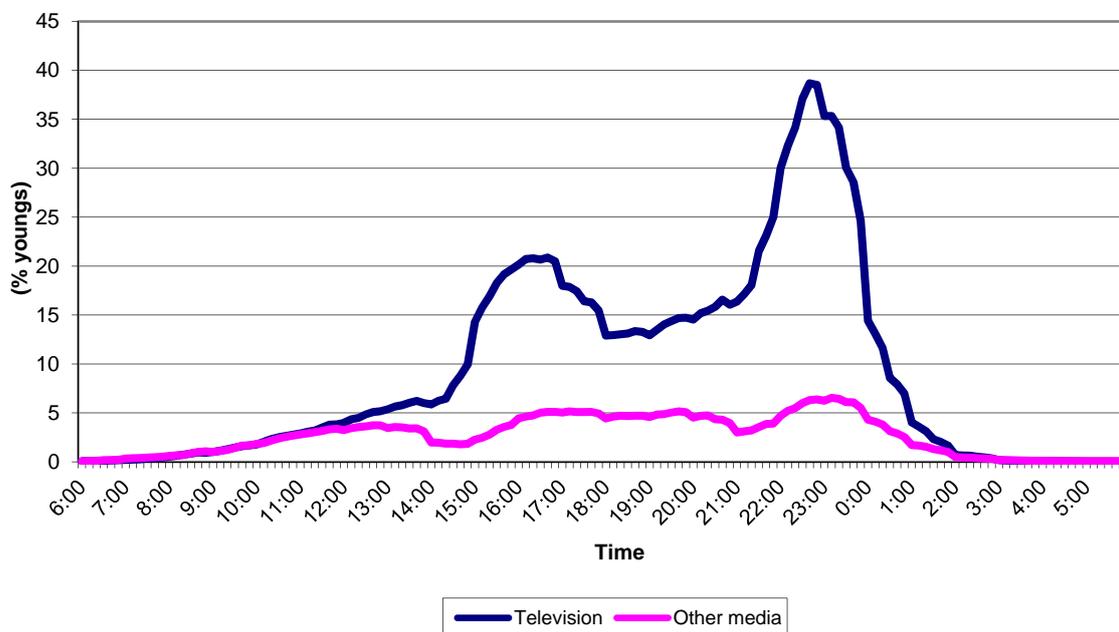
<sup>27</sup> WARDE, Alan, CHENG, Shu-Li, OLSEN, Wendy et al., “Change in the practice of eating: A comparative analysis of time-use”, *Acta Sociologica*, 50 (4), 2007, pp. 363-385.

<sup>28</sup> MESTDAG, Inge and GLORIEUX, Ignace, “Change and stability in commensality patterns: a comparative analyses of Belgian time-use data from 1966, 1999 and 2004”, *Sociological Review*, 57 (4), 2009, pp. 703-726; CHEN, Shu-Li, OLSEN, Wendy, SOUTHERTON, Dale et al., “The changing practice of eating: evidence from UK time diaries, 1975 and 2000”, *British Journal of Sociology*, 58 (1), 2007, pp. 39-61. A study of this type is recommendable in the future for the Spanish case with regard to the relationship with the media when there is more longitudinal data, taking into account that the first results were from the 2002-2003 period.

<sup>29</sup> These results are based on the 24 hour day for the population over 10 years of age and, therefore, they include all activities: sleeping, personal care, work, etc.

TV consumption continues to dominate, particularly during so-called *prime time* between 10 and 11:30 at night, with almost 40% of the population watching television at that time. As can be seen in graph 1, the gap between the percentage that watch television and the percentage using other media throughout the day is clear. Television is the most used medium during the day (taking up on average 2 hours and 18 minutes as primary activity) and the one with the greatest number of users over the course of the day. In contrast, at no time during the day does any other medium reach 5% of the population. However, the proportion of persons that spend time reading at some point during the day reaches 25.2% and the proportion that listens to the radio, 32%, while the figure for watching television reaches 90.1%<sup>30</sup>.

**Graph 1: Proportion of young people using the media as their principal activity during the day**



Source: Based on the INE 2009-2010 Time Use Survey.

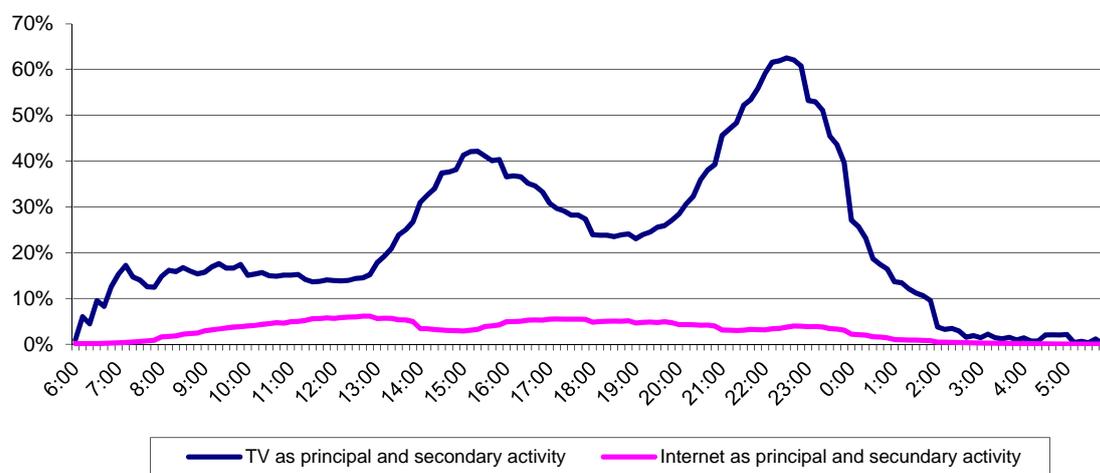
Comparing the relationships with television and the Internet<sup>31</sup>, both as main activities and as secondary activities (graph 2), the differences remain significant and reveal different patterns of daily use. There are two major peaks during the day when the percentage of persons watching television is at its highest, which correspond to *prime time* (between 10 and 11:30 at night) and after lunch (between 3 and 4:30 in the

<sup>30</sup> In this first approximation information on the use of the Internet as a differentiated activity among all the possible activities is not specified, rather, Internet use is considered an activity that can be done *along with* or *in support of* another activity.

<sup>31</sup> It should be taken into account that what is being measured is the relationship with the medium as an “apparatus”. In other words, if someone is watching television on the Internet (computer) it appears as use of the Internet; and, on the contrary, if the Internet is being used through the television, it appears as use of the television.

afternoon). This bimodal tendency is stronger among women (25.6% of whom are watching television at 4 in the afternoon) than among men (18.9% of whom are watching television at 4 in the afternoon). In addition, if we take age into account, the bimodal tendency regarding television is less evident among the population under 44 years of age: 15.5% of those between 25 and 44 years of age watching television at the 4 o'clock "peak" and 16.8% of those under 25 years of age. However, the use of the Internet is more linear or continual, less cyclical, as Internet use is not as concentrated at specific times of the day. And perhaps most importantly, these concentrations happen precisely during the period of the waking day when the percentage of persons watching television declines to its lowest point<sup>32</sup>, specifically from 12 to 1 PM and from 5:30 to 8 PM. Thus, initially, taking into account that the reference is to the general population, there are clear differences in the use of these two media.

Graph 2: Television and Internet use during the day



Source: Based on the INE 2009-2010 Time Use Survey.

Focusing on adolescents and young adults, there are significant differences in the use of the Internet when the reference period is the previous three months, as in the 2011 INE

*Survey on Equipment and Use of Information and Communication Technologies in Households*, and when it is the previous day, as in the EET09. In the former, the

<sup>32</sup> While the peak periods concentrate the highest percentage of television use, the low periods are characterized by reflecting a decline of these percentages with respect to previous periods, in the sense that individuals stop watching television but will return to watching it in a later period in the day. This constitutes a type of pause in the relationship with television, which is particularly notable from 5:30 in the afternoon until 8 in the evening, in other words, based on typical Spanish timetables, from the end of a long lunch period, which tends to coincide with the end of the broadcasting of soap operas and other series, until the beginning of prime time, which coincides with the broadcasting of the nightly news, beginning at 8:30 at night.

percentage of this population group considered users of the Internet is 67.1%, declining to 61.8% when use refers to at least once a week during the three month period. In this survey Internet use is higher among the younger age groups. If the reference period is three months, 95% of young people between 16 and 24 years of age are users of the Internet and 87.8% of those from 25 to 34 years of age. When the reference period is the previous day, these two age groups also have the highest percentage of users; however, in this case, the percentage of Internet users between 16 and 34 years of age declines to 44.2%, which may be an indication of two distinct possibilities: a) for a majority of young people, the use of the Internet does not form part of their daily routine, even though they do use the Internet (91.5% of young people between 16 and 24 years of age used the Internet at least once a week in the previous three months according to the INE survey); and b) when asked directly if they had used the Internet over a long period of time, respondents may be responding to the pressure for a positive response, given the high social acceptance this activity has.

Taken as a category and taking into account both those that participate in the activity and those that do not (Internet use), the difference between young people and older adults regarding average daily use of the Internet is clear. While young people from 16 to 24 years of age dedicate on average 1 hour and 21 minutes daily to the Internet, this time declines to 52 minutes for adults between 35 and 44 years of age and continues to decline with age, reaching an average of 10 minutes for the population between 65 and 74 years of age.

The population between 16 and 34 years of age that uses the Internet (44.2% of this age group) dedicates an average of one hour and 28 minutes daily to its use, those that watch television (78% of this age group) spend an average of 2 hours and 14 minutes a day doing so, those that spend time reading (14.6%), an average of 57 minutes a day, and those that spend time listening to the radio or other recordings (7.1%), an average of 1 hour and 13 minutes. Therefore, in terms of average time spent daily and how broadly it is used, the Internet is below television in use and above activities such as reading and listening to the radio or recordings. Taking into account the use of all media during a full day, the consumption by young people –accounting for 12.8% of the day or slightly more than three hours (184.6 minutes)– is only slightly higher than among the rest of the population. Further breaking down the time spent using the media, we find that children from 10 to 12 years of age spend approximately 154.5 minutes per day consuming media; adolescents from 13 to 15 years of age spend 186.9 minutes; young people from 16 to 24 years of age spend 195.8 minutes a day and for young adults between 25 and 34 years of age, the figure is 182.7 minutes a day.

Differences by age should be noted in the use of the Internet in regard to the percentage of users in each age group, the amount of time it is used and the periods of the day when it is used (graph 3). The highest percentage of users is found among those between 13 and 24 years of age. Among those 13 to 15 years of age, 56% use the Internet, with 16.7% doing so from more than two hours a day, while among those 16 to 24 years of age, 54.9% used the Internet the previous day, with 23.8% using it for more than two hours.

	Age groups			
	10-12	13-15	16-24	25-34
Do not use Internet	64.37%	43.78%	45.08%	63.90%
1 hour or less	20.47%	21.34%	16.28%	11.92%
Between 1 and 2 hours	7.28%	18.18%	14.79%	8.29%
More than 2 hours	7.87%	16.70%	23.85%	15.89%
N	508	539	1677	2474

**Table 1. Daily Internet use by age group. (Percentage of persons in each age group)**

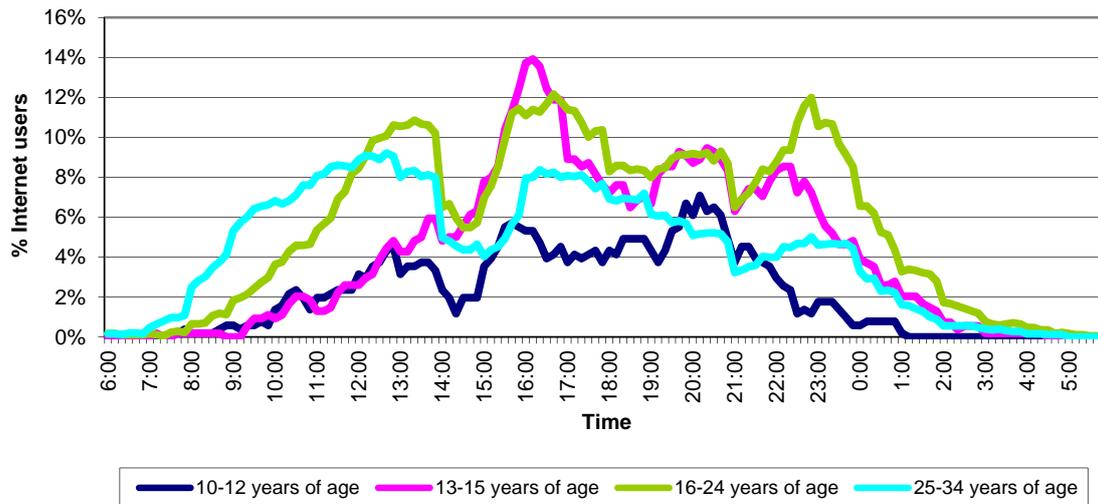
Source: Based on the INE 2009-2010 Time Use Survey.

Employing an evolutive interpretation of table 1, it could be said that the leap toward extensive use –in terms of percentage of users and amount of time of use– happens at around 13 years of age, increasing between 16 and 24 years of age and then decreasing with age. However, this interpretation must be made with caution, as young people between 25 and 34 years of age at the time of the survey did not have the same access to the Internet when they were between 10 and 12 years of age as that age group currently does. Given the relatively rapid rate of change in this sphere, the nearly fifteen years between one age and the other can be enormous: change in access to computers, in price and in the devices themselves, etc. A simple example demonstrates this: while in 2004, 33.6% of homes had access to the Internet, in 2011 this percentage had risen 63.9%<sup>33</sup>. In other words, from 2004 to 2011 the ability of adolescents to access the Internet at home almost doubled.

Regarding the percentage of Internet users for the different age groups during different times of the day, we see that the youngest age group (10 to 12 years of age) is the one with the lowest use. This group uses the Internet in a relatively more linear manner than the other age groups being analysed; its maximum period of use, when 7.1% of this population group is online, is between 20:10 and 20:20. The time of maximum use for those between 13 and 15 years of age seems to correspond to the period after lunch, which is relatively late as the school morning extends into the afternoon, from 4 to 5 in the afternoon (reaching 13.9% from 16:10 to 16:20). Those that are between 16 and 24 years of age reveal three peaks in their use of the Internet: between 1 and 2 PM (10.8% of this age group are using the Internet from 12:20 to 12:30), between 4 and 6 in the afternoon (12.2% using the Internet between 16:40 and 16:50) and at night, after 10 PM (12% using the Internet between 22:50 and 23:00). Lastly, young adults between 25 and 34 years of age record their highest use of the Internet from 12:40 to 12:50 midday (9.2%).

<sup>33</sup> Source: Trends in household data (2004-2011) by size of household, type of equipment and time period are from the 2011 Survey on the Equipment and Use of Information and Communication Technologies in Households, available at [www.ine.es](http://www.ine.es).

Graph 3: Percentage of Internet users by age and time of day



Source: Based on the INE 2009-2010 Time Use Survey.

Based on the data analysed, there is only a slightly negative correlation between use of the Internet and watching television among adolescents and young adults:  $-0.098$ . There appears to be little relationship between the two activities among young people, as the slight negative correlation, although statistically significant<sup>34</sup>, suggests only a minimum reduction in the time dedicated to one activity because of an increase in time spent on the other. Possibly this is related to the television schedule being fixed or rigid and the consumption or use of the Internet being flexible.

### 5. The importance of gender, even among young people

One of the most widespread conclusions based on analyses of time use is the existence of gender inequalities. In the Spanish case, with an employment rate among women (55.5% in 2011) below the European average (62.3% in 2011 for the EU-27), these inequalities appear more pronounced<sup>35</sup>; hence, some have referred to the existence of *cronos dividido* (divided time)<sup>36</sup>. In this section we will examine to what extent this inequality is projected onto the use of the media in age groups that are to a significant extent outside of the labour market. To do this, we continue to look at young people from 10 to 34 years of age as the reference group, and regarding the media we look at television, reading (newspapers and books), the Internet, the radio and recorded music. First of all we find that males spend 10 more minutes watching television than do females (107.12 minutes versus 96.85 minutes) and almost fifteen more minutes using

<sup>34</sup> Significance level of 0.001 (2-tailed test).

<sup>35</sup> IZQUIERDO, Jesusa, DEL RÍO, Olga and RODRÍGUEZ, Agustín, *La desigualdad de las mujeres en el uso del tiempo*, Ministry of Social Affairs, Madrid, 1988.

<sup>36</sup> RAMOS, Ramón, *Cronos dividido. Uso del tiempo y desigualdad entre hombres y mujeres*, Ministry of Social Affairs, Madrid, 1990. More recently, see DURÁN HERAS, M<sup>a</sup> Ángeles and ROGERO GARCÍA, Jesús, *op. cit.*

the Internet (73.42 minutes versus 58.5 minutes). However, these differences vary significantly depending on the age group (table 2):

**Table 2. Average daily time (ADT) spent on different communicative practices, by age and gender**

Age group	Gender	(A) ADT television (minutes)	(B) ADT Internet (minutes)	(C) ADT reading (minutes)	(D) ADT other media	A+B+C+D (minutes)
<b>10-12 years of age</b>	male	108.62	30.41	8.81	7.09	154.93
	female	104.71	31.50	11.67	6.50	154.38
	Difference M-F	3.91	-1.09	-2.86	.59	.55
<b>13-15</b>	male	116.74	60.78	6.63	2.78	186.93
	female	106.84	59.44	10.15	10.52	186.95
	Difference M-F	9.90	1.34	-3.52	-7.74	-.03
<b>16-24</b>	male	95.47	91.04	6.31	9.15	201.97
	female	95.46	73.85	10.80	9.39	189.50
	Difference M-F	0.01	17.20	-4.49	-.24	12.47
<b>25-34</b>	male	113.19	73.50	7.80	8.63	203.12
	female	94.32	53.64	10.25	7.50	165.71
	Difference M-F	18.87	19.86	-2.45	1.13	37.41

Source: Based on the INE 2009-2010 Time Use Survey.

Comparing the respective use of different media we find evidence of what we mentioned earlier: the relative rigidity of television consumption (with a difference of only approximately 22 minutes between the 116.74 minutes males from 13 to 15 years of age spend watching television on average every day, and the 94.32 minutes that women between 25 and 34 years of age spend watching TV every day, a variation of 21% over the average), in comparison to the relative flexibility of Internet use, with a difference of over one hour between the 91.04 minutes of average daily use of males from 16 to 24 years of age and the 30.41 minutes of males from 10 to 12 years of age (a variation of 102% over the average<sup>37</sup>). In addition, we find that differences by gender in the total time spent consuming the four types of media increase with age; there are barely any differences between males and females between 10 and 15 years of age, but the difference reaches 37.4 minutes in the group between 25 and 34 years of age. The increase in the total time of use is progressive among males, but in the case of females, those 16 to 24 years of age spend more time using these media than do females from 24 to 34 years of age.

The average amount of time spent watching television daily is greater among males for all four age groups; this is in contrast to what we find regarding reading, with females dedicating more time to this activity than males. The difference in time spent on the Internet by gender should also be noted. Among the youngest group, from 10 to 12 years of age, the average time spent on the Internet is slightly higher among girls than boys; however, in the oldest age group, 25 to 34 years of age, men spend on average almost 20 minutes more using the Internet than women.

<sup>37</sup> The variability is 59% for reading and 100% for the category of other media.

Beginning at 16 years of age, there is greater variability in individual life situations; young people can enter the labour market or continue their education, and they might live outside the parental home with a partner or not. As a result, we look at the use of the media in these varying situations and by differences based on age and gender. Taking into consideration the significant decline in sample size for certain categories, we find that among the group between 16 and 24 years of age that are employed and live with a partner, the time spent using the media is greater among women than men: 15.6 minutes more in the use of the Internet, 18.5 minutes more watching television and 3.3 minutes more time spent reading; in the case of individuals not living with a partner, women spend 17.9 minutes more in the use of the Internet, 10.8 minutes more watching television and 5.9 minutes more reading. However, among those in this age group that are not working, differences in favour of women are only found in regard to reading: 4.1 minutes more among those who live with a partner and 7.3 minutes more among those who do not. Regarding the other three forms of media, men spend on average 27.4 minutes more using the Internet and 31.7 minutes more watching television when they live with a partner.

In the group between 25 and 34 years of age, among those that work and live with a partner, the differences are favourable to men, except in regard to reading and Internet use. As can be seen in table 3, the media consumption of males tends to increase with age: television consumption among those that are unemployed and do not live with a partner increases 57.8 minutes and among those that are employed and live with a partner it increases 34.7 minutes; the use of the Internet also increases among the employed, both those that do not live with a partner (32.9 minutes) and those that do (30.7 minutes). Regarding women, the consumption of television declines by 36.5 minutes among those that are employed and do not live with a partner and the use of the Internet by 19.9 minutes among those that are not employed and that do not live with a partner. If we go from this static perspective to a more dynamic one, assuming that increasing age leads to a changing life situation with regard to the two variables observed, living situation and employment<sup>38</sup>, we find that a young man between 16 and 24 years of age, without employment and without a partner, goes from watching 99.9 minutes of television on average daily and 109.6 minutes of Internet use to 101.2 minutes and 57.7 minutes respectively when enters the 25-34 age group and is employed and living with a partner. Young women go from 97 minutes spent watching television and 80.5 minutes spent using the Internet to 88.8 minutes and 59.3 minutes respectively with the same changes in life situation.

Continuing to look at media use maintaining the same categories of employment status and living situation, we find that Internet use among males increases with age, except among those that are not employed and do not have a partner, which are those with the highest level of consumption between 16 and 24 years of age. For both men and women we can see the role employment has on use of the Internet (with the exception of employed women that do not live with a partner). In contrast, time spent watching television reveals more heterogeneous trends; it increases among men as they get older,

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<sup>38</sup> 63.8% of young people between 16 and 24 years of age are not employed and not in a relationship; while 37.6% of young people between 25 and 34 years of age are employed and living with a partner. For both age groups, these are the categories with the highest percentages.

except among those who are not employed and live with a partner (who on average watch almost three hours of television a day between the ages of 16 and 24), and it increases among women who are not employed and do not live with a partner and among their “opposites”, women who are employed and live with a partner, and it declines in the other two categories.

In any case, looking at the relationship between the use of these two forms of media and the passage from one age group to the other, the differences between men and women increase in favour of the former, or decline or reverse in the case of consumption being higher among women as in the age group from 16 to 24. In absolute terms, these differences reach almost 50 minutes in the case of time spent watching television among those who are not employed and live with a partner and in the use of the Internet, as among those between 16 and 24 years of age women spent on average 18 minutes more on the Internet than men, but in the 25 to 34 year old age group men that are employed and that do not live with a partner spent almost 25 minutes more on average than women of the same age.

**Table 3. Average daily consumption of television and Internet among young people from 16 to 34 years of age, by age group, gender, employment status and living situation (average in minutes)**

Gender, employment status and living situation	Males				Females			
	Media	Age group		Gender, employment status and living situation	Media	Age group		
		16-24 years of age	25-34 years of age			16-24 years of age	25-34 years of age	
Male not employed and not living with a partner	Television	99.95	157.74	Female not employed and not living with a partner	Television	97.04	116.09	
	Internet use	109.61	89.69		Internet use	80.46	72.92	
Male not employed and living with a partner	Television	172.73	153.97	Female not employed and living with a partner	Television	141.02	104.53	
	Internet use	49.09	49.86		Internet use	21.69	19.37	
Male employed and not living with a	Television	69.94	85.38	Female employed and not living with a	Television	80.75	78.75	

partner				partner			
	Internet use	62.78	95.68		Internet use	80.75	70.76
Male employed and living with a partner	Television	66.50	101.20	Female employed and living with a partner	Television	85.00	88.77
	Internet use	27.00	57.71		Internet use	42.65	59.29

Source: Based on the INE 2009-2010 Time Use Survey.

How can it be that in table 1 Internet use declines among those 25 to 34 years of age relative to those 16 to 24 years of age, but in table 3 it appears that Internet use has increased in the older age group? We have to take into account that 45.5% of 16 to 24 year olds do not use the Internet at all; that percentage increases to 63.9% among those between 25 and 34 years of age. However, those who use the Internet in the older age group spend more time doing so. Therefore, if the average amount of time spent on the Internet for the whole population in these two age groups is 82.5 minutes daily for the first group and 62.7 minutes daily for the second, when we only take into account the population that uses the Internet, average daily use increases to 150.2 minutes for those 16 to 24 years of age and to 173.6 minutes for those 25 to 34 years of age. As we will see in the cluster analysis, the presence in the older age group of heavy users of the Internet increases, particularly among men, generating a significant *gap* between users and non-users.

## 6. *Toward a typology of media use among adolescents and young adults*

Up until now we have looked at young people largely as a homogeneous group with respect to their use of the media<sup>39</sup>. Starting specifically from the amount of time spent using different media, we have generated four groups or clusters<sup>40</sup> based on a k-means cluster analysis<sup>41</sup>, which is considered the most robust<sup>42</sup>. Thus, we initially ignore the socio-demographic characteristics of the subjects, grouping them based on their behaviour with respect to one specific variable, media time use; subsequently, we look at the socio-demographic profiles that are dominant within each proposed cluster. The approach used leaves no cases outside the groups, although the clusters are of very different sizes (table 4), with the first cluster containing 60% of the cases.

<sup>39</sup> A critique of conceiving this population as a homogenous group can be found in the doctoral thesis of MARTÍN CRIADO, Enrique, *Producir la juventud*, Istmo, Madrid, 1998; following BOURDIEU, Pierre, *Questions de sociologie*, Minuit, Paris, 1984.

<sup>40</sup> The number of clusters chosen is based on the logic of results, from the combinations that the variables used present.

<sup>41</sup> The cluster algorithm in SPSS 19 was used.

<sup>42</sup> PUNJ, Girish and STEWART, David W., "Cluster analysis in marketing research. Review and suggestion for application", *Journal of Marketing Research*, 20, 1983, pp. 134-148; LEVY, Jean-Pierre, and VARELA, Jesús, *Análisis multivariable para las Ciencias Sociales*, Pearson Prentice Hall, Madrid, 2003.

**Table 4. Number of cases in each cluster and average time spent per day on each form of media (in minutes)**

Cluster	absolutes	percentage	(A) Internet use	(B) Watching television	(C) Reading	(D) Other media	Total (A+B+C+D)
1	3150	60.6	15.49	59.53	7.68	7.31	90.01
2	270	5.2	467.22	66.67	9.56	8.33	551.78
3	973	18.7	25.02	270.80	9.03	6.50	311.35
4	805	15.5	176.62	74.68	13.73	13.43	278.46
N	5198	100.0					

Source: Based on the INE 2009-2010 Time Use Survey.

The results presented in tables 5 and 6 show that the clusters have the right variability and are differentiated. In table 5, which shows the Euclidean distances between the centres of the clusters, we can see that the most distant are 2 and 3, although the distance between 1 and 2 is also significant. The closest are 1 and 4.

**Table 5. Distance between the centres of the clusters**

Cluster	1	2	3	4
1		45.179	21.150	16.207
2	45.179		48.705	29.079
3	21.150	48.705		24.803
4	16.207	29.079	24.803	

Source: Based on the INE 2009-2010 Time Use Survey.

**Table 6. F-test variance for the 4 variables among the 4 clusters obtained through k-means cluster analysis**

	Cluster		Error		F	Sig.
	Quadratic mean	Gl	Quadratic mean	Gl		
Internet use	209953.075	3	20.017	5194	10488.619	.000
Television	114482.250	3	43.186	5194	2650.887	.000
Reading	78.440	3	7.902	5194	9.927	.000
Other media	91.121	3	10.700	5194	8.516	.000

Source: Based on the INE 2009-2010 Time Use Survey.

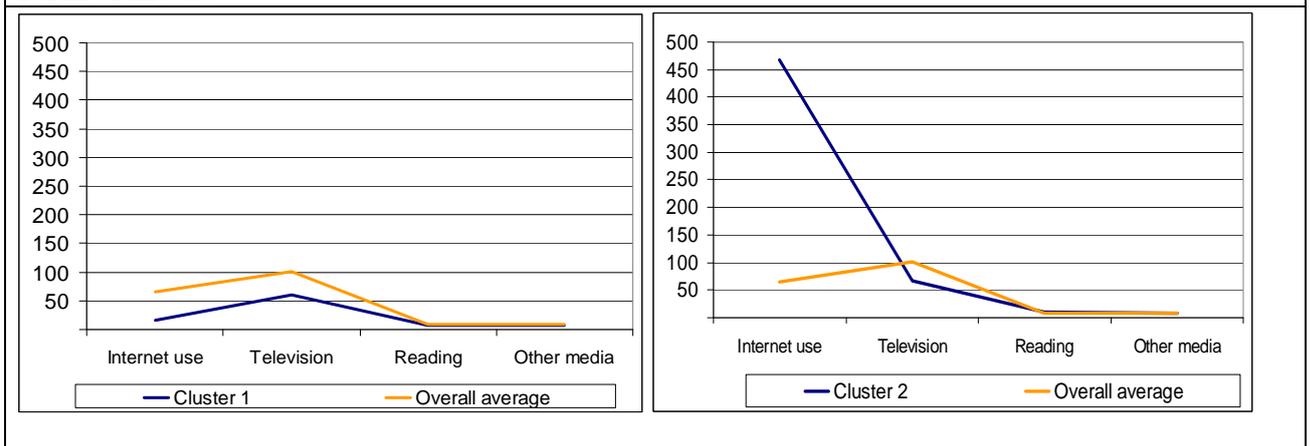
As can be seen in table 6, the variable that most differentiates the clusters is Internet use, with an associated F-test of 10488.619. In second place is watching television, with the use of other media (reading, listening to the radio and recordings) far behind.

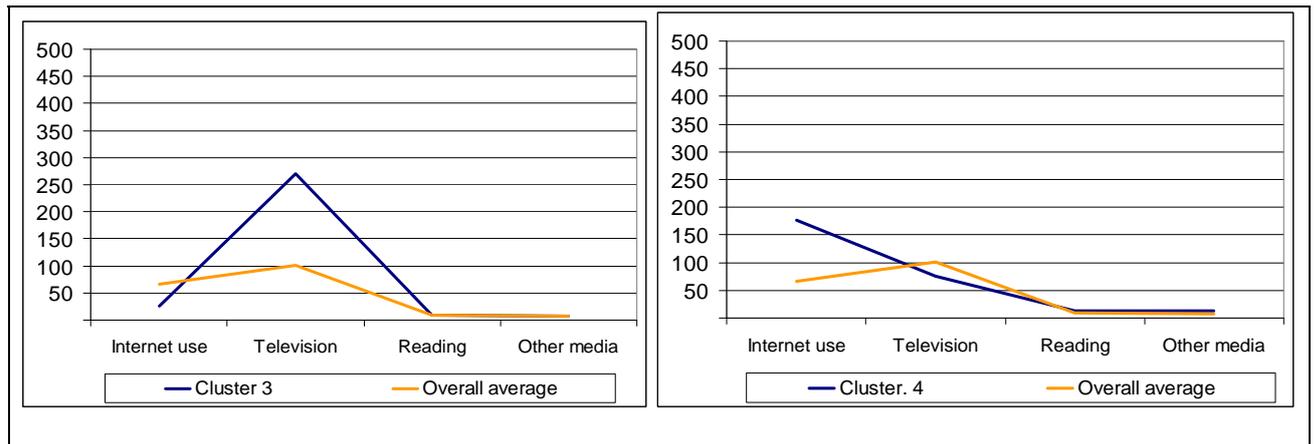
The first cluster is characterised by the relatively little time –in comparison to the other clusters– dedicated to media use; the average time spent in this cluster is approximately one and a half hours a day. The second cluster, the one with the lowest relative weight

(5.2% of the sample), is characterised by intensive use of the Internet, almost 8 hours daily, while the third cluster is characterised by television consumption, approximately four and a half hours a day. Lastly, the fourth group is characterised by both its Internet use –reaching almost three hours a day (176.6 minutes)– and by more time spent reading and using other media relative to the other clusters. We can refer to the four groups in the following manner: (1) moderate users of media, (2) netizens, (3) heavy TV viewers and (4) users of multiple media. Returning to table 5, regarding the distance between clusters, the netizens and the TV viewers are the most distant, also notable is the distance between netizens and moderate users of the media, reinforcing the hypothesis that it is the group of intensive Internet users that determine the differences. If cluster 2 (netizens) and cluster 3 (heavy TV viewers) are the most distant, it is because of the unequal weight that television and the Internet have in the total consumption of the media in these groups. Among the netizens, 89% of their time using media is dedicated to the Internet and 12% to television, while among the heavy TV viewers, 87% is dedicated to television and 8% to the Internet. Taking into account what we have seen in the previous section, these results tell us that although there is a slight negative correlation between Internet use and time spent watching television among the population being studied, there are sectors of this population that behave in very different manners regarding consumption of these two forms of media, grouping 5.2% (extensive amount of time using the Internet) and 18.7% (extensive amount of time watching television) of the population being studied.

The media use profile of each group, shown in figure 1 and table 4, shows group 1 (moderate use of media) to be below the average for use for all four types of media. The netizens (Cluster 2) stand out for their daily Internet use, while their use of other media is below the overall average. Cluster 3 (heavy TV viewers) is only above the average in television, while members of Cluster 4 (users of multiple media) are slightly above the average in Internet use and reading and slightly below the average for time spent watching television.

**Figure 1. Profile of each cluster in comparison to the overall average time spent using each form of media**





Source: Based on the INE 2009-2010 Time Use Survey.

Having looked at the differences in the profiles of the four clusters regarding time use of the media, we now look at the socio-demographic characteristics for each cluster (table 7)<sup>43</sup>.

Cluster 1 (moderate consumption), the largest cluster, with approximately 60% of the total population sampled, reveals few clear socio-demographic characteristics: it has the highest percentage of women (in the other three, men are the majority) and the highest percentage of persons below 13 years of age; the majority in this cluster are employed (53.6%), and it has the highest proportion of persons living in households composed of couples and members under 25 years of age (57.9%) and the highest percentage of persons residing in municipalities of less than ten thousand inhabitants.

Cluster 2 (netizens) is the most masculine (55.2% of persons in this cluster are male) and the oldest: almost all of its members are over 16 years of age and 61.1% are over 25 years of age. This means that it is also the cluster with the highest percentage of persons who are employed (60.8%) and that do not live in the parental home (13.3% in households with a partner and 4.4% in single-person households). The households in this cluster have the highest income levels: 17.8% have household incomes over 3000 euros per month. This cluster also has the highest percentage of persons residing in municipalities with more than one hundred thousand inhabitants.

Cluster 3 (heavy TV viewers) is characterised by low household income: 27.3% of this group live in households with income below 1200 euros a month and 55.2% below 2000 euros. Type of household also appears to be a differentiating characteristic of this group: 5.2% live in single-parent households with members under 25 years of age and 12.6% live in households classified as “other household types”. These are indicators that suggest membership in a subordinate group in the social structure.

Cluster 4 (users of multiple media) is characterised by the high percentage of persons between 13 and 24 years of age, the percentage residing in municipalities with more than fifty thousand inhabitants and the percentage in households formed by a couple with children. Among those over 16 years of age, 66.5% do not work.

<sup>43</sup> In all the crosses presented in this study, the asymptotic (bilateral) significance of the Pearson's chi-square test is equal to or less than 0.002.

**Table 7: Socio-demographic profiles of the clusters (percentages within each column)**

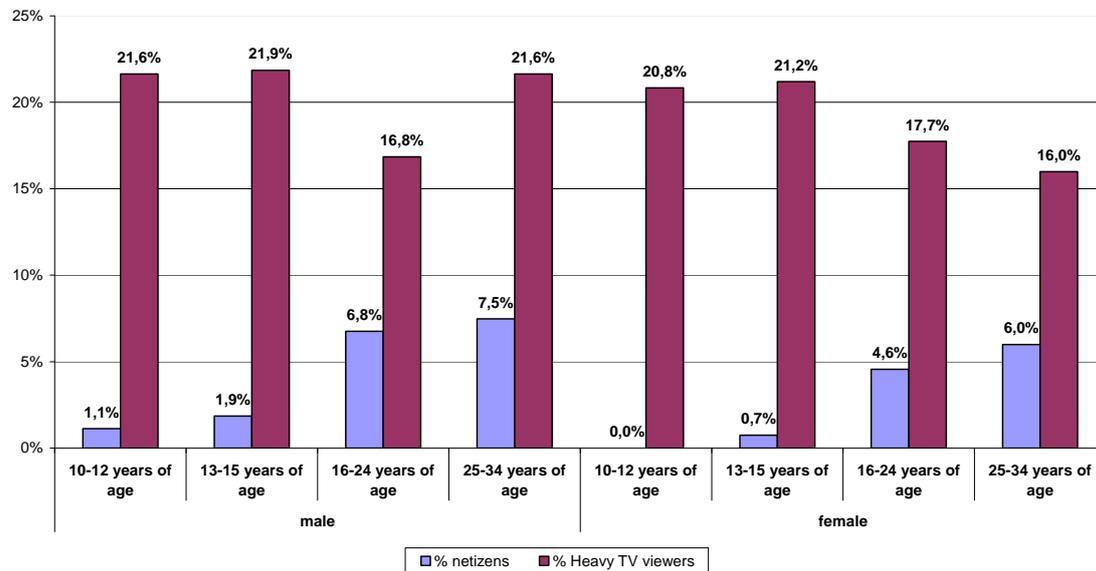
Variables and socio-demographic categories		Clusters			
		1	2	3	4
<b>SEX</b>	Male	46.0%	55.2%	51.6%	50.3%
	Female	54.0%	44.8%	48.4%	49.7%
<b>AGE GROUP</b>	10-12	11.3%	1.1%	11.1%	5.1%
	13-15	9.6%	2.6%	11.9%	14.2%
	16-24	29.3%	35.2%	29.8%	46.0%
	25-34	49.8%	61.1%	47.2%	34.8%
<b>WORK STATUS</b>	Employed*	53.6%	60.8%	36.6%	33.5%
	Not employed	46.4%	39.2%	63.4%	66.5%
<b>HOUSEHOLD TYPE</b>	Single person household	3.5%	4.4%	3.0%	2.4%
	Couple living alone	8.7%	13.3%	10.3%	6.6%
	Couple under 25 years of age	57.9%	42.2%	51.3%	57.1%
	Couple with all children over 25	7.8%	15.6%	6.5%	10.1%
	Single parent with child under 25	6.5%	7.0%	8.6%	8.9%
	Single parent with all children over 25	2.1%	4.8%	2.5%	3.2%
	Couples or single parent with child under 25 and another adult	3.7%	2.6%	5.2%	2.9%
	Other household types	9.9%	10.0%	12.6%	8.8%
	Up to 1200 €/month	20.4%	15.2%	27.3%	17.3%
<b>HOUSEHOLD INCOME</b>	1201-2000 €	27.7%	14.8%	27.9%	25.0%
	2001-3000 €	19.5%	26.3%	16.3%	19.8%
	More than 3000 €	13.7%	17.8%	9.2%	17.0%
	Don't know/No answer	18.7%	25.9%	19.2%	21.0%
	More than 100.000 persons	46.2%	56.7%	48.9%	53.0%
<b>SIZE OF MUNICIPALITY</b>	50.000 / 100.000 .	11.3%	9.3%	12.3%	12.3%
	20.000 / 50.000	11.6%	8.5%	12.3%	10.7%
	10.000 / 20.000	9.7%	7.4%	8.5%	7.2%
	Less than 10.000 h.	21.2%	18.1%	17.9%	16.8%

(\*) Work status was only asked of those 16 years of age and over.  
Source: Based on the INE 2009-2010 Time Use Survey.

Taking into account the weight of each of these clusters based on media consumption for each of the age groups analysed, we find an increase in the relative weight of intense Internet users, accounting for 6.7% of those between 25 and 34 years of age, while the

proportion of those who are heavy television viewers declines from 21.3% among those between 10 and 12 years of age to 18.6% among those between 25 and 34 years of age. The increase in the weight of netizens in the oldest age group is greater among men (reaching 7.5%) than among women (6%).

Graphic 4: Percentages of netizens (cluster 2) and heavy TV viewers (cluster 3), by age group and gender



Source: Based on the INE 2009-2010 Time Use Survey.

Beyond the differences based on gender and age, the link between employment status and education level is also significant in determining the clusters/is where there are the greatest distances/gaps between clusters. Thus, 18.8% of young people who are employed and have higher education are netizens, while only 1% of the employed who did not complete secondary education are. In other words, employment alone is not correlated with Internet use. In fact, employment is linked to very opposite results regarding media use, when education level is also considered.

## 7. Conclusions

Analysis of the EET09 shows it to be a useful resource for looking at the relationship of Spanish society to different forms of media. However, time use surveys are an expensive approach, only affordable for public statistics institutes and only occasionally, thus making them a suitable instrument for a longitudinal perspective. In the Spanish case, the first set of data –standardised with the majority of European countries– was produced in 2002-2003. Unfortunately, participants in that survey were not asked to record their Internet use over ten minute periods, as was done in 2009-2010. We hope that the latter survey will be the base for observing changes in the use of the media in the future in Spain.

Total consumption of the media in Spain occupies on average approximately 12% of each day. This is still far from what was found in the study by Suzuki, Hashimoto and Ishii (1995) on Japanese society. In Spain, media consumption is dominated by television. However, the sector we have focused on, those from 10 to 34 years of age, are the heaviest users of the Internet.

The media consumption of young people over the course of a day is somewhat higher than that found for the total population: 12.8% of each day or 184.6 minutes, with the time spent watching television dominating. Regarding use of the Internet among this population group, we have found notable differences, both in how widespread use is and the times during the day when the Internet is used. Use is extensive among those 13 to 24 years of age, both in terms of the percentage who say they used the Internet during the previous day and, above all, in terms of the percentage of this age group that use the Internet for more than two hours a day. The youngest members of the population being studied, those between 10 and 12 years of age, use the Internet less, which can be attributed to their reduced access to this medium. However, survey data shows that more than one third of this age group (35.6%) did report using the Internet during the previous day.

With the exception of heavy consumers of television or the Internet, there is only a very slight negative correlation between the use of these two media in this population. Among the heavy consumers of television or the Internet, who represent approximately 24% of the total population being studied, the respective decline in the daily consumption of the other medium is 35 minutes in the case of television for heavy Internet users and 41 minutes in the case of the Internet for heavy television users. Taking into account that average daily consumption of television is one and a half times (1.55) that of the daily consumption of the Internet underscores the overall and relatively extensive consumption of television –even among those who use the Internet a lot– and, as indicated by the F-tests on the characteristics of the cluster analysis, the use of the Internet is the variable that most distinguishes the consumption of the media among young people. Thus, while the group of heavy Internet users (5.2% of the sample in our study) dedicate an average of 7 hours and 47 minutes to the Internet each day, the group of heavy consumers of television (18.7% of the sample), spend 25 minutes using the Internet, still higher than the 15 and a half minutes spent by the largest group or cluster of young people, who account for 60.6% of our sample.

Cluster analysis has shown that the majority of young people are relatively moderate users of media (60.6%), spending an average of an hour and a half a day using the various forms of the media being measured in this study, with the consumption of television dominating their use as it represents approximately two thirds of the total time they spend using the media. The remaining 39.4% of young people are characterised by extensive use of media. Heavy use of the Internet tends to increase with age, reaching the highest percentage among young people 25 years of age and older with employment and, as we have also seen, when employment is linked to higher education.

How can we explain that starting at 25 years of age there is a decline in the average daily use of the Internet in comparison with younger age groups but that the group with the highest Internet use is primarily composed of people above this age? An initial explanation points to the wide variability within this age group in the overall use of media and in the use of the Internet in particular, to the extent that where we find the heaviest Internet users we also find those that use the Internet the least: 63.9% reported

that they did not use the Internet the day before the survey. In other words, both those who do not use the Internet and those that are heavy users of the Internet make up a relatively significant proportion of this age group. In addition, the group of heavy users reaches one of the highest quotas among the employed with higher education, a category with much higher presence among those 25 years of age and over.

This study shows that regarding media use we cannot refer to young people as a homogeneous category. Age, gender, education and other social factors (the division of labour tasks, employment status, etc.) play a role in explaining the amount of time spent using different forms of the media. Finally, heterogeneity in the consumption of media, even within relatively small age intervals, is shown to be important.

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