

Evaluating the diversity of television programming

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- *This article positions the diversity of television programming as one of the defining elements of the specificity of public broadcasting services. Diversity is a value endorsed by politicians, programmers and viewers but which becomes dispersed in terms of what it actually means. This article systematises the dimensions of diversity and the indices used to measure it, and constructs an analytical protocol. In a second phase, this is applied to Spain, where the evaluation of diversity, and specifically of the contribution each channel makes to the overall diversity of the system, is a task that has been pending since television began.*

Keywords

Television quality, diversity, television programming, public service, media market.

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1. Presentation

This article is a summary of the key contributions made via research carried out by the CAC, entitled *Construcció d'un protocol d'anàlisi de la diversitat de la programació televisiva* (Constructing an analytical protocol of the diversity of television programming). The complete text for this research, the dimensions of diversity and its indices of measurement, as well as the findings from applying this to an evaluation of diversity in Spain, can be found, in Catalan, on the following website:

<http://www.cac.cat/pfw_files/cma/recerca/estudis_recerca/Analisi_diversitat_programacio_tv-_Eva_Pujadas_abril_07.pdf>

2. Introduction: why diversity?

Given the discussion of the latest broadcasting values, the value of diversity has traditionally been one of the most often mentioned in the various regulations structuring public TV, especially in Europe, although not exclusively (debates about diversity have also been traditional in the United States, Canada, Japan, Australia and, recently, in Asian countries such as Korea and Hong Kong, although most of the debates and references focus on the European context).

In the Spanish case, and given a lack of definition and the ambiguities with which the notion of public service was established in television regulations, diversity became, as did many other concepts, something that was *taken as read*, a kind of ragbag used by the different operators to programme practically whatever gives them greater profits and/or notoriety, taking cover under the claim that they are covering the diversity of tastes, opinions, etc. of the audience. But diversity is a much more complex value than the interpretation

given by programmers and directors of the channels in defending certain kinds of programming and programme production.

Specifically, diversity as a value has been present in parliamentary and governmental discussions in historical contexts in which, for various reasons, the entrance of new operators in television markets has been discussed and approved, be this in neo-liberal contexts of opening up the markets or in those cases where the aim is to ensure that the territorial, linguistic, national, ethnic or group diversity (among others) of modern societies is being covered, something which has given rise to the existence of television channels for autonomous regions and local areas.

One of the documents that most clearly summarises the desire of legislators to increase diversity (broadening the number of channels) using the argument of improving programming quality and, therefore, the quality of the service offered to TV viewers, is the report drawn up under the government of M. Thatcher (*Competition, Choice and Quality*). In a neo-liberal context impregnating the television market, this report presented a structural argument based on the "natural" consequence of increasing the number of channels; so the entrance of new operators into the market would be translated into an increase in the diversity of programming offered to viewers, something which, in turn, would increase freedom of choice and would have a practical effect, "naturally", on the increase in television quality.

In spite of being based on the principles of this theory, the diversity-quality distinction has turned out to be not only clearly too simple and insufficient to explain how the media market works but has also been an argument often contradicted by the very way television markets operate.

In the case of Spain, it goes without saying that fifty years after television arrived and was implemented, TV's structure and market have changed to an extraordinary extent. It is also evident that, from the choice of a single TV channel in the times of Franco's dictatorship to the present day, there has been a notable increase in the diversity of programming, in any of this concept's dimensions. However, one of the questions we must clarify is the impact of each channel on the diversity offered by the system as a whole.

This research coincided with the introduction of two new television channels for the whole of Spain: Cuatro and La Sexta. As the television system in our country has only just

started to change but new television channels have gradually been introduced, it has become particularly important and urgent to investigate the mechanisms used to evaluate the impact of new channels on programming as a whole and their contribution to the system's overall diversity.

For this reason, advantage was taken of the initial objective to evaluate diversity in television programming in order to test the specific contribution of each channel and to measure whether the system's overall diversity was increasing or not once the programming offered by the new channels had been implemented and consolidated, without it being possible to identify a cause-effect relationship, as will be seen below.

Consequently, the objective of this research was to identify and systemise a measure or series of measures to evaluate the diversity of television programming, both as a whole and also each channel's contribution to overall programming. The evaluation of diversity had to be agile enough to be able to assess both the individual contribution of the channels and also the contributions grouped according to different research objectives. For example, comparing the contribution of public and private channels, or Spanish and autonomous region channels, distinguishing between public television's first and second channel, etc.

3. Programming diversity in Spain: preliminary questions

Most of the studies carried out place diversity as a variable that depends on three kinds of conditions:

- **Structural conditions** of the reference context. These conditions include issues regarding legislation, the establishment of programming quotas, the number of operators, etc.
- **Strategic decisions concerning penetration** in a specific market adopted by a channel's directors, as well as decisions regarding production and programming policy.
- **More or less conscious decisions made by viewers** when consuming certain television programmes rather than others.

A second constant in studies on programming diversity is that of placing it within a specific market where it is evalua-

ted; i.e. the media market. In other words, diversity in television programming does not fluctuate in the same way as diversity in the shoe market, electricity market or mobile telephony market.

The report drawn up describes and justifies the characteristics of the media market and the impact each of these characteristics has on overall programming diversity. Briefly, these characteristics are as follows:

- The media market is **essentially an oligopoly** (Levin, 1971, Van Cuilenburg, 2000), principally due to two reasons. First because the media market is not a market of perfect competition (implying the absence of differentiation between products) and, secondly, because of the specific cost structure of media products (high creation costs and/or purchase costs for the first copy but very low duplication and distribution costs). This means that company size is essential in the market insofar as large companies can produce or buy various products and finance failures with profitable products.
- **Hotelling's law**. This law describes how, in competitive markets, the most rational action for producers of goods (programmes), the most profitable, is to make their products as similar as possible. This law, applied to the media market, predicts that competitive markets tend towards homogeneity more than monopolistic markets or those governed by the public service model (Van Cuilenburg, 2000).
- **Competitive strategies** in the media market. The so-called **Porter model** identifies three generic strategies in the media market: the cost leadership strategy, the differentiation strategy and the focus strategy. Depending on the degree of market saturation, the different channels opt for one strategy or the other with the consequent impact on what is offered and consumed in terms of diversity.
- Finally, mentioned is made of the **theory of programme choice** on the part of consumers as an element that characterises the media market. These theories refer to the fact that viewers have some strong preferences for programmes specifically designed for them and more diffuse preferences for more homogeneous programmes. According to the logic of these models, when there are few channels more audience is achieved when generalist programmes are shown. On the other hand,

when the number of channels increases, the average audience per channel is increasingly smaller and, therefore, it's easier for a programmer to maximise audience by offering minority programming.

This characterisation allows us to propose a model of how the media market operates in terms of programming diversity in which, under certain conditions of competition between channels and due to the number of channels in operation in the market as well as the specific preferences of consumers, etc., an increase in programming hours, resulting from an increase in the number of privately-owned channels, translates into a reduction in the overall diversity of the system.

This is due to the fact that the public channels' contribution to overall diversity is greater than that of private channels and, therefore, a proportional reduction in their airtime compared with private channels (when new operators enter the market) translates into a reduction in overall diversity.

Having characterised the media market, the third step in the research consisted of identifying the key dimensions or interpretations of diversity and the corresponding indices to measure this. The report suitably covers the different ways the notion of diversity is accepted in the media and groups and reformulates some proposals that receive different names but correspond to similar principles.

Briefly, five broad classifications are distinguished when analysing diversity:

- a. **Diversity as reflection, diversity as access and diversity depending on the number of channels** (McQuail, 1986; Hoffman-Riem, 1987). Diversity as reflection refers to the extent that the media system reflects social structure; diversity as access refers to the permeability of the media to different voices, groups and social interests; and, finally, diversity in the number of channels refers to the correspondence between these channels and offering a diversity of opinions, cultural models and ways of life.
- b. **Diversity of sources, content and consumption** (Napoli, 1997; Aslama, 2005). Studies of the diversity of sources evaluate the diversity of content ownership, programme ownership or workforce; the diversity of content covers the diversity of formats, of points of view, subjects, styles or resources; and the diversity of con-

sumption (*exposure diversity*) refers to the diversity the audience really consumes, which goes far beyond than the diversity offered.

- c. A third dimension of diversity distinguishes between the **diversity reflected and diversity offered**. The first refers to the extent to which content reflects the ideas or subjects in the same proportion that media users prefer. On the other hand, diversity offered evaluates whether, and to what extent, the media express all reasonable ideas or possible subjects in the same proportion, irrespective of public support. The political implications of each of these dimensions are covered and debated in the report (pg. 33).
- d. **Vertical diversity** (or internal diversity) and **horizontal diversity** (or external diversity). The first evaluates the diversity offered by a channel (or a group of channels) throughout its programming; horizontal diversity, on the other hand, refers to the number of programmes or types of programme available for a viewer at a specific time.
- e. Finally, the debate concerning diversity is currently based on the **content diversity/access diversity** distinction. This debate reveals the fundamental paradox that, in spite of legislators emphasising diversity, the audience does not want diversity per se and we should therefore focus our interest on the diversity of access to media content.

4. Evaluating programme diversity in Spain

Having established the objective of evaluating TV programme diversity in Spain and the contribution of each channel to the system's overall diversity, we need to construct an analytical protocol for diversity; i.e. to decide what kind of diversity we wish to evaluate and, consequently, to deploy the corresponding indicators and indices to measure it.

Consequently, we need to take three decisions: the first concerns the dimensions of the diversity to be evaluated

(*diversity of what?*); the second, the context of the measurement indices (*how is this diversity measured?*), and the third concerns the units of reference (*what is counted in order to measure diversity?*).

Briefly, and due to data availability, it was decided to choose vertical and horizontal diversity. Consequently, a sample was selected of one week's programming before the two new channels (Cuatro and La Sexta) started up, and one week a year afterwards, once these channels had consolidated their programming.¹ There were two objectives: on the one hand, to detect any variations in the overall diversity offered and, on the other, to evaluate the contribution (positive or negative) of each channel to this overall diversity.

The indices of measurement were relative entropy, which is a measure of the degree of spread for the time dedicated to each genre; the HHI (Herfindahl-Hirschmann Index), which measures the degree of concentration of time between genres; dissimilarity, which compares the programming of the two channels, and the index of choice options, which evaluates the viewers' degree of real choice at specific times of the day.

With regard to the classification of genres, it was decided to construct our own stable generic classification so that it could be used in comparative analyses, beyond the sample studied in this research. This classification has 16 categories of genre based on the format (fictional series, cinema, game shows, late shows, news, documentaries, reality shows and magazine programmes), on the content (culture, celebrity gossip, education, religious, and humour) and on the kind of audience it's aimed at (children/youngsters and programmes for minorities).

5. The first time these indices have been applied to the Spanish context

This analytical protocol contains four fundamental innovations within the context of Spanish research on programming diversity.

¹ The weeks analysed are from 19 to 25 September 2005 and from 18 to 24 September 2006, from 7 am to 2 am the following morning.

A. Analysis of vertical diversity

Firstly, the kind of analysis carried out within this research means we can analyse the diversity and concentration of programming throughout the TV system (all channels), as well as measuring the presence and distribution of air time among different genres. Secondly, we can also analyse the diversity, concentration and distribution of genres on each channel.

At the same time, this research also introduces the study of genre distribution in terms of strong demand and inflexible demand, both in the television system as a whole and also on the different channels. Strong demand genres are capable of attracting audience attention in the same proportion as their presence increases on the programming grid (e.g. fictional series, game shows, cinema or celebrity gossip programmes). On the other hand, inflexible demand genres are those that have less capacity to attract audience (news, documentaries, cultural programmes, educational programmes or those for minorities); these genres are traditionally programmed on public channels.

It is also possible to draw comparisons between public and private channels, as well as between the first and second public channels, highly relevant distinctions given that these channels have their own differentiated profiles that are reflected not only in the configuration of the programming grids but also in the contribution each channel makes to the system's diversity.

Lastly, a comparison is also made between the total data for the day and prime time, as well as the data for weekdays and weekends.

B. Each channels contribution to overall diversity

The second novelty of the analysis designed is that we can analyse the contribution of each channel to the system's diversity as a whole. In this respect, it is relevant to compare the contributions to overall diversity of public and private channels, as will be seen in the findings once the protocol has been applied.

C. Analysing dissimilarity

We can measure how different the programming is on two channels by means of dissimilarity, in relation to the genres present on the grids and the time allocated to each genre. These data allow us to broaden the study of the pro-

gramming profiles of each channel, as well as their contribution to overall diversity.

D. Index of choice options (ICO)

The ICO means we can analyse the real options for choice of viewers for a system at a particular time; i.e. how many different genres they can choose from at a specific moment. This index, which is applied in the study of prime time to 15-minute time bands, means we can broaden the study of the system's diversity, given that it translates this diversity into the audience's possible options for choice.

These four analytical possibilities allow us to examine television programming diversity from different angles via objective indicators with closed and internationally agreed scales of evaluation, something which provides us with a view both of the overall diversity and also the contribution of each television channel.

6. Conclusions

Firstly, the main finding of this research is the construction and testing of an analytical protocol that, on the one hand, provides objective indicators to analyse television programming diversity of a specific television system and, on the other, to carry out comparative analyses both between different periods of time (analysing trends in diversity) and also between different systems (analysing programming diversity in different territories, autonomous communities or countries).

With regard to applying the protocol developed in this research in relation to the analysis of programming in Spain (analysing national and Catalan channels in 2005 and 2006), the following conclusions have been reached:

- **The diversity in the system is very high and its concentration is average.** In other words, there is a large number of genres on the Spanish and Catalan channels as a whole but airtime is shared unequally. So the genres with more presence on channels as a whole are the news, fictional series children's/youngsters' programmes, followed by celebrity gossip programmes, sports, cinema and game shows.

- **Overall diversity tends to fall during prime time, as predicted by Hotelling's law**, according to which, in competitive markets (and prime time is an extraordinarily competitive market), it is more profitable for the different operators to risk as little as possible and bring their products close to the standard. In this way, in this time band we find less diversity and greater concentration (few genres share most of the air time).

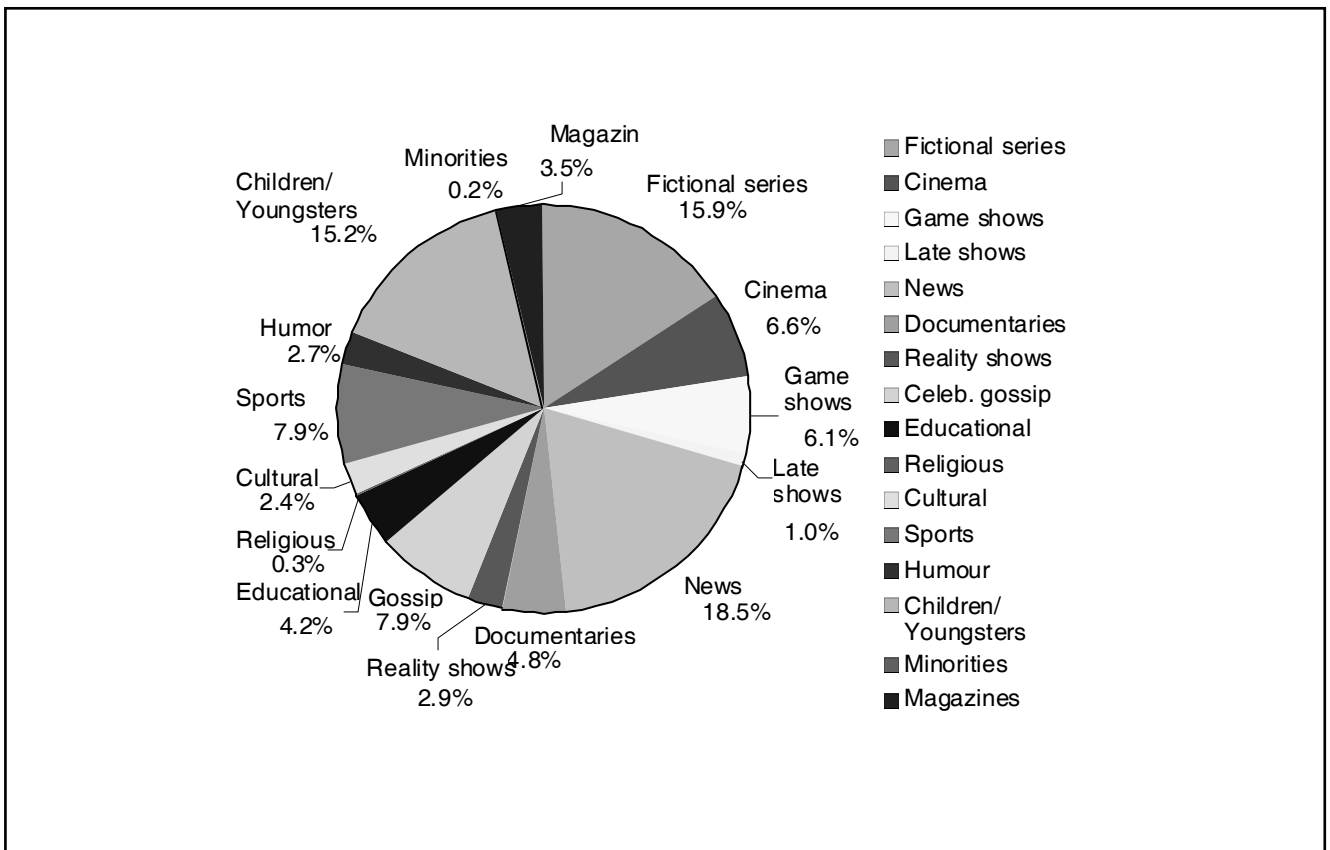
So prime time is dominated by the news and fictional series, which considerably increase their presence compared with the day as a whole and which, together, account for almost 50% of the airtime in this band, as well as sports.

In spite of the system's high diversity, **the programming for each channel is based on only 3 or 4 genres**, the total of which account for more than 50% of the total

broadcasting time. This little diversity and high concentration become even more evident if we differentiate between workdays and weekends. Diversity is less and concentration higher in practically all cases. This is due to the fact that the genres broadcast during the week and those broadcast at the weekend are different, so that, evaluated together, they complement each other and the overall diversity of the channel increases.

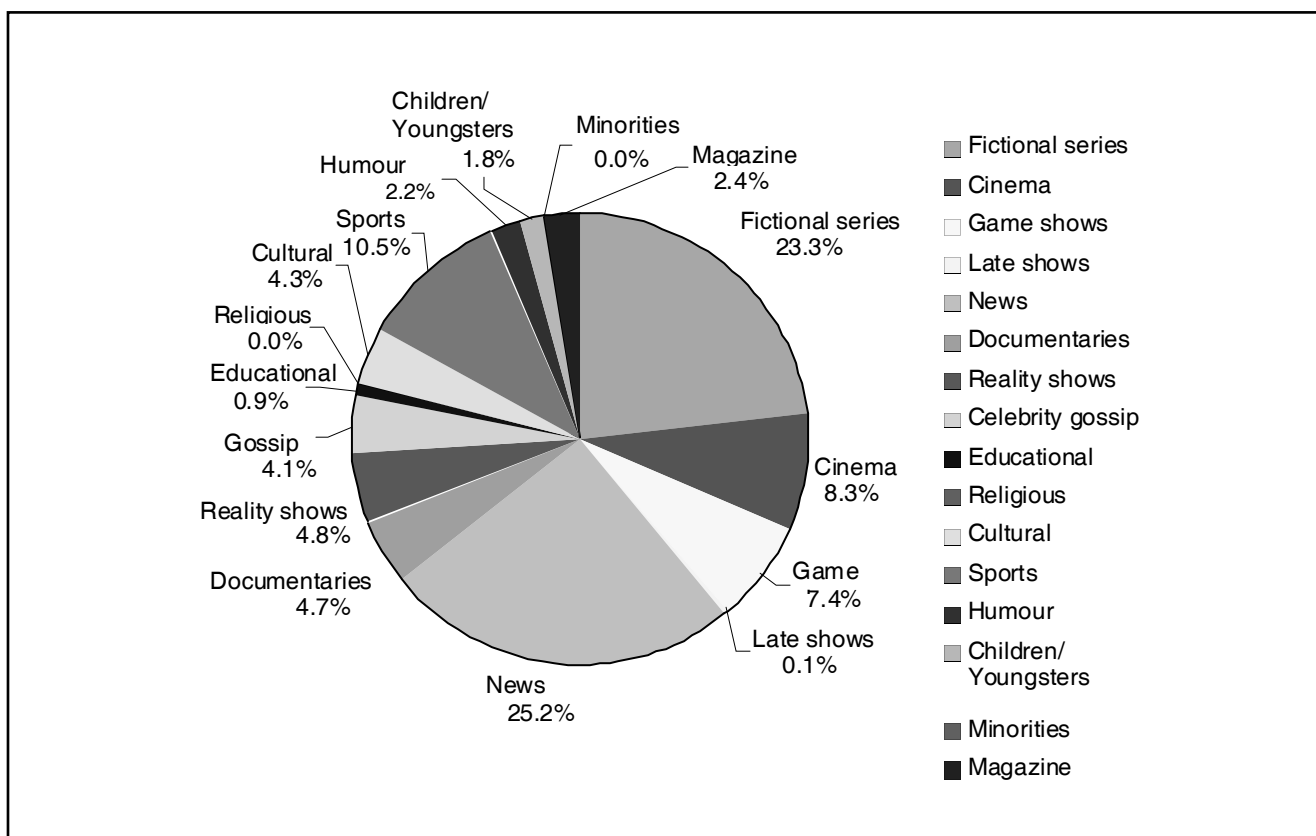
- **The first and second channels of public television stations offer different but complementary genres.**
 - **The first and second public channels are characterised and differentiated by the presence and distribution of genres on their grids but not by vertical diversity.** In other words, that which characterises (and differentiates) the first public channel from the second (i.e. TVE-1 and TV3 from

Diagram 1. Distribution of genres (total programming). 2006



Source: in-house.

Diagram 2. Distribution of genres (prime time). 2006



Source: in-house.

La 2 and K3/33, respectively) is not that they are more or less diverse or concentrated but in the genres included in the programming and how the time is allocated to these.

So the first public channels are based on strong demand genres (especially fictional series, cinema and, in the case of TVE-1, celebrity gossip programmes) and news (the only inflexible demand genre with significant presence on these channels), genres that, in both cases, account for 40% of air time.

In fact, this programming is quite similar to that of private channels (as will be seen in the analysis of dissimilarity), where there is a majority of strong demand genres (especially fictional series, celebrity gossip, game shows and cinema), accounting

for 60% of the air time, as well as news (also the only inflexible demand genre present in the programming), accounting for 25% of the time.

The second public channels, however, are semi-specialised in programmes for children/youngsters and sports, accounting for almost 50% of the broadcasting time. After these, there are inflexible demand genres such as documentaries, educational, cultural and religious programmes and programmes for minorities, genres that are not present on any other channel and that, as a whole, account for 40% of air time (while strong demand genres only account for 10%).

So a certain degree of complementation can be observed in the programming of the first and second public channels.

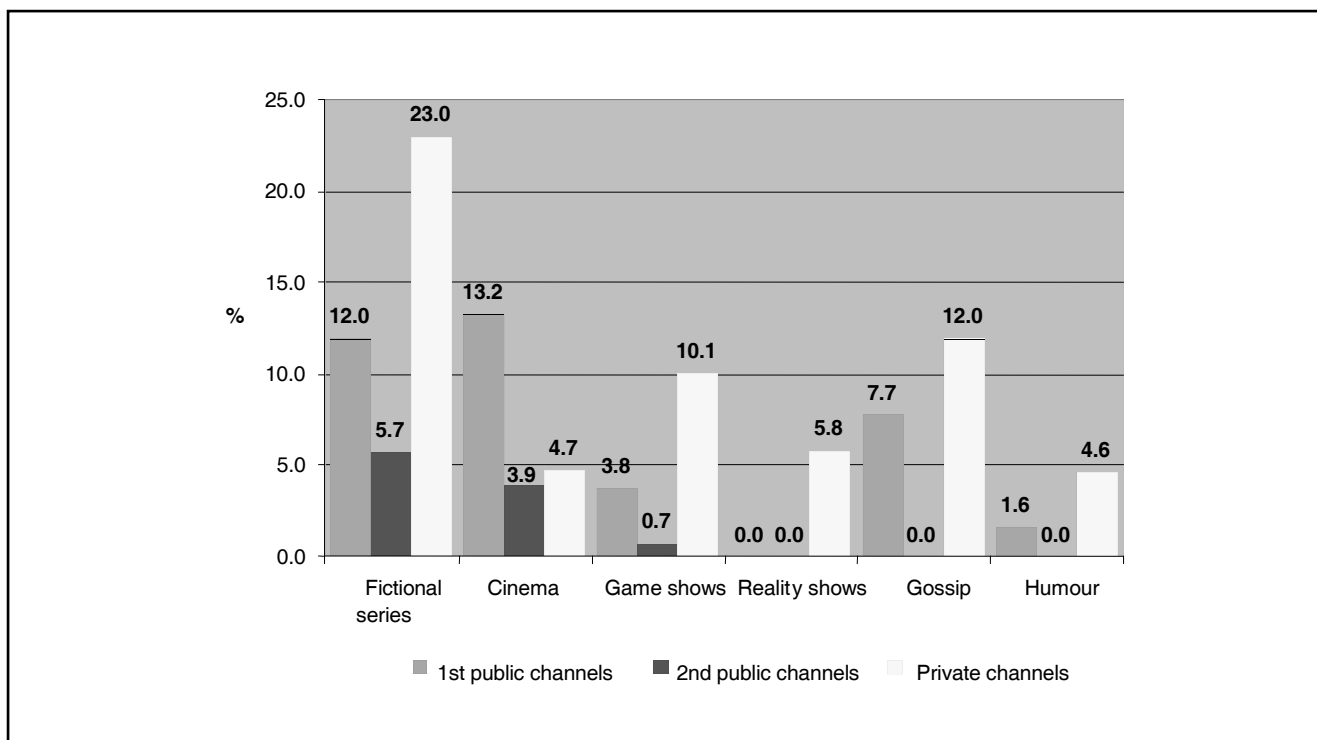
- **The dissimilarity between the first and second public channels is higher than the dissimilarity between the first public channels and private channels.**

An analysis of the dissimilarity, i.e. how different is the programming of the two channels regarding the presence and distribution of genres, provides greater insight into the differences in the programming profiles of first and second channels compared with private channels, which we have referred to earlier. So the dissimilarity between the first and second channels on public television is very high, while that established between the public television companies (between TVE-1 and TV3, on the one hand, and between La 2 and K3/33, on the other) is less. This confirms the difference and complementary nature established between these two types of channel.

The dissimilarity between second public channels and private channels is also much higher than that observed between the first public channels and private channels. All this refers to the fact that the first channels on public television opt for a programming strategy that brings them closer to what is offered by the private channels (with whom they compete for leadership in audience ratings), with a strong presence of news and strong demand genres, such as fictional series and, in the case of TVE-1, celebrity gossip programmes.

The second channels, however, have a concentration of genres with little presence on the rest of the channels: sports, programmes for children/youngsters and inflexible demand genres such as documentaries, educational and religious programmes, etc.; genres that do not achieve big audiences and can limit the competitiveness of the first channels.

Diagram 3. Distribution of strong demand genres on the first and second public channels and on private channels (total programming). 2006



Source: in-house.

These observations on dissimilarity enrich the study of the contribution made by the different channels to the system's diversity, which we will deal with in the next section. Precisely, the second public channels contribute more to the system's diversity as a consequence not of internal diversity but because they have a differentiated profile from the rest of the channels (in other words, very high dissimilarity compared with the rest of the channels). On the other hand, the resemblance between the programming on the first public channels and the private channels means that their contribution to diversity is practically null.

With regard to La Sexta and Cuatro, these two new private channels have significantly high dissimilarity compared with other private channels, due to their strategies for entering the television market which differentiate them from the private

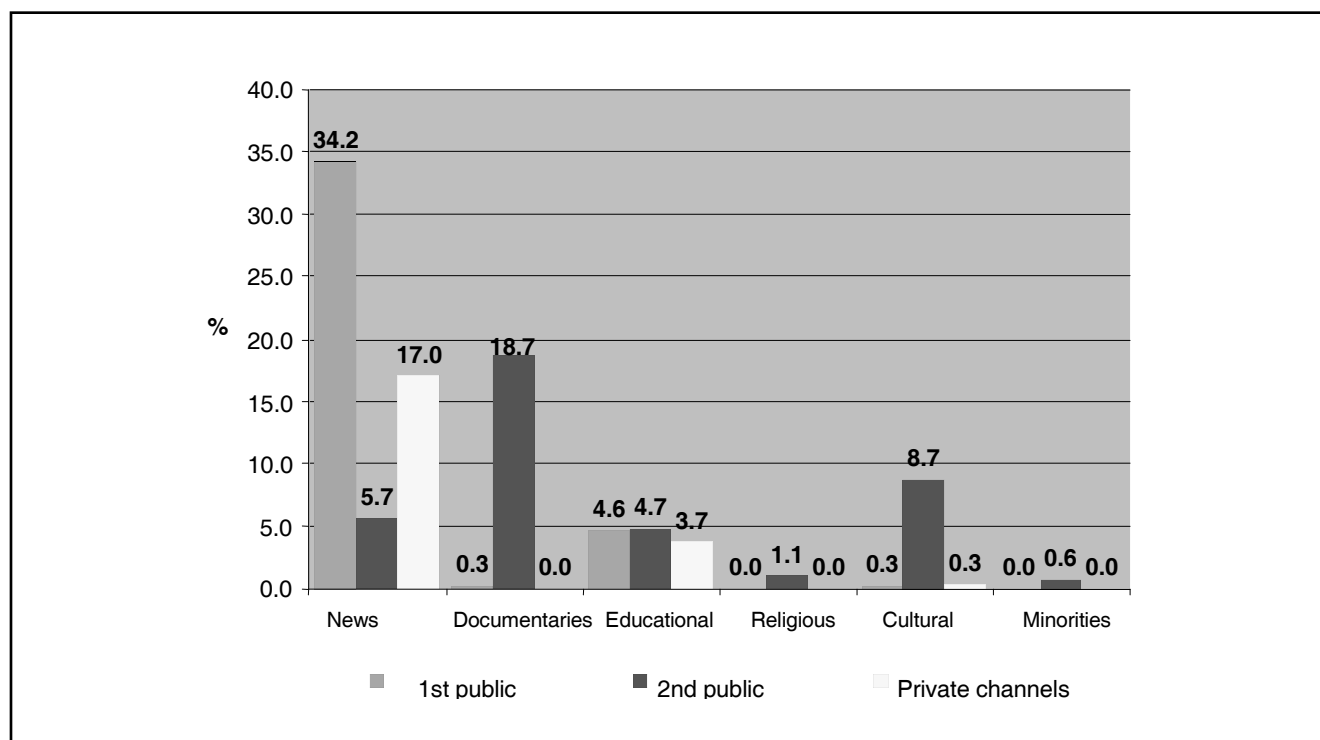
channels and from the first public channels and bring them closer to the second channels (especially thanks to the presence of programmes for children/youngsters, sports and educational programmes).

- **The contribution of public channels as a whole to overall diversity is higher than that of private channels as a whole.** However, this is only the case if we take into account public channels as a whole, given the complementary nature between their first and second channels (both together cover practically all genres), something which does not happen with private channels.

However, here it is interesting to differentiate between the first and second public channels:

- **Second public channels contribute more to the system's diversity than first channels,** as we

Diagram 4. Distribution of flexible demand genres on the first and second public channels and on private channels (total programming). 2006



Source: in-house.

Table 1. Analysis of dissimilarity. 2006

Channel	TVE	La2	TV3	C33	T5	Antena3	Cuatro	La Sexta
TVE		1.195 High	0.561 Medium	1.605 Very high	0.694 Medium	0.698 Medium	1.133 High	1.162 High
La2			1.222 Very high	0.743 Medium	1.446 Very high	1.382 Very high	1.158 High	1.118 High
TV3				1.585 Very high	0.905 High	0.863 High	1.135 High	1.083 High
C33					1.707 Very high	1.685 Very high	1.140 High	1.367 Very high
T5						0.624 Medium	0.840 High	0.887 High
Antena 3							0.672 Medium	0.743 Medium
Cuatro								0.739 Medium
La Sexta								

Value	Deviation
1.20-2.00	Very high
0.80-1.19	High
0.50-0.79	Medium
0.20-0.49	Low
0.00-0.19	Very low

Source: in-house.

have seen in the dissimilarity analysis, not because they are highly diverse channels but because their programming is based on genres that are not present on the other channels or only to a very small extent (especially inflexible demand genres: documentaries, educational, minority, religious, cultural, etc.).

- **The contribution of first public channels to the system's diversity is practically inexistent, and lower than that of the private channels as a whole**, as their programming contains the same genres as private channels (fictional series, news or cinema). So, if first public channels did not exist, the system would not suffer, as it would be compensated by the programming of private channels.
- **The contribution of each individual channel to the system's diversity is practically imperceptible**, something that shows that no channel has a clearly differentiated proposal from the rest and

any gaps on one channel are offset by the genres present in the programming of others.

Second public channels are also the highest contributors to diversity when calculating the individual contribution to the system (especially K3/33). On the other hand, first channels contribute to a similar degree as private channels: TV3 contributes practically nothing, while TVE-1 has a negative contribution, i.e. system diversity would increase without this channel.

- **The increase in hours of programming as a result of the two new private channels (La Sexta and Cuatro) has been translated into an increase in system diversity**, although this is practically imperceptible and is therefore not proportional to the increase in broadcasting hours.
Programming diversity increased slightly in 2006 in spite of the fact that all the channels are tending towards less diversity and more concentration. This might be due, on the one hand, to the strategies adopted by the two new

channels upon entering the market, choosing different genres, as well as slight reactions from the rest of the channels which, although losing diversity, increase the differences compared to the rest.

So, in this case, a reduction in the relative importance of public channels (because of the introduction of two new private channels) does not lead to a reduction in overall diversity.

- **The increase in programming hours has not seen a proportional increase in viewers' election options in prime time, where all channels offer the same genres** (Hotelling's law).
- **The increase in programming hours has led to an increase in the concentration of strong demand genres**, although this is only a slight increase. So the percentage of fictional series, game shows and humorous programmes has increased, while the presence of inflexible demand genres has decreased, especially the news.

This is due, on the one hand, to the programming strategies of the two new private channels, where the strong demand genres, especially fictional series, game shows and humorous programmes, have a significant weight, while much less time is dedicated to news. On the other hand, this is also due to the changes in programming on the part of the rest of the channels, where in all cases (both private and public channels) a reduction can be observed in the percentage of total time dedicated to inflexible demand genres and an increase in those of strong demand.

So the fall in inflexible demand genres is not only due to a reduction in the relative weight of public channels but also to the programming strategies of the public channels themselves.

7. Outlook for the future

Given that this is a pioneering piece of work in Spain and that our country is still going to see a significant increase in TV channels and operators in multiple formats, the research carried out has great diagnostic and predictive value as it

brings together and clarifies the research carried out around the world on programming diversity, describes its dimensions and key indicators and proposes some indices to evaluate accurately the overall diversity of programming and, specifically and most appropriately, the contribution of each channel, sometimes positive and other times negative, to overall diversity. The regular tracking of programming diversity must allow us to identify trends in the overall diversity on offer and to carry out comparative studies between autonomous communities and/or other countries.

Finally, we should also note that research on programming diversity must also deal with an analysis of the diversity of programmes, i.e. content. Genre classifications are useful because we can construct large groups of programmes but they are not enough to describe the diversity of the specific universes of reference of television programming. In this respect, in the case of fictional series, it is not the same to programme *House* as *Los Serrano*. This displacement of focus represents a radical change in methodology. In the first case we analyse and measure the programming policies of the channels and, in the latter, the content of the programmes themselves.

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