

The analog switch-off in a cable dominated television landscape. Implications for the transition to digital television in Flanders

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Abstract

Flanders will complete the migration from analog to digital terrestrial television by the end of 2008. Despite the cable dominated television landscape, the Flemish government is aiming at a smooth transition from analog to digital terrestrial television. Therefore, a multi-methodical study (quantitative survey and qualitative focus group interviews) has been set up by order of the Flemish government to understand the specific features and needs of analog antenna viewers and their expectations for the analog switch-off. The study shows that there are three distinctive types of analog antenna viewers. The results demonstrate that the antenna viewers are rather badly informed about the upcoming analog switch-off, which may lead to a negative attitude and may impede a smooth transition. Finally, antenna viewers seem to be rather conservative viewers: they wish to keep on watching the same television programs from the same channels. Moreover, digital terrestrial television is their preferred alternative.

Keywords: *analog switch-off, digital era, terrestrial television, antenna viewers, policy research*

Introduction

When talking about the digital age, the digitization process of television catches the eye. Dependent on the specific characteristics (geography, existing infrastructure) of each member state of the European Union, the transformation from analog to digital television in Europe has been initiated by one of the traditional transmission channels (terrestrial, satellite or cable). Digitization has now reached a crucial phase, i.e. the replacement of the analog terrestrial system by its digital equivalent. Europe's countries are being prompted to switchover from analog to digital terrestrial television by 2012.

In Flanders, analog terrestrial television transmission has until now always been the cheapest option and covers the whole Flemish territory. The analog switch-off endangers geographically and financially. Despite the relatively small number of analog terrestrial television viewers, some of them risk being isolated (when having no cable access) or face a financial barrier to their watching television in the same manner as now. After all, other alternatives such as 'digital terrestrial or satellite' require some financial investment (the 'switching cost' at the very least) (d'Haenens and Bink, 2001). In other words, the geographical universality of access in the digital era can no longer be taken for granted.

The latter refers to access to television programs of the public service broadcaster¹. The transition process thus implies that the government and the public service broadcaster bear some responsibility (Chalaby and Segell, 1999: 360–365). Commercial television players could profit from the advance of digital television by providing the public with a more diversified range of content and services, aimed at the target groups who are of greatest interest to them (i. e. for advertising purposes, etc.). Public broadcasters cannot simply follow the same strategy (Sourbati, 2004). Because of their mission statement and the fact that they are funded from public resources, one of their primary goals is to reach everyone in society ('universal access') (McQuail, 2000: 157, 169; Murdoch, 2000: 54). The process of digital switchover puts this principle under pressure to some extent. People who only watch television via analog terrestrial television should therefore be adequately informed about the implications and alternatives (program, infrastructure, costs) after the analog switch-off. Starting with background information about the analog switch-off plans in Europe, this article discusses the research that has been carried out to obtain profound insights into the current users of analog terrestrial television, in preparation for the analog switch-off. The research methodology and results may be helpful or inspiring for other countries in their development of strategies for achieving a fair digital switchover. In addition, analog terrestrial television viewers' perspectives and feelings regarding the analog switch-off may also reflect in some way the willingness of citizens to move towards digital television in general.

The analog switch-off: From analog to digital terrestrial television

Switch-off plans and strategies in Europe

The eEurope 2005 action plan (followed by i2010) stresses the role of digital television in the information society (EC, 2005). Therefore, the national and European regulators have put this issue high on their agendas (Iosifidis, 2006: 249). Member states of the EU were urged to reveal

their national plans concerning the analog switch-off (date, strategy, commissions, etc.) (Iosifidis, 2007: 8). The member states can choose their strategy freely, but Europe aims for the end of analog terrestrial television by 2012 (Brown and Picard, 2005: 345–347).

The plans and timing vary greatly. In Luxembourg, the Netherlands, Finland, Andorra and Sweden, the analog switch-off has already been accomplished (DigiTag, 2008). Other countries have fixed a date in the near future (Flanders: 2008; Germany: 2008; UK: 2008–2012; France: 2011; Spain: 2010; Italy: 2012), while others have not yet decided (Ireland, Portugal) (Iosifidis, 2006: 258–260). The switch-off dates vary from one country to another depending on the particular characteristics. The current penetration of digital television and services and the particular television landscape are probably two of the most predictive variables (Iosifidis, 2007: 8).

Three types of countries in Europe can be roughly distinguished (d'Haenens and Bink, 2001: 135; BIPE, 2002: 18; Blumler, 1992: 25): First, '*cable countries*', where more than 90 % of households watch cable television (Belgium, the Netherlands, Luxemburg); second, '*terrestrial countries*', which have terrestrial transmission as the dominant delivery platform (UK, France, Italy, Spain, Portugal); and finally, '*hybrid countries*', where cable and satellite together serve more than half of the households (Germany, Ireland, Sweden, Finland, Denmark). The degree of DTT penetration is extremely varied, often dependent on the role of the state and the PSB in the implementation and further evolution (Storsul and Schanke Sundet, 2006: 248–249; Iosifidis, 2007: 10).

Digital switch-off in the Low Countries

The research presented deals with the analog switch-off in Flanders², the northern part of Belgium. Being typical '*cable countries*', the television landscapes of Flanders and the Netherlands have several parallels. Both regions adopted a dual broadcasting system in approximately the same period (Flanders in 1989 and the Netherlands in 1991) (Bardoel et al., 2000: 88). Research also shows that the mean viewing time in both regions is comparable, with an equally dominant cable penetration (> 95 %), implying that the analog switch-off only has implications for a minority of television viewers.

The Netherlands

In 2002, the Netherlands installed a '*Switch-off Commission*', to investigate how the transition from analog to digital terrestrial television might take place. The commission concluded that the transition would be rela-

tively easy compared to other countries (e.g. hybrid or terrestrial countries) given the limited number of households dependent on analog terrestrial transmission. In the assessment study GfK (2006) concluded that only 1% of the households were watching television (exclusively) via analog terrestrial transmission.

The actual transition from analog to digital terrestrial television happened in the night of December 10 to December 11, 2006. The date of the analog switch-off had been postponed for a few weeks, because the Dutch Government wanted to organize a large-scale information campaign, and a parliamentary discussion arose about the choice of free-to-air channels. Different ads, articles, radio commercials and a centralized website informed the Dutch citizens about the upcoming changes, and ticker tapes³ were sent out by the public broadcaster.

Despite the limited number of citizens 'affected' by this transition, the analog switch-off caused more commotion than expected. Due to the short preparation period preceding the analog switch-off, some of the antenna viewers felt they had been taken by surprise and left out in the cold.

Flanders

Just as in the Netherlands, the Flemish government wants to make the analog switch-off before the 2012 deadline. This will take place in November 2008 as planned. The Flemish government recognizes that this transition demands a certain degree of 'strategic' guidance, and wanted to start a communication campaign from the beginning of 2008.

Unfortunately, not much information is available about the number of households affected by the analog switch-off. It is believed that in 2006 90% of the households in Belgium watched television via cable, 9% via satellite and 3% via IP-TV (OBS, 2007). In-depth knowledge about the typical profiles of the Flemish terrestrial viewers, however, is lacking. Because of the small number of analog terrestrial television viewers, this group appears to be an 'ignored' minority.

Research questions

With the Dutch experience at the back of its mind (fast transition, not enough information, no extensive transitional matters) and given that the planned switch-off in Flanders was approaching fast, the Flemish government and the public broadcaster VRT both wanted to gain more insight into the profiles of the analog terrestrial television viewers.

As Flanders has a high degree of cable penetration (Coppens, 2003), the analog terrestrial television viewers are a tiny minority: because they

are not registered anywhere, there are no reliable figures available to distinguish between non-viewers and antenna viewers⁴. This finding confronted the Flemish broadcaster and PSB with questions as to their profiles, their motivations for watching analog terrestrial television, their attitudes towards television in general and possible alternatives after the analog switch-off, etc. This information may after all be crucial to understand the social acceptance of the analog switch-off, and to developing information, action and awareness campaigns for this small, but very specific target group.

In this research, three main research questions were dealt with:

1. Who are the analog terrestrial television viewers?
2. Which knowledge and questions do they have about the analog switch-off?
3. What are their television-viewing expectations for after the analog switch-off?

Methodology

Recruitment and approach

The Flemish government only had some rough estimates of the number of households watching analog terrestrial television in Flanders: about 60,000 families (about 2.5% of Flemish households) are assumed to be exclusively analog terrestrial television viewers, and between 80,000 and 180,000 households are assumed to combine multiple distribution platforms with ‘the antenna’ as the platform that allows television watching in a second location at home, in a holiday home, or in a second residence (students, foreign workers).

For the research presented, the combination of different recruitment techniques was necessary to attract as large a sample of analog antenna viewers as possible: respondents were recruited via an announcement in two Flemish newspapers (*De Standaard* and *Gazet van Antwerpen*⁵), via an interview about the switch-off issue on a national radio program, via snowball sampling among family and friends starting from the identified analog terrestrial viewers, etc. Each of the detected viewers willing to participate in the research was invited to fill in their profile on a website which was created especially for this research (www.antennekijkers.be). Individuals without an Internet connection were contacted by telephone or face-to-face. The final selection for the research sample was based on some preliminary ‘double-check’ questions on their television behavior and access. In this non-probabilistic way, a sample size population of

521 respondents was reached, making it possible to set up a mixed quantitative-qualitative research approach, within which we still have to be cautious with generalizations.

Integration of quantitative and qualitative research

First of all, a quantitative survey was set up to explore the respondents' attitudes towards television in general and terrestrial television in particular, to examine their knowledge of the switch-off and to gain profound insights into how they look at the future of television. The latter was investigated by asking the respondents to rate the possible alternatives for watching television after the analog switch-off. In total, 521 respondents participated in the survey.

Taking into consideration the limitations of quantitative research for in-depth investigation, this survey was combined with qualitative research (focus group interviews), to gain more insight into some of the (quantitatively) revealed attitudes and findings. Based on the latter and the distinction between different segments of antenna viewers, 25 respondents were selected for additional focus group interviews.

Results

Different segments of antenna viewers

The 521 respondents participating in the quantitative survey are certainly not all the same. Some of them use terrestrial broadcasts as the sole signal source in their main residence, while others limit the use of the antenna signal to watching television in a caravan or in a holiday home. Based on this distinction between 'primary' and 'secondary' antenna viewers and the dimension of 'analog vs. digital', four distinct segments of antenna viewers can be detected in the sample.

- Group 1: *The primary antenna viewer* (respondents who have no cable or satellite at home, which obliges them to watch television by means of antenna. They have no other options available at home);
- Group 2: *The secondary antenna viewer at home* (these respondents do possess cable or satellite at home, but they also watch television via the antenna, for example, in the bedroom, in the kitchen, etc.);
- Group 3: *The secondary antenna viewer in a holiday home/second residence* (respondents watching analog terrestrial television exclusively outside of their home);
- Group 4: *The digital antenna viewer*.

Table 1. Segmentation of antenna viewers.

Group		Number	N	Percentage
Primary antenna viewer	1	370	71.0	
Secondary antenna viewer at home	2	36	6.9	
Secondary antenna viewer in a holiday home/second residence	3	28	5.4	
Digital antenna viewer	4	87	16.7	
<i>Total</i>		521	100	

Given the specific nature of the fourth group of antenna viewers (they watch television via digital terrestrial signals), we will not further elaborate on them in the remainder of this article. The other segments are the most important groups within the scope of the study (on the analog switch-off). As a result, the following results are applicable to a sample of 434 respondents.

Television-viewing behavior

Obviously, the primary antenna viewers in our sample only watch television by means of antenna, on average between about one and two hours a day. The secondary antenna viewers spend more of their time in front of the television set. But these groups (2 and 3) reserve their analog terrestrial television viewing to shorter periods, while cable or satellite television is preferred for longer periods.

The channel preferences of the participating primary antenna viewer are quite obvious, since they can only receive two television channels, transmitted by the Flemish public broadcaster (VRT). They only watch other channels when they are staying with friends or family.

When it comes to their preferences with regard to television programs, antenna viewers clearly prefer news and current affairs, followed by human interest programs and serials. Soaps and reality television are not very popular. The participating primary antenna viewers tend to watch movies (transmitted by the broadcasters) much more than secondary antenna viewers. The qualitative focus group interviews, however, revealed that the primary antenna viewers 'compensate' for this by watching movies on DVD. The results show that the 'real' antenna viewers (primary antenna viewers) seem to be relatively moderate consumers of TV. This may explain why they stick to their analog signals. More choice or other digital TV services are not very appealing for them.

Attitudes towards television

In order to examine this in more depth, respondents were presented with a list of statements to map out their attitudes towards television. Table 2 shows the mean scores on each statement, measured on a five-point scale, divided by group.

For some statements these mean scores reveal a clear heterogeneity in 'television attitudes' between the 'antenna segments'. More specifically, statements 2, 3, 6, 7, 10 and 14 show that primary antenna viewers in this sample are (in comparison with the other groups) more critical viewers: they complain about the lack of interesting programs; they do not perceive television as a necessity in their social lives, etc. These respondents are not waiting for the proposed benefits of digital television (more choice, more channels, etc.). On the contrary, they all agree that the government must (continue to) provide a basic range of television free

Table 2. *Mean scores on attitude statements towards television.*

		Group 1	Group 2	Group 3
1	Watching television is expensive for what it has to offer	3.37 (+)	3.11	3.29 (+)
2	I find it important to be able to receive foreign channels	2.90	3.94 (+)	3.32 (+)
3	I find that there are not many interesting television programs	3.70 (+)	3.14	3.14
4	Television has a bad influence	2.76 (-)	2.53 (-)	2.54 (-)
5	The government must provide a free basic range of television	4.15 (++)	4.31 (++)	4.18 (++)
6	Watching television is a waste of time	2.78 (-)	2.28 (-)	2.29 (-)
7	Television has a bad influence on social behavior	3.07	2.89	2.89
8	Watching too much television is not good for children	3.62 (+)	3.58 (+)	3.39 (+)
9	Digital television, regardless of the provider, seems interesting	2.86	3.47 (+)	2.93
10	Television keeps me informed of current affairs	3.57 (+)	4.08 (++)	3.93 (+)
11	Watching television is relaxing	3.88 (+)	3.94 (+)	4.00 (+)
12	Television is a manipulative medium	3.76 (+)	3.78 (+)	3.57 (+)
13	I discuss what is on television with others	3.09	3.25 (+)	3.39 (+)
14	Television is necessary to be part of social life	2.34 (-)	2.56 (-)	2.79 (-)
15	I do not like watching television	2.35 (-)	1.97 (--)	2.14 (-)
1-2 (--)	2-2.8 (-)	2.8-3.2 Neutral	3.2-4 (+) I agree	4-5 (++) I fully agree
I do not agree at all	I do not agree			

of charge. And, in spite of their critical attitude, they evaluate television as quite a relaxing information medium (especially group 2). The reservations of all respondents towards television are quite clear as they seem to be somewhat anxious about the manipulative nature of television and its negative influence on children. This may also explain why the antenna viewers do not seem to be early adopters of digital television at all. Psychological variables may not be overlooked when it comes to (digital) television adoption (Atkin et al., 2003: 169).

Summarizing, we may state that the antenna viewers in our sample are only moderately enthusiastic about television. They mostly value it as a news medium while at the same time being quite reserved, for different reasons. The most critical group is the group of primary antenna viewers. For the first and the third group of 'antenna viewers', a resource allocation consideration also seems to determine their decision to watch television via the antenna: watching cable television is seen as too expensive, especially with regard to what it has to offer.

Watching television via the antenna

In order to evaluate their current experience with 'antenna viewing', respondents were presented a scale (ranging from 0 to 10) to indicate their satisfaction with program range and reception via antenna. In this evaluation, it is striking that the participating antenna viewers do not seem to be 'high demanding viewers'. Despite reception being more susceptible to weather conditions and a more limited range of programs, they do not have outspoken complaints. In general, we see that all the antenna viewers are quite satisfied with the quality of reception (mean scores varying from 6.25 to 6.58). The primary antenna viewer (mean score on this statement: 5.67) shows a higher degree of satisfaction than the other two groups (mean scores: 4.42 and 4.61) when it comes to the program range. Again, the results may support our assumption that digital television, although providing more choice and better quality, may for some part of the population not be the 'next big thing' as it was assumed it would be (Weber and Evans, 2002: 449–453).

When asked to list the (dis)advantages of watching analog terrestrial television, the advantage most often mentioned is the 'conscious viewing pattern'. The primary antenna viewers in particular stress that they want to protect themselves and their children from the oversupply of television channels and television programs, and the waste of time which could result. This also contrasts with the proposed benefits of digital television.

The disadvantage most often mentioned is temporary reception problems. For example, snow and fog can easily disturb reception. Temporary losses of quality, however, are not sufficient for the antenna viewers

to consider an alternative manner of watching television. A second disadvantage is the limited choice of programs available, but – again – most respondents put this in perspective.

Awareness of the analog switch-off

The knowledge of the respondents about the analog switch-off seems to be very limited. A lot of them know that they have to search for an alternative after the switch-off; however, they believe they will have to pay more to watch television in the future. Some of the antenna viewers in our sample take the view that the analog switch-off has something to do with technological progress (better image quality, digital reception), but the majority still has questions about ‘what’ and ‘how’ and ‘why’. As a consequence of this uncertainty some false assumptions exist and the participating antenna viewers believe they are being forced into a technological revolution they actually do not want. These findings are similar to the attitudes discovered in research in other countries, e.g. UK (Klein et al., 2004: 13). The respondents complain about a lack of information, although the government had – at the time of the investigation – not yet officially started to communicate the reasons for this transition and the public broadcast service considers digital terrestrial transmission still to be in a ‘preliminary’ stage.

Attitudes towards the analog switch-off

Uncertainty and the lack of information about what will happen can lead to a rather negative attitude towards the migration process. To examine this attitude in greater depth, respondents were confronted with seven statements about this topic.

The opinion of the three groups of antenna viewers is clear-cut when it comes to the government’s role in this evolution: they fully agree that the government should provide a basic range of programs free of charge. They also feel somewhat unfairly treated, since they will no longer be able to watch analog terrestrial television without adding a decoder to the equipment they currently use. The secondary antenna viewers in a holiday home/second residence are not that harsh in their judgment. The average scores indicate that all antenna viewers are financially able to buy an alternative (except the more neutral attitude of the students in group 3), but at the same time, they are not really willing to do so. Finally, the antenna viewers agree with the fact that the analog switch-off is a problem for them, because they still want to keep on watching television. They count on the government and the public service broadcaster for more information and guidance. Responses on these state-

Table 3. *Attitudes towards the analog switch-off.*

		Group 1	Group 2	Group 3
1	The government must provide – even after the analog switch-off – a free basic range of programs	4.61 (++)	4.47 (++)	4.37 (++)
2	It is unfair that I will no longer be able to watch television by means of the analog antenna	4.10 (++)	4.14 (++)	3.74 (+)
3	All the other alternatives are impossible for me for financial reasons	2.34 (-)	2.31 (-)	3.04
4	I do not wish to invest any money in the other alternatives	3.76 (+)	3.17	3.44 (+)
5	The analog switch-off is no problem for me, I will just switch to another way of watching television	2.48 (-)	2.75 (-)	2.41 (-)
6	If I cannot watch anymore via the antenna, I will just stop watching television	2.72 (-)	2.36 (-)	2.85
7	Analog terrestrial television is outdated	2.17 (-)	2.31 (-)	2.19 (-)
1–2 (--)	2–2.8 (-)	2.8–3.2 Neutral	3.2–4 I agree	4–5 (++) I fully agree
I do not agree at all	I do not agree			

ments show us that the participating antenna viewers particularly want to continue watching television as they do it right now: they are not ‘triggered’ by (the benefits of) a digitized television landscape. This finding confirms other research that (awareness of the) perceived benefits may have a decisive influence on digital television adoption (Chang-Olmsted and Chang, 2006: 793).

Which kind of information do they need?

The majority of the antenna viewers in our sample wishes to receive more information about the alternatives, their possibilities and the cost implications. They also wonder whether they will be able to receive the digital signal via the antenna and whether the reception quality will be good enough.

In general, the antenna viewer needs to know more about ‘why’, ‘how’ and ‘when’. As mentioned earlier, this uncertainty is causing a negative attitude towards the analog switch-off. However, the respondents in the qualitative research are of the opinion that financial incentives are not necessary, except for socially weaker groups in society.

What are the expectations for after the analog switch-off?

Knowledge about the possible alternatives. The research immediately revealed a lack of knowledge about the advantages or disadvantages of the possible ‘post-switch’ alternatives. Due to the lack of information, the antenna viewers are not adequately informed about typical aspects of the different alternatives especially when it comes to buying equipment, installation procedures, the terms and formulas of subscription, and the program and channel range. Keeping in mind their relative lack of interest in digital television, it is not surprising that the respondents are not well informed about the alternatives.

Evaluating different scenarios. The last part of our study presented the respondents with a full explanation of the possible alternatives for watching television after the analog switch-off, and the implications in terms of equipment, installation procedures, types of subscription, and program and channel range. Afterwards, the respondents were asked to rate each of the alternatives with a score between 0 and 10, indicating their level of interest.

Table 4. *Evaluation of possible scenarios – after the analog switch-off.*

	Group 1	Group 2	Group 3
Scenario 1: Digital terrestrial television	8.22 (++)	6.67 (+)	7.44 (+)
Scenario 2: Analog cable	1.92 (--)	1.86 (--)	3.07 (-)
Scenario 3: Digital cable	1.33 (--)	1.31 (--)	2.41 (-)
Scenario 4: Digital satellite	2.37 (-)	3.94 (-)	4.15 (-)
Scenario 5: IP-TV	2.03 (-)	1.89 (--)	1.11 (--)
Scenario 6: I stop watching television	3.14 (-)	2.94 (-)	3.52 (-)
0–2 (--)	2–4.5 (-)	4.5–5.5 (+)	5.5–8 (++)
No interest at all	Not interested	Neutral	Interested
			Very interested

The results seem very explicit: the participating antenna viewers all prefer digital terrestrial television, the digital version of their current transmission platform. The other alternatives (analog cable, digital cable, digital satellite, IP-TV, and no television) are perceived as less interesting. Some small differences, however, can be noticed: in general digital satellite gets the highest score over the other alternatives and the secondary antenna viewers in a holiday home/second residence have a slightly higher figure than the other groups when it comes to certain scenarios. The rating of the alternative scenarios clearly shows that digital television does not meet a need of the ‘antenna viewers’. If they are forced to go digital, their only choice is digital terrestrial television which is –

for the moment in Flanders – the type of digital television that mostly correlates with traditional television (no multitude of channels, no interactive services, etc.).

Conclusion and discussion

With the aim to smooth the transition from analog to digital terrestrial television, a multi-method study emphasizing the distinctive features of analog antenna viewers was set up in cooperation with the Flemish Minister of Media. The results served as input for the development of a large-scale communication campaign in preparation for the analog switch-off. Based on the research it should be clear that information may be crucial: the concept of the analog switch-off needs to be explained to the viewer together with information about the reasons and motivations for this evolution. The communication campaign may also emphasize possible alternatives after the analog switch-off (including both financial and technical aspects), with a focus on digital terrestrial television as an alternative.

The research results also reveal the following conclusions: First, a substantial majority of the present primary antenna viewers in the research are technically and financially able to subscribe to cable television, but have preferred not to do so. Second, the analog antenna viewers wish to continue watching television at their present location and expect to have the same free program choice after the analog switch-off. Third, some of the secondary viewers do not (yet) identify themselves with the community that will be affected by the analog switch-off, so they might be taken by surprise when the transition takes place. As they still have an alternative for watching television, the principle of universal access does not seem to be endangered for them; however, the information campaign should also be addressed to them. Finally, less affluent and less technically skilled viewers may expect financial and, in particular, practical support as part of the switchover process. From this point of view we should not neglect the households that watch television via the antenna owing to a lack of financial resources. Moreover, such households will probably hesitate to step forward in an open survey to ‘express’ themselves as antenna viewers.

In addition to the conclusions regarding the analog switch-off, the results open up the discussion about the perceived interest in digital television as such. Despite the proposed benefits (more quality, more choice, etc.) it must be clear that a substantial number of television viewers may not be awaiting digital television with eager anticipation. The study demonstrates that the users have their own agenda, i.e. they will not adopt or accept every innovative technology or strategy which is pushed

forward from a top-down perspective. Extensive user research seems to have continuing importance in the transition process to a new digitized television landscape.

Notes

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1. For the moment, no programs from commercial broadcasters are being offered to the Flemish citizens via terrestrial signal.
2. Media, and consequently also the switch-off, come under Flemish Community authority. For more detailed information about the Belgian and Flemish media landscape, see Coppens (2003: 148–152).
3. Ticker tapes are a kind of banner that can be sent out via the analog television signal. This strategy made it possible to convey the government's message only to that group of viewers that was watching terrestrial broadcasts.
4. About 99 % of Flemish households are considered to be 'television households'. As cable subscription accounts for nearly 96 % of all households, the difference between 'non-viewers' and 'antenna viewers' becomes very difficult to calculate.
5. *De Standaard* is regarded as a quality newspaper, while *Gazet van Antwerpen* is regarded as more popular.

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