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ARTICLE

# Additional communication channels in Dutch television genres

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## Abstract

This study examined the way in which television genres in the Netherlands make use of additional communication channels in terms of interactivity and genre modification and whether the availability of additional communication channels in genres corresponds to audience age. Expert interviews were held with representatives of Dutch broadcasting organizations and a secondary analysis of Audience Research data was conducted. It was found that compared to other genres, short message service (SMS) is added most frequently to reality programmes, email and websites to the information genre, teletext to sports programmes and merchandizing to children's programmes. In addition, it was found that only SMS is added more often to programmes attracting a younger audience. The extent to which the additional communication channels represented real innovation varied from maintenance to the elaboration and modification of genres.

## Key words

additional communication channels • audience research data • cross-media production of television • expert interviews • interactivity • ITV • media innovations • television genres

In recent years traditional media organizations have been undergoing innovative transformations as they engage in the development of internet-based activities. One of the reasons for this situation is the potential the internet holds for traditional mass media generally (e.g. Boczkowski, 1999; Dennis, 1995; Mings, 1997). Online newspapers have been at the forefront of this development and the number of these newspapers has expanded enormously (e.g. Jankowski and Van Selm, 2000). During the past decade also, other media organizations have begun to make use of internet technology to facilitate their professional activities and to reach their target audiences. Examples include broadcast media such as television news and radio stations and print media such as popular women's magazines and opinion periodicals.

The extent to which public broadcasting organizations offer interactive services and initiate experiments with information and communication technology (ICT) is seen increasingly as a quality characteristic of the performance of broadcasting organizations (d'Haenens, 2001; McKinsey and Company, 2003). Parallel to this development, ICT professionals are querying continuously new opportunities for applying their innovations in a broad range of sectors, including the traditional media sector. In a study on interactive television (Van Dijk and de Vos, 2001) the perspectives of both experts from the television production industry and those of experts from internet production are taken into account.

The present study describes the way in which television genres in the Netherlands make use of additional communication channels, such as Short Message Service (SMS), email and websites. In order to furnish some background with respect to the changing media landscape, a number of empirical studies focusing on the internet initiatives of various traditional media will be reviewed.

## TRADITIONAL MEDIA INTERNET INITIATIVES

The studies described below dealing with the value added to traditional newspapers and television news, web radio and interactive television (ITV) provide examples of how the traditional media engage in initiatives of incorporating internet technology into their own media practices. The characteristics of online news media that potentially could add value to the function that traditional news media have in society include hyperlinks, discussion groups, feedback, archives, multimedia and news updates (Jankowski and Van Selm, 2000). It was examined whether these features could be identified in a small sample of online newspapers in the Netherlands and the United States, and seven television news sites located in Canada, the UK and the USA. It was concluded that online newspapers, compared with television news sites, make more intensive use of discussion forums, possibilities for feedback through provision of editorial staff email addresses and archiving facilities. The television news sites make more use of audio and

video features and hyperlinks on their websites. Jankowski and Van Selm suggest that the traditional function of the two types of news media seems to carry over into the online version. Most of the differences found in these media, they speculate, are related to policies and practices that the respective traditional media organizations take with them to an online environment (Jankowski and Van Selm, 2000: 99).

Lind and Medoff (1999) identified a range of added values that the internet provides for traditional radio stations. These include the possibility of reaching listeners outside the broadcasting region, hosting live cybercasts, archiving previously broadcast programmes or items, supplementing programmes with text and images and multi-tasking (using the computer while listening to the radio via the internet). Based on a content analysis of commercial radio sites in the USA, Lind and Medoff report that nearly three-quarters of the sites in their sample contained promotional materials such as programme guides, staff profiles and other forms of station information. Considerably fewer stations provide information related to news stories, sports and the weather. For the most part, contact with stations was arranged through email links. Other forms of feedback from listeners, such as listener surveys, registration forms, chat or discussion forums, were organized by a limited number of these commercial radio stations.

A small-scale study (Van Selm et al., 2004) examined forms of web radio in the Netherlands – specifically, how internet technology was used to facilitate interaction between radio hosts and programme listeners. The study included interviews with radio professionals and examined the behaviour of focus groups plus a web questionnaire among listeners of a particular series of web radio programmes. The study showed that, although interactive tools were made available on the website, the degree of audience involvement remained limited. Live web radio programmes continue to resemble traditional radio shows inasmuch as radio programme hosts prefer to remain the 'stars' and listeners prefer to be entertained and treated as members of a conventional radio audience.

Van Dijk and de Vos (2001) developed a theoretical model of ITV which was compared to the results of a questionnaire investigating corporate expert images of ITV. Two groups of European and American experts with divergent backgrounds were included in the sample: internet producers of ITV had a background in internet technology, whereas television producers of ITV developed their expertise in the television production sector. It was found that internet producers define ITV differently compared to television producers, the former emphasizing typical internet features such as communication among internet users and producing information, and the latter emphasizing interactivities such as choosing programmes or channels typically used when operating a television set. With respect to the image of future television, the findings point in the same direction. All the experts expected television and the internet to converge, but television producers

envisioned set-top box devices on top of, or built inside, television sets, whereas internet producers thought of television as being received increasingly on a personal computer (PC) or other home connection via screens (Van Dijk and de Vos, 2001).

In particular, Van Dijk and de Vos' study on ITV comprises similarities with our focus on how producers of television programmes implement additional communication channels. The following section will elaborate on their notion of interactivity, as this notion seems valuable to the present examination of the ways in which additional communication channels are used by various television genres.

## INTERACTIVITY

In the literature on computer-mediated communication (CMC), various conceptualizations of interactivity have been developed (e.g. McMillan, 2002). As previously stated, Van Dijk and de Vos (2001) developed a conceptualization of interactivity which was applied in a study on ITV. The model, which is based on Van Dijk's earlier work (1999), employs four levels of interactivity. The lowest level of interactivity is realized by the space dimension and enables two-sided or multilateral communication. The next level of interactivity is realized by the time dimension and adds synchronicity to the former level. In turn, the dimension of behaviour adds control on behalf of the participants whereas, finally, the mental dimension adds the aspect of mutual understanding to the interaction. Thus, the levels are not independent but cumulate to the latter and highest level of interactivity: 'For example, there is no synchronicity and control without two-way communication and there are different levels of control and understanding in their own right' (Van Dijk and de Vos, 2001: 449).

Van Dijk and de Vos see communication channels added to television as one of the means by which ITV is realized. They indicate that the level of interactivity realized by feedback channels added to television may vary from two-sided or multilateral communication (level 1) to control (level 3). The present study will focus exclusively on the additional communication channels implemented by television programmes. The levels of interactivity as proposed by Van Dijk and de Vos are used as the guiding principles while examining the value of these channels.

## DEFINING COMMUNICATION CHANNELS ADDED TO TELEVISION

This study distinguishes between the following channels that are added to television programmes: telephone, SMS, website, email, teletext, ITV and merchandizing. When compared with watching television, what these channels have in common is that their use requires a different type of activity. Whereas watching television leaves the user with the option to stay tuned, switch channel or switch off, another more active and involved attitude is witnessed while

operating a set-top box device, consulting a website or composing and sending an SMS. The following will devote some space to descriptions of the use of both television and additional communication channels within the Dutch context.

## Television

In the Netherlands, almost all households own at least one television set (Van de Wal et al., 2004). In 2005, the average time spent watching television by the Dutch population six years and older was more than three hours a day (197 minutes: Stichting KijkOnderzoek, 2006). Time spent watching television is correlated with age. Until the age of 20, about two hours per day were spent watching television; the amount of time increased subsequently to four hours per day for people 65 years and older (Stichting KijkOnderzoek, 2006). Television was watched mostly in the evening of (66 percent in the timeslot between 6pm and midnight). In multiple-person households television was watched together with others in 56 percent of all viewing time; with respect to the 6pm – midnight timeslot, this was 64 percent (Stichting KijkOnderzoek, 2004).

## Websites and email

In 2006, 80 percent of the households in the Netherlands had an internet connection (CBS, 2006). The most popular usage was email correspondence (93% of Dutch households used their internet connection for this purpose) and surfing on the web (89%). Other activities were downloading software (27%) or games, pictures and music (50%), and online shopping (40%). People made use of the internet at home, school and work. Internet use was related to age. People who used the internet every day were younger (average age 36.9 years) compared to those who used the internet once a month or less (average age 46.2 years) (CBS, 2006).

## Cellphone and SMS

In 2006, 91 percent of the Dutch population had cellphone access (TNS Opinion & Social, 2006). Cellphone ownership was correlated with age: 94 percent among people between 18 and 50 years, and 47 percent of people over 65 (Huysmans et al., 2004). According to Peters et al. (2003), about 75 percent are prepay cellphone users and most of the money spent by cellphone users is on sending and receiving text messages. Aoki and Downes (2003) report that in Europe and Asia, cellphones are much more prevalent than in the USA and that young people have been the driving force in adopting the new communication device. With respect to the usage context, Aoki and Downes (2003) report that cellphones have evolved from their original purpose as business tools largely into personal communication devices, as the majority of cellphone users in the USA reported in 2001 using phones primarily for social purposes and carrying their phones with them all the time (Aoki and Downes, 2003).

The authors concluded from studies on the (social) effects of cellphone use (mainly conducted in European and Asian countries) that both intended and unintended uses of the technology can be identified. Cellphones are tools that support the formation of particular subcultures among youths in many different countries. Furthermore, the use of cellphones seems to enhance the blurring of boundaries between work and private life as well as the boundaries between public and private space; it can make the user susceptible to social control by friends, family and business (Aoki and Downes, 2003).

### SMS

SMS is a system for sending and receiving text messages to and from cellphones. The text can comprise words or numbers or an alphanumeric combination. Using SMS is correlated with age. In the Netherlands young people (aged 18–24) send the most messages (on average 60 messages per month), whereas people over 55 send the least messages (5 or less per month) (KPMG, 2007).

Peters et al. (2003) conducted a survey among 755 Dutch students of a university and a number of high schools (including vocational education) aged 12 to 25. The study showed that students aged 12–17 send more texts a week than students aged 18–25, but found no difference between female and male respondents in the amount of texts sent per week. With respect to educational differences, university students sent fewer texts a week than high school and vocational education students. Practical motives (referring to ease of use) were dominant for using SMS, followed by peer influence and entertainment. Benefit motives (referring to efficiency in time) were less salient.

### Teletext

Teletext offers a 24/7 information service on the networks of public broadcasting organizations (in the Netherlands, NOS-Teletekst). The commercial broadcasters own separate teletext information services. The service is consulted mostly for news, sport and weather information and is supplied with information from various sources, such as airports and stocks. In the Netherlands 93 percent of households' main television set is furnished with teletext (SPOT, 2006). Teletext is accessible from individual television sets and the internet. For the purposes of this article data were analyzed from Stichting KijkOnderzoek (2006) on the use of Dutch Teletekst. Dutch Teletekst is consulted on a daily basis by 23 percent of the population, who spend on average seven minutes using the service. Compared to other age groups, people aged 50–64 spend more time consulting Teletekst.

### ITV through a set-top box

A set-top box is a technical device developed for receiving digital television which can be attached to a cable or telephone modem. In combination with a remote control, it provides a tool in order to send a return signal from the

individual viewer (consumer) to the television station (service provider) (Van Vliet, 2002). The central characteristic of ITV is the two-way principle that enables viewers to select programmes and donate input to the programme (which potentially influences the programme's content). Van Dijk et al. (2003) report that in 2002, no more than 1.2 percent of the Dutch population was able to receive digital television with some form of interactive services. The profile of these ITV users does not differ from an average television viewer with respect to gender, age, family size and type. However, compared with general television viewers, ITV users are less educated, watch more television and make more use of the internet (Van Dijk et al., 2003). In 2002, Dutch public broadcasting organizations broadcasted eight interactive television programmes which were watched by viewers both with and without an interactive return channel. To date, ITV is still at the experimental stage.

## Merchandising

Merchandising represents a particular additional channel as it does not constitute an independent medium, but a product or an activity that is always attached to (in this case) the television programme. This study defines merchandising as selling physical products; the sale of services (such as SMS) or events (such as concerts) is excluded. Roughly, three categories of merchandising products can be distinguished. First, merchandising products can be exact copies of the television programme (sometimes enriched with additional materials), such as videotapes and Digital Video Discs (DVDs). Second, merchandising products can represent extensions of a television programme in that they relate to its content. Examples of the latter are newsletters about a programme, or replicas of props and furniture used in a game show. Third, merchandising products can be image products, such as T-shirts decorated with a programme's logo, or pictures of actors featuring in a television programme. In a Dutch study on the viewing behaviours of children and their parents (Lohmann and Peeters, 2001), it was found that 75 percent of the parents with children between 3 and 12 years who were interviewed, had purchased products related to television programmes within the last two years.

The sale of merchandising products is incorporated into the present study as these products may enhance viewers' involvement with television programmes in a similar way as an additional form of communication, such as SMS. Parallels can be drawn with the realization of audience involvement in the internationally-known television programme *Idols*. This programme is an audition show for young singing talent in which, after a gradual elimination process, one person is to become a country's new 'idol'. Whereas a panel of experts could have taken care of the entire evaluation of the singers, the show's impact has been much larger due to live audience involvement (voting for favourite candidates) organized through SMS and telephone channels. As with audience involvement created by SMS and telephone, selling image

products such as T-shirts portraying the *Idols* candidates may have been an instrument in increasing audience involvement.

## TELEVISION GENRES

In research on television, television content is organized often in terms of genres. Turner (2001) discusses the way in which genre has been used in relation to television from the perspectives of audiences, academic researchers and critics and the television industry. For the television viewer, genre plays an important role in the way that programmes are selected and understood. For researchers into television, genre is a means of breaking down its extensiveness into manageable segments. In order to understand what constitutes television, they have approached the medium through the analysis of specific genres, rather than the whole of television. For producers of television, genre is a decisive factor in the production, programming and transmission of television. Turner (2001) emphasizes that genres and programming formats are becoming increasingly hybridized and subjected to mutations over time. Preston and Claire (1994) describe genre as a widely used and valuable level of analysis, as genre preferences remain stable whereas, at the same time, the popularity of television programmes or particular episodes may fluctuate; genres constitute meaningful categories to viewers, as different groups of viewers are attracted by various genres and watching various genres seems to be related to separate psychological processes (e.g. the purpose of watching); and genre (name) includes information on content and form. The categorization employed in this study is based on the standard genre categories of Audience Research in the Netherlands. This categorization takes into account both the content and form of television programmes and is developed based on years of audience research experience. The categorization employs main categories (e.g. information and education, fiction), subcategories (news, Dutch drama) and codes (weather reports, soap opera).

Yates and Orlikowski (1992) used the concept of genre as a basis for studying organizational communication and defined genres as 'typified communication actions characterized by similar substance and form and taken in response to recurrent situations' (1992: 299). 'Substance' refers to socially-recognized purposes, themes and topics expressed in the communication, and 'form' refers to the observable aspects of communication, such as medium, structural features (e.g. format) and linguistic features (e.g. level of formality) (Orlikowski and Yates, 1994). Although situated in the arena of organizational communication, Yates and Orlikowski's work offers insight into the way in which genre may evolve as a result of ideology and situational factors, including new communication media. Yates and Orlikowski (1992) discuss three modes of enacting genres which seem useful in order to understand evolution (production and reproduction) in genres: maintenance, elaboration and modification. When genres are enacted by using the rules of substance and form without alteration, there is maintenance of

existing genres. When genre rules are adapted to reflect new conditions such as a new medium without substantially departing from those genre rules, the existing genre is elaborated. Genres are being modified when existing genre rules and formulas are replaced by new ones.

Yates and Orlikowski's ideas on genre evolution have been applied to an examination of genres of communication on the world wide web (Crowston and Williams, 2000) and the attributes of cybergenres (Shepherd and Watters, 1999). With respect to the present study, the implementation of interactive additional communication channels to television programmes can be considered to be a situational factor that influences genre substance and form. Generally, the enactment of genres (maintenance, elaboration or modification) occurs in communication acts by those agents involved. Within the context of communication channels added to television programmes, these agents are the broadcasters who increasingly implement additional communication channels, and the viewers who possess the additional communication channel equipment and are willing to use it in order to interact with the programme.

## RESEARCH QUESTIONS AND HYPOTHESIS

Based on the preceding sections, the following research questions will be addressed:

> RQ1: To what extent do television genres make use of additional communication channels?
>
> RQ2: In what way are these channels incorporated into programmes in terms of interactivity and genre form and substance?
>
> RQ3: What viewer characteristics correspond to the use of additional communication channels as forms of feedback to television programmes?

Based on the studies described previously (e.g. Huysmans et al., 2004), it can be concluded that older people make less use of email, websites, SMS and more use of teletext than younger people. The telephone (whether regular or mobile) can be considered as equipment more generally available and used among all age groups. Therefore, the following hypothesis can be formulated:

> H1: Additional communication channels particularly popular among young people (SMS, email and websites) are employed in programmes directed at the young, whereas programmes with a more general or older audience will choose to employ no or more traditional additional communication channels, such as teletext or the telephone.

## METHOD

### Participants

The study was conducted in three steps. First, based on official Dutch figures on Audience Research (Stichting KijkOnderzoek, 2004), an overview was

compiled of all programmes broadcast more than once during the period September 2001–September 2002. This list consisted of 2793 titles. For each broadcasting organization (public and commercial), a separate list of programmes was composed. Second, expert interviews were conducted. For each broadcasting organization one or two experts with respect to programme innovations were selected and approached with a request to participate in a semi-structured interview. We used our own networks and those of two participants in order to approach the experts. The experts met the criteria of having an overview of all programmes broadcast by the particular organization, having knowledge of programme features and formulae by which additional communication channels were incorporated, or being able to collect facts on these matters at short notice. The experts held jobs such as multimedia developers and programme coordinators. They were asked to indicate for each programme (broadcast by the organization that they represented) from the programme list, whether or not one or more additional communication channels were available and, if so, in what way. Details such as email and website addresses and teletext page numbers were registered. In the event that the participants could not respond to questions regarding a specific channel, the name and contact information of another participant was written down. In the final step, secondary analyses were conduced. Survey data from Audience Research 2004 (www.kijkonderzoek.nl) were used in order to analyze what viewer characteristics corresponded to interacting with television programmes by means of additional communication channels. Figures from Audience Research 2001–2 were used in order to assess the average age of programme viewers both with and without additional communication channels.

## RESULTS

### Additional communication channels per genre

Table 1 shows, for various genres, what percentages of programmes make use of the various additional communication channels.

SMS is most common in the genre reality at almost 30 percent whereas in 26 percent of the genre reality soap, some kind of SMS service is available. News, current affairs and weather reports take second place at almost 28 percent, whereas in almost 18 percent of quizzes and game shows, SMS is present. Email appears to be a generally accepted additional channel: in programmes from all genres, viewers are able or encouraged to make use of an email possibility (ranging from almost 7 percent of childrens' amusement programmes to 67 percent of programmes in the satire/cabaret genre). The same is true for websites: programmes of all genres employ this possibility. Teletext is by far the most used in sports programmes, whereas merchandising is found most frequently in children's programmes. Interactive television realized by means of a set-top box device was only encountered in eight

• Table 1 Percentage of television programmes of various genres broadcast in 2001–2 in the Netherlands featuring additional communication channels

| | Additional communication channel(s) | SMS | Telephone | Email | Website | Teletext | Merchandising | ITV | *N* |
|---|---|---|---|---|---|---|---|---|---|
| Amusement: quiz/game show | 56.5 | 17.6 | 13.0 | 16.2 | 43.2 | 2.7 | 12.2 | 2.7 | 74 |
| Amusement: satire/cabaret | 66.7 | 0.0 | 6.7 | 66.7 | 46.7 | 0.0 | 26.7 | 0.0 | 15 |
| Amusement: other | 63.2 | 5.6 | 9.2 | 23.3 | 51.1 | 1.1 | 7.8 | 0.0 | 90 |
| Drama | 20.2 | 0.3 | 4.1 | 11.9 | 10.7 | 0.8 | 1.6 | 0.0 | 737 |
| News/current affairs/weather | 74.4 | 27.9 | 20.5 | 9.3 | 53.5 | 23.3 | 0.0 | 0.0 | 43 |
| Information: talk show | 76.1 | 5.6 | 23.6 | 36.1 | 59.2 | 9.7 | 5.6 | 1.4 | 72 |
| Information: nature/science | 46.8 | 0.0 | 5.2 | 36.4 | 20.8 | 14.3 | 11.7 | 3.9 | 77 |
| Information: service | 65.9 | 4.7 | 16.3 | 19.5 | 54.3 | 8.7 | 12.6 | 0.0 | 128 |
| Information: other | 61.5 | 2.5 | 15.1 | 36.4 | 32.6 | 23.0 | 12.1 | 0.4 | 239 |
| Human interest | 46.7 | 1.1 | 14.1 | 25.0 | 27.2 | 4.3 | 5.4 | 0.0 | 92 |
| Docusoap | 30.8 | 0.0 | 10.3 | 2.6 | 15.4 | 0.0 | 10.3 | 0.0 | 39 |
| Reality | 48.0 | 29.6 | 32.0 | 3.7 | 44.4 | 3.7 | 0.0 | 0.0 | 27 |
| Reality soap | 50.0 | 26.1 | 13.0 | 13.0 | 50.0 | 0.0 | 17.4 | 0.0 | 23 |
| Youth: amusement | 30.0 | 0.0 | 5.0 | 6.7 | 20.0 | 0.0 | 6.7 | 0.0 | 60 |
| Youth: drama | 27.0 | 0.0 | 9.8 | 7.8 | 12.9 | 0.7 | 3.6 | 0.0 | 449 |
| Youth: information | 86.1 | 0.0 | 32.5 | 47.5 | 25.6 | 2.5 | 37.9 | 0.0 | 203 |
| Art | 78.0 | 7.1 | 7.1 | 40.5 | 66.7 | 11.9 | 17.1 | 0.0 | 42 |
| Music | 57.9 | 0.0 | 7.5 | 23.4 | 42.1 | 3.7 | 5.6 | 0.9 | 107 |
| Religious | 71.8 | 2.6 | 59.0 | 56.4 | 51.3 | 17.9 | 15.4 | 0.0 | 39 |
| Sports | 66.4 | 13.8 | 2.6 | 0.0 | 15.8 | 46.1 | 0.0 | 0.0 | 152 |
| Other | 11.9 | 2.4 | 3.6 | 2.4 | 8.2 | 3.5 | 0.0 | 0.0 | 85 |
| All programmes | 44.2 | 3.2 | 11.4 | 19.0 | 24.8 | 7.3 | 7.8 | 0.3 | 2793 |

programmes. The genre 'science and nature' was represented most prominently in these few interactive television programmes.

### Interactivity realized by additional communication channels

With respect to the way in which these channels are incorporated into programmes, all four levels of interactivity (space, time, behaviour, mental) were found, as outlined by Van Dijk and de Vos (2001).

The simplest form of interactivity operates along the spacial dimension only, making possible two-sided or multilateral communication. In the present sample, this form of interactivity could be identified in websites added to television programmes offering additional information, or a programme's teletext page. In the former example, the distance between the television programme and its viewers is bridged by the website and the two-way communication is basically realized by the consultative channel itself: the website offering information which is to be navigated by the visitor. In the latter example, the interaction is realized merely by the users' initiative to consult the teletext page.

The next form of interactivity adds the time dimension and describes two-way or multilateral communication that shows synchronicity. In the present sample, the continuous news updates featuring on the website of a commercial station's main news programme are considered to be an example of an additional channel realizing this type of real-time interactivity. The difference regarding the lowest form of interactivity realized by the spatial dimension only is that here, the website user is supplied (potentially every minute) with the latest news on topics that they themselves have selected.

When the behavioural dimension is added, a new form of interactivity emerges in which control can be exercised on behalf of the interacting agents. This form of interactivity, in which viewers can engage in producing information (on their own initiative), is realized by means of a variety of additional communication channels. Examples are SMS opinion polls added to and commented upon in television news shows, websites added to consumer programmes, at which visitors are invited to post their consumer complaints (which are subsequently treated in the programme), and live telephone calls incorporated in programmes about real-life people who are investigated by the police. The control aspect of the interaction resides in the observation that the input of those who watch the programme is incorporated in some way into the programme.

The highest form of interactivity is reached when communicative acts are not only structured according to the formal aspects described above, but are interactive with respect to the content being communicated. For example, this form of interactivity resulting in understanding between partners is realized in the reality programme Big Brother: The Battle. The programme is of Dutch origin and in recent years has been implemented in a considerable

number of countries both in and outside Europe. The programme's formula resided in nine candidates who were confined to a house with no contact of any kind with the outside world, being filmed 24 hours a day and subject to a gradual elimination process. *Big Brother: The Battle* was the successor to the original programme in the Netherlands. The website added to this programme featured a range of live stream videos from different cameras in which the movements of candidates living in the house could be watched and an electronic community in which viewers could virtually meet and discuss the (candidates in the) programme. In addition, viewers were encouraged to telephone vote a candidate out of the house every week, resulting finally in one winner. The understanding aspect of the interactive communication resides in the idea that viewers construct images and evaluations of the programme's candidates by watching bits of video selected from the website and reading other viewers' opinions about them. These images, in turn, are shared, commented upon in the electronic (chat) forum on the website and may result in particular voting behaviour among viewers. In addition, the interventions undertaken by the programme producers, such as the tasks assigned to (some of the) candidates will (most likely) be influenced by what is discussed on the website.

## Maintenance, elaboration or modification of genre

The next question to be addressed is in what way additional communication channels, representing various forms of interactivity, are implemented in terms of genre form and substance. This study found the additional communication channels to be incorporated in television genres in three ways: genre maintenance, elaboration of genre and modification of genres.

The role of additional communication channels can be typified as maintenance in cases where the channels do not have a firm relationship to the objectives of the genre. An example is the SMS opinion poll added to a television news show, mentioned previously. Although interactive along the dimensions of space, time and behaviour, this poll does not really generate news, and thus does not add to the genre's function of informing citizens about newsworthy events and developments in society both nationally and worldwide.

In the second type of incorporation, the additional channel represents an elaboration of genres. Illustrative of this elaboration is a website added to a news programme offering continuous news updates. The primary objective of news programmes, i.e. offering the latest news, is strengthened by cybercasting news beyond the daily timeslots of the television news shows. Another example includes websites added to medical programmes. The informative value of medical programmes is enriched when a website is added, featuring chat sessions in which programme viewers and medical specialists participate in exchanging personal and medical information and advice. With respect to the amusement genre, it was found that additional communication channels

create elaborations of the programmes' objectives. Communication channels added to quizzes and game shows (such as SMS and websites) are used by viewers in order to join the game in real time or at a later point in time. Another example includes various communication channels added to the Dutch detective drama serial *Baantjer*, in which viewers vote between several options as to how the plot should develop.

In its most far-reaching form, the incorporation of the additional channel can be interpreted as a modification of the original genre into new ones. This is the case when additional communication channels become so prominent in a television programme that without it, the programme would be entirely different and with less value; for example, when the course of a television programme (with respect to length or content) is conditional upon audience input facilitated by the additional channel. An example from the present sample would be a programme in the informational genre called *Voor je kiezen*, in which a live referendum took place. Viewers were invited to vote between the referendum options by using a website channel or telephone. The programme's formula suggests that without viewers actually participating, it would not have been able to live up to what it was all about: a referendum. In other words, the programme was entirely dependent on the presence of, and audience participation in, the additional communication channels.

The communication channels added to *Big Brother* represent both maintenance and modification. Although here the television programme is not strictly dependent on the traffic generated by visitors to the *Big Brother* website, the candidates' permanent visibility on the website constituted the heart of the programme, and it is likely that the show's popularity would not have reached the proportions encountered now without this.

To summarize the analysis of the way in which the role of additional communication channels can be interpreted as maintenance, elaboration or modification, it was found that the use of additional communication channels varies from having no function when a firm relationship with the programme's substance and form is lacking, to a modifying function in generating new or altered genres.

## Audience characteristics

In addition to the research questions regarding the extent and the way in which additional communication channels are implemented in television programmes, this study examined what viewer characteristics correspond to the use of additional communication channels as forms of feedback to television programmes. It was found that Dutch viewers (aged 13 years and over) do interact with television programmes. The telephone is used most frequently by viewers as an additional communication channel, followed by SMS and, much further down the line, email, websites and ITV. The use of additional channels is related to age; viewers who have been interacting with

television programmes through additional communication channels are significantly younger than those who have not ($t(2539) = -5.661$, $p < 0.001$ (two-tailed), $d = -6.6$ years). This correspondence is mainly due to the use of SMS. The use of additional channels is neither correlated with gender ($\chi^2(1) = 1.4$; $p = 0.772$), nor with education ($t(2533) = -0.058$, $p = 0.953$ (two-tailed), $d = -0.007$). The same is true for the variety of ways of interacting with television programmes. Older viewers mention significantly less ways of interacting with the programme compared with younger viewers (Pearsons $r = -0.102$), whereas no correlation is found with education (Pearsons $r = -0.002$) and gender ($t(2539) = 0.577$, $p = 0.564$ (two-tailed), $d = 0.010$).

Further, the hypothesis regarding correspondence between the availability of additional communication channels in genres and audience age was addressed.

Table 2 shows that only SMS is added more often to programmes which attract a young audience ($t(2790) = -6.150$, $p < 0.001$ (two-tailed), $d = -6.4$ years), whereas other additional communication channels are implemented more often by programmes which attract an older than the average audience. This finding disagrees with our expectations. For ITV it was not possible to establish differences due to low power (29%). With regard to the *t*-tests, equal variances were assumed. Although in some cases significant differences were encountered between variables (Levene's Test of Equality of Variances), *t*-tests not assuming equal variances did result in comparable levels of significance ($p < 0.01$ for merchandizing; $p < 0.001$ for the other feedback channels).

## DISCUSSION AND CONCLUSION

This study focused on the way in which television genres in the Netherlands make use of additional communication channels: SMS, telephone, email,

• Table 2 Age (aged 13 and over) of viewers of television programmes with and without various additional communication channels broadcast 2001–02 in the Netherlands

| | Average age | | | | *t*-test | | | |
|---|---|---|---|---|---|---|---|---|
| | Available (*N*) | | Not available (*N*) | | *T* | *DF* | *P* two-tailed | *D* |
| One or more additional communication channels | 44 | (1224) | 39 | (1544) | 15.897 | 2766 | < .001 | 5.7 |
| SMS | 35 | (90) | 41 | (2702) | −6.150 | 2790 | < .001 | −6.4 |
| Telephone | 44 | (315) | 41 | (2458) | 4.832 | 2771 | < .001 | 2.8 |
| Email | 47 | (530) | 40 | (2262) | 15.277 | 2790 | < .001 | 6.9 |
| Website | 44 | (692) | 40 | (2098) | 8.561 | 2788 | < .001 | 3.6 |
| Teletext | 50 | (205) | 41 | (2587) | 14.113 | 2790 | < .001 | 9.7 |
| Merchandising | 43 | (219) | 41 | (2571) | 2.685 | 2788 | .007 | 1.8 |

websites, teletext, merchandizing and ITV. As stated, examining the value of additional communication channels for television is relevant from a broadcaster's viewpoint. The implementation of interactive services to television audiences and experiments directed at exploring the potential value of incorporating ICT in television programme concepts is seen increasingly as indicative of a broadcaster's quality. This study showed that broadcasters in the Netherlands during 2001/2 implemented various additional communication channels in a variety of genres. The pattern found shows that, compared with other genres, SMS is added most frequently to reality programmes, email and websites to the information genre, teletext to sports programmes and merchandizing to informational children's programmes. However, the extent to which the additional communication channels represented real innovations varied considerably, as the role of additional communication channels were found to represent maintenance, elaboration and, in some cases, modification of new genres.

In this study, theoretical notions developed in communication science on interactivity and television genres have been examined in an empirical setting. It has interrogated a theoretical elaboration on interactivity consisting of four accumulative levels (Van Dijk and de Vos, 2001) with the way in which communication channels added to television programmes generate forms of interactivity. The examination has showed that the levels are helpful in breaking down various forms of interactivity. At the same time it found that the position of the third, or behavioural, dimension of interactivity needs further refinement when applied to interactivity realized by means of more than one communication channel. According to the model, the highest form of interactivity is reached when communicative acts are interactive with respect to the content being communicated. Further, according to the theoretical model, this is possible only when the structural conditions of a physical two-way or multilateral channel, real-time presence of interacting partners and control on behalf of all partners are met. However, the study found instances of the highest form of interactivity establishing understanding, where, at the same time, the condition of exercising control on behalf of all interacting partners was not met – an illustration thereof being a community of interest on the websites added to the detective serials of a particular broadcasting organization. In this community, fans of the detective genre meet and discuss the plots and characters of the detective serials. Although communication between these fans is interactive with respect to content, resulting in a real exchange of opinions and understanding, the link to the producers and content of the television programme itself, i.e. the control-aspect, remains unclear. This finding would call for reconsidering the claim that all four levels in the model of interactivity need to be accumulative when applied to interactivity realized by more than one communication channel.

The study also addressed the question of how additional communication channels are incorporated into television programmes by examining two types of data: data representing the television broadcasters' perspective and data about television viewer characteristics (by age). We expected to find the additional communication channels particularly popular among young people (such as SMS, email and websites) to be incorporated in programmes directed at the young, whereas programmes with a more general or older audience would choose to employ none or more traditional additional communication channels, such as teletext or the telephone. Except for SMS, the findings did not confirm our expectations. From this study, it can be concluded that understanding the possible impact of additional communication channels incorporated by television programmes requires that researchers employ a double perspective. On the one hand, such a twofold perspective focuses on the potential technological innovations on the part of broadcasting organizations and, on the other hand, on the ability and willingness on the part of the receivers to make use of the services offered by the additional communication channels. Broadcasters are recommended to employ a similar twofold perspective. When implementing additional communication channels, broadcasters need to think beyond what it is technically possible and feasible to offer to viewers, in order to pay attention to what the typical viewers of genres may want, and in what way they make use of various channels (if at all). By doing the latter, broadcasters will be able to anticipate more sensibly the successful implementation of additional communication channels to various genres.

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