

An Audience Perspective on the Second Screen Phenomenon

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ABSTRACT

Second screen applications are among the latest of the TV industry's innovations to retain the TV viewer's attention in a challenging multi-screen environment. These applications can be regarded as an extension of TV content consumed on a TV set towards lightweight portable devices such as tablets. While numerous commercial instances are available internationally and the existing literature on the topic from a technical perspective is extensive, the audience side of this phenomenon has been paid far less attention to. Moreover, in the case of Flanders, the successful commercial implementation of second screen applications remains limited. In this research, we aim to elicit what TV viewers' expectations and preferences are regarding second screen functionalities. By applying means-end theory and a laddering approach we were able to discern how these preferences subsequently relate to the TV show itself, the consequences for the viewing experience, as well as how second screen applications and usages are expected to fit in the viewer's everyday life.

INTRODUCTION

In contemporary Western society, we live in a multi-screen environment. We interact with screens all day long, considering it an almost mundane practice. Moreover, concurrent media consumption on multiple screens appears to be rising. Data shows that contemporary TV viewing increasingly involves simultaneous multi-screen usage (Internet Advertising Bureau, 2012). TV viewers seem to effortlessly divide their attention between Internet-connected portable devices (e.g. smartphone or tablet) on the one hand and the television set on the other.

In a context in which commercial TV networks are challenged in their advertisement revenues (e.g. ad skipping, multitasking, etc.), these shifting user practices may pose an additional threat (Jennes & Van den Broeck, 2014). Especially because most of the content accessed using these additional devices is not related to the content displayed on the TV screen (Internet Advertising Bureau, 2012; iMinds-iLab.o, 2014). At the same time, we do see that the industry tries to turn this threat into an opportunity by targeting these lightweight devices via interactive applications: the so-called second screen applications or TV companion apps. As such

their strategy focuses on following the viewers' gaze, rather than trying to redirect them to the TV screen.

Our aim is to grasp what TV viewers' expectations are regarding second screen applications' functionalities. More in particular we will focus on how these link up to TV viewers' expectations on the consequences that these properties have for their viewing experience and what they personally value in their everyday life. The research question we maintained was "How can a second screen application be relevant for TV viewers as a companion application?"

Second screen applications today exist in different forms, aimed at enhancing the viewing experience, stimulating the viewer to search for additional and related content, and reviving the idea of social TV by integrating existing (e.g. Twitter hashtags) as well as new social media streams in the application. Cesar, Bulterman & Jansen (2008) created a framework for second screen application development in which they discern four types of second screen usages. From a user perspective, these usages are controlling, enriching, sharing, and transferring television content. Murray et al. (2012) developed a concept for an application that serves as a companion guiding the viewer through

the intricacies of contemporary serialized drama by providing information on the characters, the relationships between the characters, but also salient events. Plenty of commercial examples are available today. Given the apparent success (of some) of these applications as well as the existence of the viewer practices that we described above, second screen applications might become a successful innovation. At the same time, the failure of various second screen start-ups (Poggi, 2014) indicates there is still a substantial need for research on the characteristics of and conditions for a successful second screen application.

Research on second screen currently unfolds along two main lines of inquiry, including social TV and media experience. The social TV cluster investigates what motivates audiences to engage in online commenting via social media and how these audiences are internally diversified (Doughty, Lawson, Linehan, Rowland & Bennett, 2014), and on how online conversation patterns can vary across various types of TV shows (Mukherjee, Wong & Jansen, 2014) or within TV shows (Giglietto & Selva, 2014). The media experience cluster studies to what extent the TV viewing experience is impacted by the additional second screen (Kusumoto, Kinunen, Kätsyri, Lindroos & Oittinen, 2014; Murphy

& Hughes, 2014; Van Cauwenberge, Schaap & van Roy, 2014). Our study is however more concerned with the design aspect of second screen applications. As such, this study falls within Human-Computer Interaction (HCI) research, which is more in line with the studies of Geerts, Leenheer, De Grooff, Negenman & Heijstraten (2014), Cesar et al. (2008) or Murray et al. (2012).

In the remainder of this paper we first situate and define second screen. Subsequently, we elaborate on the applied Means-End Theory (Subramony, 2002; Zaman, 2007; Bleumers, Van den Broeck, Lievens & Pierson, 2012), hereby indicating how we investigated the potential relevance of second screen for contemporary TV viewers. Next, our method and sample are elaborated upon, and our results discussed.

SECOND SCREEN AND THE MULTI-SCREEN TV VIEWER

Given the novelty of *second screen*, both academic literature and business reports offer various definitions, descriptions and approaches regarding second screen, differing in what aspects and practices are included or excluded in the phenomenon. For Walley (2012), for instance, second screen consists of all types of TV related practices possible using a mobile device, including content interaction, but also remote consumption (e.g. watch TV content on a tablet on the bus). For the sake of our own research, this definition is far too inclusive. We chose to adopt the following more narrow approach of the 2nd screen society (2012) as a starting point, which defines second screen as

A companion experience in which a consumer engages in relevant content on a second device, such as a smartphone, tablet or laptop while watching (TV) content on the “first screen” (typically a television but not limited to the living room) (Lexicon section, para. 1).

Second screen thus aims to deliver a companion experience that taps into the “first screen” *narrative*.

As the aforementioned definition indicates, this “first screen” does not necessarily need to be a (TV) screen. For instance, the primary narrative can be a live concert or sports game while the “second screen” provides contextually relevant information to this primary narrative. The key factor is the hierarchical relation between the first and the second *screen*, with the first being the primary point of attention, while the second provides the companion experience: an experience that is intrinsically related to the first *screen* narrative and that delivers an augmentation of that experience.

Currently, we see various instances of how the second screen idea is implemented. Examples of such second screen apps include Beamly (2015), tvtag (2014), Viggie (2014), Eurovision (European Broadcast Union, 2013), Flanders Classics (Flanders Classics NV, 2013). These applications allow viewers to, for example, interact with other viewers via custom-made or existing social platforms, to receive contextual information about the events deployed in the main narrative, and to consult additional camera angles or discover new things that are related to the main narrative. Some of these applications are specifically developed for one or a series of events (Eurovision or sports events) or a specific TV show. Others overarch different types

of content and TV channels, for instance by relying on meta-data (cf. Beamly), focusing on the social aspect (tvtag), or rewarding viewers for watching TV shows (Viggle).

Although neither “first screen” nor “second screen” is tied to a specific device or situation, considering the aforementioned applications, the main application domain for second screen appears to be the domestic context. TV content watched on the large screen is supplemented by consulting information or engaging in on line conversations on lightweight Internet-connected devices such as tablets or smartphones. With respect to these companion devices, previous research indicates a higher interest in second screen among those viewers using tablets at least once a week while watching TV (Courtois & D’heer, 2012). Therefore we focus in this research on the specific situation in which the TV set is considered the first screen and a tablet the second screen or companion device.

From a political economic perspective, the second screen phenomenon seems to show similarities with the longer tradition of media franchises that may involve other media texts such as books, films, TV shows, social media platforms such as Twitter (hash tags and profiles) or Facebook (fan pages) (Brooker, 2001; Grandio & Bonaut, 2012). Second

screen as a product appears to be industry-pushed as a way to capture the viewer’s attention by delivering the “narrative” through different channels in various formats. This way the industry exploits the presence of a variety of Internet-connected devices in the domestic environment together with the existing multiscreen uses.

Despite this industry-push, various existing use practices can be interpreted as a consumer interest. The simultaneous usage of multiple screens is not uncommon. Data on Flemish TV viewer shows that about 70% of TV viewers tend to use Internet at least once a month while watching TV. Interestingly this is mainly motivated by reasons that are not related to the TV show being watched (iMinds-iLab.o, 2014). A possible explanation for this resides in the idea that the availability of multiple screens allows viewers to create a type of “micro moments” in which different activities can be combined in a spontaneous fashion. In these simultaneously created moments, viewers engage in looking for additional info, online shopping, communication and entertainment. This stimulates a new sense of time for the user, namely “found time” (Google, 2012).

Although the main share of the multi-screen activities may be unrelated to the TV show being watched, it is known that viewers have an interest

in the usage of smart devices to consult information sources such as Wikipedia, IMDB or YouTube that provide additional information on the content that is being watched (De Meulenaere, Van den Broeck & Lievens, 2012). Specifically in the context of second screen, research has indicated that viewers appreciate additional information concerning the TV show that is watched (Geerts, et al, 2014), especially if it is related to current affairs or sports broadcasts (Kusumoto, et al, 2014). With respect to sports, Anstead, Benford & Houghton (2014) found that viewers appreciate the additional statistics, which were perceived as an enrichment of their experience that the first screen by itself could not afford. Conversely, the second screen can also be used to counter boredom TV viewers may experience during some parts of a TV broadcast (Kusumoto, et al, 2014). Nevertheless, viewers’ interest in second screen should not be overestimated. For instance in the case of Flanders, research has indicated that the current adoption potential of second screen applications in Flanders appears to be low; at the same time, what potential exists is relatively underexploited by industry (Courtois & D’heer, 2012).

These findings provide us with some glimpses of the current second screen, how second screen

applications can be of interest to (certain segments of) TV viewers and how this relates to variations in TV shows. In this research we aim to deepen the understanding on this first screen – second screen relationship.

MEANS-END THEORY AND LADDERING

Means-End Theory originates in consumer research (Reynolds & Gutman, 1988) and fits within the broader rational choice research tradition. Central to this approach is that people are considered to act rationally and goal-oriented based on the beliefs they maintain (Little, 1991; Grunert & Bech-Larsen, 2005). Specific for Means-End Theory is that these beliefs are anchored to three levels of abstraction, and the linkages between them are related to an object or product. These three levels of abstraction are (a) the low-level attributes of the object, (b) the consequences of these attributes in the application or consumption of this object and (c) the high-level values relevant to the consumer as end-goals that are met by the consumption of the object. The idea within Means-End Theory is that people select objects with specific characteristics or attributes, for instance consumer goods, because they believe those to aid them in attaining particular desired consequences that, subsequently, serve the values they hold (Subramony, 2002).

To uncover these so-called means-end chains, laddering methodology can be applied. Laddering typically exists of a qualitative data collection phase (an interview), followed by a qualitative and/

or quantitative data processing phase. During the laddering interview, participants are triggered to express particular product preferences. By means of a series of *why-is-that-important-to-you*-questions, participants are asked to explain this preference. They are required to point out what product attributes lie at the basis of this preference and how these are related to perceived consequences of purchasing and consuming the product and personal values (Reynolds & Gutman, 1988). In the data processing phase, the transcribed interviews are coded with bottom-up categories following the attribute-consequence-value hierarchy, and may be further analyzed quantitatively, resulting in the construction of visual maps. These maps, called hierarchical value maps, reveal the dominant linkages between the elicited attributes, consequences and values within the aggregated data set (Reynolds & Gutman, 1988).

While laddering was initially applied in order to uncover and understand consumer behavior, it has been adopted in the field of HCI (Subramony, 2002; Zaman, 2007; Bleumers et al., 2012). The application of laddering in HCI differs from marketing applications in terms of research aim and the nature of the studied artefacts (Vanden Abeele & Zaman, 2009). First, in a HCI context, the pri-

mary focus lies on enhancing the user experience, and laddering findings are used to formulate design recommendations. Second, whereas consumer research can focus on existing consumer products, the artefacts in HCI research are often less developed or even just an idea, requiring additional methods to make participants acquainted with the research object and concept under investigation.

In 2002, Subramony studied users' web-site preferences and, as such, successfully demonstrated the applicability of the means-end theory and the laddering methodology in a HCI context. Jans & Calvi (2006) applied laddering in a user-centered design study that aimed to evaluate a mobile city application under development. In that study, laddering was complemented by a preceding association phase. This combination of methods allowed them to grasp usability issues as well as aspects related to the attitude towards the application. Laddering was then further adapted to HCI research needs into *contextual laddering* (Zaman, 2007). This was implemented in a study on the opportunities for omni-directional video (ODV) in TV shows, Bleumers et al. (2012) combined a demonstration of ODV with a card sorting exercise to facilitate the laddering interview. Our study is in line with some, but not all, aspects of the aforementioned studies.

Similar to Bleumers and colleagues (2012) we applied a card sorting exercise as the basis for a laddering interview. Our approach differed, however, in that we restricted the implementation of laddering to the interview technique and qualitative analysis. The choice to omit further quantitative analysis was based on the fact that this study was focused on identifying and understanding the different ways in which a second-screen application can be deemed relevant, not on establishing how dominant these beliefs are.

PROCEDURE AND SAMPLE

Procedure

We conducted fourteen one-hour interviews with 22 respondents using card sorting and a laddering procedure. Eight of these interviews happened one on one, while in the remaining six interviews two people were interviewed in the same session. Before the interview started, all respondents were introduced to a variety of local and international second screen applications in order to familiarize them with a range of possible applications across TV show genres (phase 1 in Figure 1). In that sense, we complied with the guidelines of *contextual laddering*. Next, we also explained the laddering interview technique because it is known that respondents may react uncomfortably to the sequence of "why-questions" that is central to laddering (Hawley, 2009).

The laddering phase started with a card sorting exercise, in order to uncover the mental connections between second screen and TV show attributes (phase 2). As the aforementioned findings of Kusumoto et al. (2014) show, different types of TV shows induce different types of interactions with the second screen. We had 21 cards, with one for each different TV show genre mentioned (cf. able

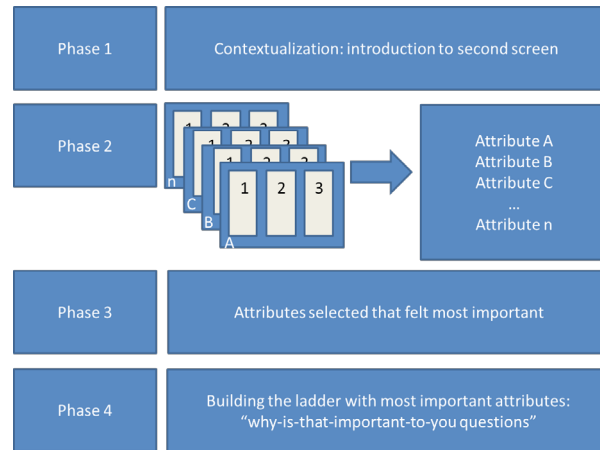


Figure 1. Interview procedure

Table 1.

TV Genres used for card sorting exercise

News shows	Hobby program
Stand-up comedy	Drama series
Current or public affairs	Action series
Reality show	Soap opera
Weather forecast	Consumer magazine
Sitcom	Docudrama
Documentary	Human interest
Quiz-show	Talk show
Debate	Touristic program
Music	Film
Sports	

1. TV Genres used for card sorting exercise).¹ These cards were presented to the respondents in a triadic fashion and participants were asked the following questions:

For which of these three types of TV shows do you think second screen is more suitable?

What are the characteristics of this type of TV show that make it more suitable? Or what makes the other TV show types less suitable?

The composition of these triadic sets was randomized, reducing the chance respondents would have the same set of cards as another respondent. The rationale behind this was that the presented genres merely served as a means to elicit and discuss preferences in terms of TV show attributes, rather than considering these genres as unambiguous categories.

During the card sorting exercise, these attributes were written down on sticky notes by the in-

¹ We used the same set of genres Bleumers, et al (2012) had derived from Geerts, Cesar & Bulterman et al. (2008), based on the European Broadcasting Union (2007) list, re-adding film as a genre.

interviewer. After the final genre was selected all of the sticky notes were presented to the respondent. The respondent was asked whether he/she agreed with the listed attributes and whether any adjustments should be made. Subsequently, the respondent selected the most salient attributes (phase 3) which were then used in the next step of the interview.

This final step involved the elicitation of the consequences our respondents anticipated a second screen would have regarding the viewing experience and, subsequently, how this might be meaningful in their everyday lives (values). It is in this final phase of the interview that the sequence of *why*-questions typical for a laddering interview was used (phase 4). The crude ladders built during these interviews were listed in a spreadsheet following the attribute-consequence-value categories, completed with the terms the respondents used, and supplemented with the respondents' justifications. By aggregating these ladders, standardized categories for these three levels of abstraction emerged and were assigned to the individual ladders, allowing the construction of standardized ladders. This enabled us to discern and understand the various ways in which a second screen could be relevant.

Sample

Our sample was recruited through an available research panel, the researchers' personal social networks and snowball sampling. During this sampling procedure, we applied the idea of purposeful sampling (Sandelowski, 1995) and aimed to have a varied sample in terms of socio-demographic characteristics (i.e. type of household, gender, age and education) and variables directly related to the second screen phenomenon. With respect to the latter, we aimed for respondents who are familiar with tablets (cf. Courtois & D'heer, 2012). Therefore, we specifically targeted respondents who owned both a TV set with iDTV subscription and a tablet.

Our sample was composed of twenty-two respondents divided over fourteen households, with a more or less even distribution of men (twelve) and women (ten). On average, our sample is rather young, with more than half of the respondents being thirty or younger, while the oldest was sixty-five. In terms of households, we obtained a varied composition with 5% singles, about 60% couples without children and about 30% couples with children. About 70% of our sample received a higher education.

RESULTS

Second screen use conditions

Before discussing the results of the laddering interview a number of general reflections our respondents had with respect to second screen usage are presented. First, second screen is seen as supplementary to the first screen (i.e. the TV set) and should therefore remain secondary to the first screen in terms of attention. Attention is a major concern: a second screen should not distract from the first screen, because of two reasons: the fear of missing something important and the fear that it will make TV viewing more cognitively demanding. As one of our informants put it,

Second screen feels like multitasking and simultaneously doing multiple things. Basically something I'm doing all day. The thing is, when I plant myself on the couch, I'd like to be brain-dead: just relax and forget about all the rest. (Eva², female, 28)

These concerns are not entirely unfounded. Research by Van Cauwenberge et al (2014) indicates

² Pseudonyms have been used to maintain respondent confidentiality.

that the factual recall and the comprehension of the first screen narrative are affected due to an increased cognitive load. This occurs regardless of whether the second screen content is related or unrelated to that first screen narrative. This does not necessarily imply, however, that the overall viewing experience is reduced, as viewers may find the additional content gratifying (Kusumoto, et al, 2014).

In line with the previous, our respondents tend to agree that using a second screen turns watching TV into a more active practice. Therefore only TV shows that are already watched in an active fashion and with which viewers already actively engage (for example by playing along or discussing the TV show at home) appear to be regarded as suited. Yet, it is also important that people feel capable of processing the two (related) information streams.

Considering this more broadly, viewing preferences play an important role. Second screen applications will only be used in those instances in which the viewer is already interested in the TV show itself. In other words, a TV show will not be watched because of the second screen application. This is in line with previous research results on the use of interactive digital television services. The research by Van den Broeck, Bauwens & Pierson (2011) showed that interactive TV applications are

only relevant for those TV shows that viewers already like to watch and to which they can relate, but these applications are no incentive to explore other types of TV content. Yet, when viewers do have an interest in the TV show, the second screen application might be an incentive to watch the TV show in a linear fashion, i.e., as it is broadcast (so-called “appointment TV”), instead of time-shifted (usually by way of recording for later viewing) .

TV show Attributes

According to our respondents, the pivotal attributes of TV shows regarding second screen applications align with the temporal aspects of TV shows, its content, and its ontological aspects. These attributes can either act as motivations to use second screens or be conditional regarding second screen usage as a whole. Before discussing how these attributes link up to the higher-level consequences and values, we first elaborate on these TV show attributes and their motivational or conditional functioning towards second screen.

Temporal aspects include attributes that stimulate as well as enable/ constrain second screen usage. Enabling/constraining temporal attributes are the duration of the TV show and the pace of the TV show. In terms of the duration of the show, it was

envisioned that the show should be sufficiently long to fully exploit the second screen. The weather forecast, for instance, is too short. In addition to duration, participants also referred to the pace in which various topics in the TV show are presented. A slow pace, with only one or a limited number of topics, enables the viewer to explore the topics more in-depth on the second screen while not missing too much information on the first screen. On the other hand, when a multitude of topics are presented (e.g. the news), the possibility may arise that some of these topics are of lesser interest to the viewer. This allows for second screen interaction, while the viewer can rely on auditory cues to direct his or her attention back and forth between first and second screen.

A fast pace may also stimulate second screen usage, because it may be joined with a more shallow discussion of the topics at hand. Respondents indicated that a topic presented quickly, without much background information, might stimulate them to search for more information using the second screen. So one commented:

News shows always have a large variety in topics. Obviously one is not always as acquainted with some topics or particularities of topics as to others. And it

disturbs me if I cannot situate the topic reported on.
(Marc, male, 65)

This implies however that other information on the first screen may be missed, as the viewer is engaged with the content on the second screen (cf. Van Cauwenberge, et al, 2014). One way to deal with this is to explore certain topics more in-depth after watching the TV show, for example, during commercial breaks.

Attributes related to the content of the TV show, particularly factual information and games/quiz shows were found to stimulate second screen usage. The factual information refers to news and current affairs but also to (consumer) product discussions, instructions, guides and discussion of holiday locations, and finally TV shows that have various parallel events going on at the same time, such as sports. With respect to games, quizzes were very often selected during the card sorting exercise. It was voiced that a second screen would be perfect to compete with both on-screen contenders as well as peers, either with a direct link to the TV network or not.

The TV show ontology refers to the idea that a TV shows' content is the result of an editing phase, that stories can span several episodes of one show

or that its content can be light or entertaining without requiring much cognitive effort or vice versa. With respect to the former, editing implies a selection in what is included in the image or story and what is not. This, in turn, leaves room for perceived manipulation and half-truths. On the other hand, viewers may also perceive that they have information needs that differ from the TV show producers. As another informant noted,

In sports broadcasts the viewer is tied to what the broadcaster or the director decides is important, yet sometimes you just want to see a replay of an earlier event that you've missed or need to understand what is happening later. (Stef, male, 26)

As this quote illustrates, the viewer is stimulated by the expected presence of non-disclosed information to use a second screen app. This might include additional information, additional camera viewpoints or behind the screen information. This finding resembles the expectations respondents had regarding ODV (Bleumers et al., 2012).

Next, stories are often told episodically, with a once-a-week broadcast, which means that viewers may miss an episode or may forget about (pivotal) information. This gap can be bridged by means of a

second screen application. Thirdly, from the aforementioned fear of missing important information while interacting with the second screen it follows that second screen applications are considered to be more suitable in the context of TV shows that allow viewers to "pause" their attention to the first screen (e.g. reality shows that feature a mix of quests or contests and background stories). So one interviewee observed:

Some shows just have boring parts. Or parts that some people like while others don't. For instance *Expeditie Robinson* [a Flemish reality-show] spends a lot of time on the election round, which I am not interested in. With a second screen one could provide diverging content to keep it interesting for everyone.
(Bastiaan, male, 32)

Consequences and Values

In this section, we focus on those attributes that operate as motivations toward the anticipated use practices. These practices are discussed in terms of the anticipated consequences regarding the viewing experience, and how these consequences relate to TV show attributes on the one hand and the respondents' values on the other hand.

Improve the understanding of the first screen narrative

A first anticipated second screen use practice revolves around improving the understanding of the first screen narrative. It was envisioned that the second screen could be helpful in understanding the first screen narrative by providing background information. Often TV shows require background knowledge to fully understand what is going on. This is attributed to those genres that entail many and/or complex “storylines”, characters, topics and/or parallel events.

Viewers tend to lose the overview of what is happening and/or fail to connect all the separate events to one overarching narrative. Similar to the application Murray et al. (2012) developed (cf. supra), a second screen can assist viewers by furnishing them with an overview as in relevant background information and live updates, but also by providing the viewer with the means to control (to some extent) the information stream. This is tied to the knowledge that a TV show is the result of an editing process, complying with the constraints inherent to AV-products.

The idea is that, when this is implemented well, the understanding of the first screen will improve.

As a consequence, depending on the genre of the TV show, the viewing experience and the overall experience is expected to improve. Viewers anticipate feeling more involved or engaged with the content and thereby enjoying themselves more while consuming TV content. However this conflicts with the fear of experiencing cognitive overload, the overall experience may still be gratifying, as Kusumoto et al. (2014) shows. This can be illustrated using the example of sports events. These typically involve many separate events, for instance, Olympic Games, track and field, cycling races, but require also a significant amount of background information that is not always easily communicated given the constraints of the TV medium. Depending on the existing knowledge, the understanding of why and how one result or event affects another event can be higher or lower, which can thus be mitigated by the usage of a second screen. So one informant commented,

Sports are about the emotional experience that occurs because you lose yourself in it. Without the emotional connection sports are just plain boring. But this is only possible if you understand what it is all about and who is who. (Koen, male, 34)

As this quote indicates, sports are about the experience, yet it requires sufficient background knowledge to be able to fully appreciate and enjoy it. Moreover, with this information, it was indicated that it is easier to predict future actions or events within the game, which contributes to understanding, appreciation and enjoyment of the TV content. The same mechanism is believed to apply to complex drama series.

A second perceived consequence is a higher retention of information because of the more intense interaction with it. Subsequently, it is expected that this information can be used in other circumstances, for instance during discussions with friends or colleagues. In turn, this may establish or reinforce social ties but also one’s social status within this social environment. Another interviewee makes this clear:

I like it when I can contribute to a conversation, to talk to friends about these trivial facts which I have picked up watching TV, browsing the web. This is not something deliberate, it just happens, it sticks. (Jeroen, male, 28)

Thirdly, second screen usage may allow for a (grounded) opinion regarding the topics discussed

on the first screen. Here, the second screen is seen as something that provides the viewer with information to make up his or her own mind. Typical examples are current affairs TV shows or talk shows, where TV viewers may experience a lack of background knowledge regarding invited guests and/or the discussed topics. This type of TV show can, for instance, be stumbled upon while channel surfing. To stick to this TV show instead of to continue channel surfing, a second screen can be helpful by filling these gaps, as Anna (female, 24) observed:

Often you stumble upon something like a talk show that looks interesting, but you can't place the guests or the topic they are talking about. Via a second screen you can easily be updated about all this information.

In this context, the improvement of the first screen narrative may result in a deeper understanding of the topic, the development of a personal opinion, but also in a verification of the trustworthiness of the information provided by the TV show.

Second screen as convenient access to related information

Respondents also considered the use of a second screen as a means for easy access to relevant information. Whereas the previously described practice involves developing in-depth understanding, this envisioned practice is more pragmatic – i.e., using the second screen to quickly satisfy one's curiosity or to conveniently capture information that can be put to use later in other activities (e.g. capturing ingredients for preparing the recipe shown on TV).

Firstly, it is expected that a second screen can provide this information in a filtered, efficient and useful fashion when the viewer struggles with *nagging questions* triggered by either curiosity or distrust. For instance statements made by a guest in a talk show or current affairs TV show, without (sufficient) reasoning may trigger the viewer to question the trustworthiness of the statement. When watching TV, however, the interest in starting a search oneself is not always present. In that sense, a second screen can be the means to be provided with the requested information in an easily digestible fashion, either via sources offered via the network, a third party or through the social media. It is expected that when finding what one was looking

for, the viewer could again focus on the first screen without this disturbance, rendering TV viewing into a cognitively relaxed activity, complying with what is expected of TV viewing. In addition, having access to this information in the relaxing environment of TV viewing, the second screen is expected to contribute to an intellectual development while requiring little effort. In addition, it also serves as a verification of one's knowledge.

Secondly, this easy access to information relates also to TV shows that provide information that is not easily remembered, such as reviews of products and travel destinations, instructables or guidelines. By providing the information in a filtered, easily accessible way, viewers can learn in a relaxing fashion and be inspired as well as informed. In addition, the second screen can serve as a mnemonic that can be used at a later, more relevant stage. During the interview references were often made to cooking or DIY-shows. Typically these type of TV shows offer tips and tricks, recipes, guidelines, and so on that are relevant to the viewer, yet only at a later stage, away from a TV viewing situation. Furthermore, viewers can get inspired by the content but are unable to find it when they really need it. So one interviewee noted:

I often see interesting or tasty dishes on the TV and I really want to try that afterwards. But when the moment is there, when I want to prepare it, I have forgotten what exactly it was or where I have seen it. (Felicia, female, 28)

In this sense, second screen is envisioned to contribute to the improvement of the viewer's personal situation as in acquiring new skills and competences, but also by providing the means to be able to make more deliberate, well informed, hence better choices with respect to the allocation of one's resources (time, money...). As such, the time spent watching TV is considered to be more useful: this recalls the finding of a Google study from 2012 mentioned above on "found time." This study indicated that *finding time* was one of the main reasons for simultaneous but unrelated media usage. For instance, checking mails or planning holidays while watching TV was considered more efficient (Google, 2012). Moreover, the time that is saved using the second screen applications can consequently be allocated to other activities, contributing to an improved work-life balance.

Second screen as tool for first screen narrative interaction

Second screen applications are also seen as a means to participate in the first screen narrative, especially in the context of game shows such as quizzes. This participation appears to be executable in a number of ways, ranging from direct competition with the on-screen participants to offline competition with co-located viewers. So Anna (female, 24) commented:

It would be so much fun to quiz against my partner during a TV quiz. We always do this anyway when a quiz is on. It would be cool to have your own score by the end of the show and see how well you have performed, for instance compared to my partner or friends.

A second screen in this context is perceived as augmenting the existing offline participation with quizzes. From this follows that the viewing experience will improve, making it more enjoyable to watch. What is interesting here is that in this case, the existing co-located interaction of 'playing along' within the household while watching a quiz would be supplemented with a mediated interaction with distant others.

Moreover, this was also seen in the context of improving the work/life balance. For instance Steve, a 32-year-old male, indicates that he often participate in these TV quizzes in a similar fashion to what Anna describes above. He specifically emphasizes the seemingly paradoxical relaxation you can experience after engaging in a mentally straining yet immersive activity:

If you have made an effort, you need to relax. And it is my assumption that relaxing is far more effective when it involves immersion. I believe that you will be more satisfied with an immersive experience. (Steve, male, 32)

Second screen as diversion

Light-minded TV shows, providing entertainment without an overarching story, are considered to allow the viewer to let his or her attention slip away from the first screen from time to time. One of our respondents named this *pausable* content (cf. supra). Typically, the viewer's interest in the various topics that feature on the first screen varies. This opens up an opportunity for a second screen application that can diversify the content of the first screen narrative for those viewers who are less interested in the first screen at that moment. For

instance, with social media streams, behind the scenes content, etc. viewers can be entertained while the content presented on the main screen continues. Again, this appears to correspond with the idea of making TV viewing more worthwhile. The second screen can ameliorate the idea that the viewer is wasting his or her time by providing content via the second screen within the broader first screen narrative that is closer to one's interest compared to the first screen.

DISCUSSION AND CONCLUSION

In this study we aimed to investigate how a second screen application as a companion application on a tablet device could be relevant to TV viewers that regularly use a tablet by applying means-end theory and the laddering method. We found that the expected use of second screen is contingent upon TV shows' temporal, content-related and/or ontological qualities. These qualities can either stimulate second screen usage or function as a precondition.

In relation to the first screen narrative, four types of anticipated second screen practices can be discerned. A first practice considers the second screen to complement the first screen by filling in the gaps necessary to fully comprehend the first screen narrative. Secondly, the second screen can function as a library to draw information that surpasses the first screen. Thirdly, the second screen can function in parallel to the first screen, diversifying the content within the same broader narrative. And finally, second screen can provide the means to interact with the content, the content provider and/or (remote) others.

These findings largely corroborate the existing literature (cf. *supra*) in terms of what viewers (may) appreciate in second screen applications, yet

we were also able to find explanations for these expected use practices. Through the convenient, instant, complete, yet concise nature of the companion experience, viewers expect to retain a relaxing TV viewing experience. It is anticipated that new skills are acquired, grounded opinions can be developed, and limited resources (such as time) will be more efficiently allocated, while the viewing experience is at least maintained or even improved.

In that sense, it seems that our respondents expect to gain something more from the TV viewing activity by using a second screen application. TV viewing in itself can be perceived as wasting time. This is expected to be alleviated by means of second screen. In the concept of *found time* (Google, 2012), the resource *time* is (perceived to be) allocated more efficiently by performing multiple tasks simultaneously. Looking at our findings in the same vein, these also suggest that combining two activities (first and second screen use) is seen as a more efficient or worthwhile employment of the time allocated to TV viewing. Thus, the concept of *found time* also holds true when the multiple activities being involved are related.

The purpose of this study was to uncover the various ways in which second screen applications can be relevant. To attain this end a stratified sam-

pling strategy was applied. Given the aforementioned sample sourcing techniques (cf. supra), it is reasonable to think, however, that not all variability was covered. In that sense, future research could advance this understanding by theoretical sample cases (Smaling, 2008) that have, for instance, different socio-economic backgrounds.

To conclude, we were able to provide a glance at tablet using TV viewers' aspirations and dissatisfactions on various levels with TV as a whole and second screen specifically. We highlighted and (re-)emphasized a set of opportunities for second screen applications as companion experiences, which developers and the industry as a whole can take into consideration to successfully employ the second screen phenomenon.

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