



DEGREE PROJECT IN MEDIA TECHNOLOGY,
SECOND CYCLE, 30 CREDITS
STOCKHOLM, SWEDEN 2018

News for Everyone - Investigating Universal Accessibility with Cognitively Disabled Users on Swedish News Sites

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ABSTRACT

As more readers consume news through digital platforms such as computers, mobiles and tablets, it is essential to make these interfaces accessible to as many users as possible, both from an economic and social standpoint. The terms ‘universal accessibility’, ‘inclusive design’ and ‘design-for-all’ refer to the method of designing for users both with and without disabilities, which is a widely debated subject among researchers in the field where some say that it improves the usability for everyone, while others argue that it is impossible to create a design that fits all needs. The aim of this thesis is to investigate this ‘universal design’ method on news sites and answer the question whether a more accessible design can improve the experience for all users regardless of cognitive abilities. In order to do so, five current news sites were evaluated and compared to accessibility guidelines and previous research. Based on the results, two prototypes were developed and tested in a qualitative user study together with the existing sites. The user study consisted of two test groups of students with (Group 1) and without (Group 2) cognitive disabilities, with 5 users in the first group and 9 users in the second. Oral opinions were compared within and between the groups together with results from a hierarchical sorting of sites based on general preference, appearance and credibility. The results showed both differences and similarities between the groups, whereas the greatest common factor was the preference for the “clean” and “calm” design, ranking both prototypes higher than their originals. The conclusion was that it is indeed difficult to design for everybody because of individual needs and preferences, but including disabled users in the design process highlights general problems that could otherwise have been missed, while also making it easier to implement customizable options for disabled users.

ABSTRAKT

När allt fler läsare konsumerar nyheter via digitala plattformar - såsom datorer, mobiler och läsplattor - så behöver dessa gränssnitt vara tillgängliga för så många som möjligt, både ur ett ekonomiskt och socialt perspektiv. Med termerna ‘universell design’, ‘inkluderande design’ och ‘design-för-alla’ menas den designmetod som utgår från användare både med och utan funktionsvariationer. Denna metod är starkt debatterad bland forskare där vissa anser att det förbättrar användarvänligheten för alla, medan andra menar att det är omöjligt att skapa en design som uppfyller alla behov. Målet med denna rapport är att utforska denna ‘universella design’ på nyhetswebsidor och se om en mer tillgänglig design kan förbättra upplevelsen för alla användare, med fokus på kognitiva funktionsvariationer. För att besvara denna fråga så analyserades och jämfördes fem nyhetswebsidor med riktlinjer för tillgänglighet samt tidigare forskningsstudier. Baserat på resultatet så skapades även två prototyper som utvärderades tillsammans med de existerande websidorna i ett kvalitativt användartest. Denna studie bestod av två grupper av studenter med (Grupp 1) och utan (Grupp 2) kognitiva funktionsvariationer, med 5 användare i första gruppen och 9 användare i den andra. Muntliga åsikter jämfördes inom och mellan grupperna tillsammans med resultaten från en hierarkisk sortering av websidorna baserad på generella preferenser, utseende samt trovärdighet. Resultatet visade på både skillnader och likheter mellan grupperna, där den största gemensamma nämnaren var preferensen för en “ren” och “lugn” design, vilket placerade båda prototyperna högre än deras originalversioner. Slutsatsen var att det mycket riktigt är svårt att skapa en design för alla på grund av individuella behov och preferenser, men att inkludera användare med funktionsvariationer i designprocessen kan markera generella problem som annars hade kunnat missas, samt att göra det enklare att implementera skräddarsydda inställningar.

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As more readers consume news through digital platforms such as computers, mobiles and tablets, it is essential to make these interfaces accessible to as many users as possible, both from an economic and social standpoint. The terms ‘universal accessibility’, ‘inclusive design’ and ‘design-for-all’ refer to the method of designing for users both with and without disabilities, which is a widely debated subject among researchers in the field where some say that it improves the usability for everyone, while others argue that it is impossible to create a design that fits all needs. The aim of this thesis is to investigate this ‘universal design’ method on news sites and answer the question whether a more accessible design can improve the experience for all users regardless of cognitive abilities. In order to do so, five current news sites were evaluated and compared to accessibility guidelines and previous research. Based on the results, two prototypes were developed and tested in a qualitative user study together with the existing sites. The user study consisted of two test groups of students with (Group 1) and without (Group 2) cognitive disabilities, with 5 users in the first group and 9 users in the second. Oral opinions were compared within and between the groups together with results from a hierarchical sorting of sites based on general preference, appearance and credibility. The results showed both differences and similarities between the groups, whereas the greatest common factor was the preference for the “clean” and “calm” design, ranking both prototypes higher than their originals. The conclusion was that it is indeed difficult to design for everybody because of individual needs and preferences, but including disabled users in the design process highlights general problems that could otherwise have been missed, while also making it easier to implement customizable options for disabled users.

Author Keywords

UX, Accessibility, Inclusive Design, Universal Design, Design-for-all, Cognitive Disabilities, News Websites

INTRODUCTION

In recent years the news industry has seen a drastic increase in digital subscriptions, a trend motivated in part by improved and accessible digital devices allowing for media consumption anywhere and anytime [Aranyi et al, 2016]. This puts greater demand on the various interfaces, which should be simple and engaging to use for as many readers as possible, something that is even more important today when alternative sources with questionable credibility compete for attention. The ability for everyone to use a service regardless of individual functionality is referred to as “accessibility”, a term that has been discussed for quite some time but only recently in the context of news sites. Implementing accessibility into websites is often mentioned to be both socially and economically beneficial, as it includes a wider user group, whereas in some cases it is even required by the law¹. Additionally, it is debated whether accessibility can improve the experience for users without disabilities as well [Lawton Henry et al, 2010].

At the Swedish news company *Bonnier News*, owner of popular brands such as *Dagens Nyheter* (DN) and *Expressen*, the digital departments have just begun looking into accessibility to include more users. However, according to results from user testings, as well as word of mouth, the sites also receive criticism from non-disabled users. Could a universally accessible design approach be the solution, or is it simply impossible to create a design that fits all as claimed by some researchers [Steinfeld & Jordana, 2012]?

The purpose of this thesis is to reevaluate the designs of widescreen news sites by focusing on accessibility and universal design, and include users with cognitive

¹ See EU Directive 2016/2102

<http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016L2102&rid=3> and the Discrimination Act (2008:567)

<http://www.government.se/information-material/2015/09/discrimination-act-2008567/> [Accessed December 8 2017]

disabilities (Dyslexia, ADHD, ADD and Autism/Asperger syndrome) in the process to see if it can improve the experience for everybody regardless of functionality. If a more inclusive design proves to be preferable overall, it would suggest that an accessible design approach could be beneficial in both attracting new readers as well as keeping current ones. Furthermore, since accessibility is still a work in progress within this area, taking the lead could give Bonnier News the upper hand on competitors within the same field, as well as to serve as an example for other business areas. Since DN is planning to rebuild their website in the near future, it would thus be a great opportunity to try a new accessibility oriented design approach, where this thesis may serve as an inspiration of how such can be implemented.

The project will focus on visual accessibility as it is relatable to most users, and not on technical methods such as screen readers, which is mostly used by visually impaired. Furthermore, due to the time scope of this study the user testing will mainly concentrate on the frontpage of each site.

Research question

Can a more accessible design be applied to the major sites of Bonnier News in order to improve the experience for all users regardless of cognitive functionality?

In order to answer this question, the two biggest news sites of Bonnier News - *Dagens Nyheter* and *Expressen* - have been evaluated on accessibility aspects together with *Aftonbladet*, *The Guardian* and *BBC News*. Based on these findings, two prototypes were developed and compared to the mentioned sites in a qualitative user study consisting of participants with and without cognitive variations.

BACKGROUND

Web Accessibility

Web accessibility can be defined as the ability for everyone to use a website, no matter the individual functionality [Lawton Henry, 2005]. The term is often confused with usability, i.e. how easy something is to use, though they are better described as two separate but interrelated factors that together make up the user experience. An accessible website may be particularly useful for some individuals, but less so for others [Yates, 2005]. Making an accessible product is challenging in that sense, since users require different assistive methods depending on their abilities. Not even within the same diagnosis group can one make a general assumption between individuals [Borg et al, 2015].

Yet it is debated whether accessibility is something that can be beneficial for everybody, which has given rise to terms such as 'universal design', 'design-for-all' and 'inclusive design', where the goal is to develop a product that can be

used by as many as possible [Persson et al, 2015]. This concept is often described using the seven principles of universal design - it should be useful and marketable for a diverse user group; be flexible and adaptable to the users' needs; be simple and intuitive; communicate necessary information effectively; have tolerance for error; require low physical effort and offer size and space for approach and use [Connell et al, 1997]. One part of these initiatives is to involve disabled users in the usual design process, making them feel included [Newell et al, 2002]. Another advantage is that taking into account the requirements of disabled users from the beginning in the general design process can make it both cheaper and easier to make adaptations at a later stage [Abascal et al, 2005]. Furthermore, W3C's Web Accessibility Initiative (WAI) promotes inclusive design by mentioning its benefits for the general public, stating that by involving disabled users in the development process, improved usability comes for free [Lawton Henry et al, 2010]. However, since the user base is far from uniform as previously mentioned, some researchers claim that it might even be impossible to fully utilize a universal design that fits everybody, calling it an utopian vision [Steinfeld & Jordana, 2012]. This is reflected in one of the definitions of the term 'inclusive design', saying that it should aim for a design that is "accessible to as many users as *reasonably* possible on a global basis", the 'reasonably' added to point out the difficulties in removing all barriers for everyone. The problem with this definition is however that it may be interpreted as allowing designers to disregard measures of accessibility if they are too difficult to implement [Persson et al, 2015]. A common method to avoid such problems is to use adaptive methods instead, where the user can change the interface design themselves depending on their requirements [Newell et al, 2002].

Despite the many advantages with accessible products, the development progress has been slow. Standards and guidelines, where the most common is W3C's WCAG (Web Content Accessibility Guidelines), often include well written documentation on disabilities regarding hearing, vision and mobility, but missing information on cognitive disabilities [Borg et al, 2015]. While lack of knowledge is one factor, other common reasons to why some companies have previously avoided following guidelines are money, time or the mistaken belief that an accessible website is a boring website [Yates, 2005].

Designing for Cognitive Accessibility

Some examples of cognitive disabilities are dyslexia, ADHD (Attention Deficit Hyperactivity Disorder), ADD (Attention Deficit Disorder), aphasia, autism and mental health issues. The common denominator for these diagnoses is the difficulty in processing information, resulting in problems with for example understanding, remembering,

navigating or concentrating [Borg et al, 2015]. As such, some fundamental principles to have in mind when designing for these individuals is to use a simple and predictable design avoiding elements of distraction. The following is a collection of common guidelines that reportedly works well for users with cognitive disabilities in the context of websites [Abou-Zahra, 2017; Friedman et al, 2007; Pernice et al, 2001, WAI, 2017]:

Interaction: Minimize scrolling, use filters, multiple navigation methods (links, search), customizable options, clear navigation titles, back/return buttons (tolerance for error).

Structure: Grouped content, wide margins, few columns.

Graphics: Consistent design, images and text combined, larger text (minimum 12 pt), high contrast, soft colors, avoid animated or flashing content.

A recurring notion in many articles is the problem with following accessibility standards and guidelines blindly. One study discovered that a relatively small amount of accessibility issues can be discovered by comparing to WCAG standards, about 42% for WCAG 1.0 and 49% for the updated WCAG 2.0 with 95% confidence. Instead, the focus should lie in actual user testing, where the design choices can be validated in context [Rømen et al, 2012]. Due to the occasional difficulties in finding disabled test users compared to others, some designers are known to have used simulated disabilities to represent a certain group, e.g blindfolded users instead of visually impaired, as mentioned by Sears et al [2012]. Such methods may be allowed in the beginning of development, but must otherwise be avoided as much as possible since it may yield inaccurate results. If the size of the test group is limited, alternative methods such as repeated tests with the same users can maximize the results. Additionally, when comparing groups with different abilities, it is important to try to keep the groups otherwise as similar as possible, such as age, education or experience [Sears et al, 2012].

Other tools for automatic accessibility validation are also available online.²³⁴ These programs compare the site code to WCAG guidelines, which can be useful for evaluating the basics. However, like simulative methods these services should also be regarded as a complement to user testing, since technology cannot replace interaction from actual users [Rutter et al, 2007].

² aXe Google Plugin, available for download <https://chrome.google.com/webstore/detail/axe/lhdoppojpmngadmndnejfpokejbdd?hl=en>

³ AChecker, available online <https://achecker.ca/checker/>

⁴ Wave, available online <http://wave.webaim.org/>

In a widely cited study by Paul Jaeger [2006], American government websites are investigated in terms of accessibility using a multimethod approach consisting of automatic evaluation, expert evaluation (comparing to existing guidelines), user testing with disabled users and a questionnaire directed towards each site's webmaster in this particular order. The user testing was conducted by first having a set scenario of tasks to complete, followed by a think-aloud session allowing the users to freely explore the website, a common structure proven to be effective when evaluating usability and accessibility [Jaeger, 2006; Brajnik, 2008].

User Experience Design and Accessibility on News Sites

Users visit news sites to search for specific information or to browse leisurely to see what is happening around the world. In that sense, there are two aspects of User Experience (UX) design that are important for the general experience of news sites - pragmatic (usability) and hedonic (fun, engaging)[O'Brien et al, 2013]. Indeed, these aspects also seem to be correlated, as discussed by for example Aranyi et al [2016] who mention 'beauty' to be promotive to the perception of usability. Additionally, the same authors also noted that trustworthiness is another contributor to the overall experience when it comes to websites specializing on news.

Even though digital accessibility has been studied for some time, it is quite recently that results have begun to show on news sites. In 2014, The New York Times redesigned their web page, and simultaneously incorporated accessibility guidelines in their design standard [Fitzgerald, 2016]. During the same time, BBC took it one step further and established a department called *My Web My Way* that is solely engaged in accessibility questions, creating their own open source guidelines and publishing relevant research [BBC, 2014]. A noteworthy example of universal design is NPR One, an audio app streaming radio and podcasts. When doing user testing with visually impaired users, the developers discovered challenges with using the app, even though an audio app in theory should be especially useful for people who use hearing over vision. Therefore they made the decision to change the standard layout completely by making the typefaces larger and decreasing the amount of screen content, simplifying the experience for everybody [Fitzgerald, 2016].

Bonnier News

Bonnier News is one of the six organisations that constitute Bonnier AB, the leading media company of Scandinavia as well as one of the oldest with its establishment in 1837 [Bonnier, 2017]. The main area of Bonnier News is printed and digital news with well-known brands such as *Expressen*, *Dagens Nyheter* and *Dagens Industri*. In this

study, it is primarily Dagens Nyheter and Expressen that will be investigated because of their differences and respective popularity, Dagens Nyheter being Sweden's most read morning paper while Expressen is one of the two biggest evening papers.

Previous studies

In 2017, the UX team of Dagens Nyheter conducted a think-aloud user testing on their website in order to study the navigation. 8 users (f=4, m=4) took part in the study and received tasks of navigating the website, such as finding specific content, while sharing their thoughts throughout the process. The opinions were both positive and negative - where the most commonly used descriptions were 'clean' followed by 'too much advertising', 'informative' and 'disorganized'. Some users also experienced the website to be boring and lacking of a satisfactory overview.

Regarding the navigation, the labeling of pages was criticized as they were perceived to not be explanatory of their content. The wish for an improved categorization was also expressed, since some pages are currently sorted improperly, e.g Motor under Economy. Some participants also mentioned the desire of having an option to sort and filter content [Dagens Nyheter, 2017].

METHODS

This thesis follows a similar multimethod approach as Jaeger [2006], comparing several websites through automatic evaluation followed by manual comparison to existing guidelines, and finally a qualitative user testing with cognitively disabled users. Additionally, the same test was also conducted with a non-disabled control group in order to answer the research question whether a more accessible design can be beneficial for users regardless of functionality. Based on the pre-analysis of existing websites, two prototypes were developed and discussed in the user testing along with the other sites.

Pre-analysis

To get an overview of current news sites and their relation to accessibility, some of the most well known websites of Sweden and internationally was chosen for analysis. The results of this evaluation laid the foundation for the prototypes and user study. The following is a descriptive list of the websites evaluated:

Dagens Nyheter (DN) - Sweden's leading morning paper, has recently started looking more into accessibility.⁵

Expressen - Currently Sweden's most read evening paper (printed).⁶

⁵ Dagens Nyheter, 24 november 2017. www.dn.se

⁶ Expressen, 24 november 2017. www.expressen.se

Aftonbladet - Main competitor to Expressen. Sweden's leading news channel online.⁷

BBC News - The world's largest broadcast news operation. Known to work much on accessibility, has different layout than the sites of Bonnier News.⁸

The Guardian - One of few news sites that have chosen filter options, allowing the user to hide content on the front page. Officially welcoming users' opinions on accessibility since January 2017.⁹

Each website was accessed by multiple automatic analysing programs (*AChecker*, *Wave* and Google's *aXe*), since results tend to differ depending on service. However, since these programs are not very efficient in validating visual aspects apart from e.g. color contrast which can be deduced from the website code, more focus was put on manual comparison to relevant guidelines (see *Designing for Cognitive Accessibility* on p.2).

Prototypes

With the pre-study as a starting point, two interactive mockup prototypes based on Expressen and Dagens Nyheter were developed using the prototyping tool Axure RP 8. Both prototypes are inspired by the layout of BBC and The Guardian, minimizing scrolling by decreasing content, grouping articles and allowing the user to hide and show articles. The style aims to be cleaner and more consistent. The advertisements are moved from the side margins into the main column, with the goal of incorporating them into the design. The layout occasionally has more than 2 columns, breaking one of the guidelines. However, since this particular guideline is not as commonly mentioned as the others, it will be discussed with the test users.

User Study

The user study was conducted on two test groups, 5 people with cognitive disabilities and 9 people without. In

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<http://www.digitalnewsreport.org/survey/2017/sweden-2017/>, 24 november 2017. www.aftonbladet.se

8

http://news.bbc.co.uk/aboutbbcnews/hi/this_is_bbc_news/default.stm, 24 november 2017. www.bbcnews.se

9

<https://www.theguardian.com/help/2017/jan/21/help-us-improve-the-guardian-websites-accessibility>, 21 January 2017. www.theguardian.se

accordance to Sears et al [2012], all participants were students between ages 21 to 31 to minimize differences other than cognitive functionality.

Table 1: Participants from the first test group with cognitive disabilities.

| Test subject | Age | Diagnosis |
|--------------|-----|-------------------|
| A | 27 | ADD/Autism |
| B | 31 | ADD/ADHD/Asperger |
| C | 25 | ADD |
| D | 21 | Dyslexia |
| E | 30 | Dyslexia |

Coincidentally, all subjects with cognitive disabilities who accepted the request to be a part of the study were female. It was important that the test subjects were able to meet up with the researcher in person for the study, since users may not always be aware of the problems they encounter, making observation and follow up questions essential [Brajnik, 2008]. Another requirement for the first test group was for the participants to have been officially diagnosed for their particular disability. The participants were recruited through student groups on Facebook, where A, B and C volunteered, while D and E were asked directly. The second test group consisted of 9 non-disabled students of the same ages as the first group, 5 females and 4 males. All subjects knew the researcher of this study from before, except for subject B and C who had no prior relationship to the researcher.

All but one test subject consumed news on a regular basis through different sources. 8 participants actively chose DN as one of their primary sources, and 8 mentioned Aftonbladet. 5 participants mentioned consuming news through indirect sources such as Facebook, Reddit and Omni, which are all sites with content feeds linking to external sources. Additionally, 3 participants were active readers of BBC News.

Before the real study, a test study was performed on one non-disabled male user in order to get feedback on the method. This test session lead to some rephrasing of questions, as well as some minor corrections on the prototypes (e.g. correcting sections that were not entirely centralized, which attracted unwanted attention). The results of this test session were satisfactory enough for the process to move on to the actual study, but will not be a part of the end results.

The study consisted of interviews where each test subject got to interact with the different news sites, both existing

and prototypes, while answering questions about their opinions. The reason for using all websites in the study was both to compare the existing sites to their potentially more accessible counterpart prototypes, as well as to compare them to each other in case of factors that were missing from the prototypes but could be used for future implementations.

As in previous studies regarding user experience on news sites [Pesonen et al, 2015; Dagens Nyheter, 2017], the process was divided into two parts - one where the user was encouraged to freely explore the frontpage and voice their opinions (similar to a think-aloud process), followed by interactive tasks such as searching for a certain topic - a structure that is also commonly used and proven to be effective in accessibility studies [Jaeger, 2006; Brajnik, 2008]. The tasks were formed such that language skills were minimally required, where the participants would search for news about sports (being the same in English and Swedish) or a certain person, seeing whether they would scroll through the feed, use the search field or use the top menu. During the first part, the researcher asked questions regarding accessibility aspects such as scrolling, wide margins and structure of articles, if the topic had not already been brought up by the test subject themselves. Each site was viewed and discussed for as long as the test subject wanted to and the researcher felt was satisfactory in terms of results. In the end of the study, each participant got to rank the websites on appearance, trustworthiness and general preference using printed cards depicting each site. The order of which the sites were shown to the test subject was changed before each interview, and was planned beforehand in order to be as evenly distributed as possible.

Before each session, the participants signed a consent form informing them that the results were to be made anonymous, and the session could be paused or aborted by them whenever without a need for an explanation. Every participant was told of the major topic of the thesis (universal accessibility on news sites) prior to the study.

The news sites were viewed on a 13” laptop in quiet rooms, and sound from each session was recorded for documentation purposes with approval from the test subject. The recorded material together with notes from the sessions and the site ratings served as the basis for the inter- and intra group comparisons discussed in the Results section.

RESULTS

Pre-study

In the automatic evaluation, BBC had the fewest number of errors, while Expressen and DN generally ranked the lowest with most errors, with results differing depending on program. Many of these errors were caused by insufficient

color contrast, as well as missing descriptive attributes which inhibits technical solutions such as screen readers.

When comparing the sites to existing guidelines manually, none of them fulfil the requirements entirely. It is however argued that BBC and The Guardian would rank high because of better grouping, less scroll, consistent styles and less animated content, The Guardian also having filter options to hide sections. Expressen and Aftonbladet have a lot of content and different styles, much of which goes against rules of accessibility. DN have less content, but utilizes a longer news feed with more scrolling, as well as a lack of satisfactory overview which was also mentioned by non-disabled users in the internal study.

User study

Table 2: Results from the user ranking, based on average score.

| Rank | Group 1 | Group 2 |
|------|------------------|----------------|
| 1 | DN Prototype | DN Prototype |
| 2 | Exp Prototype | The Guardian |
| 3 | BBC/The Guardian | BBC |
| 4 | Dagens Nyheter | Dagens Nyheter |
| 5 | Aftonbladet | Exp Prototype |
| 6 | Expressen | Aftonbladet |
| 7 | | Expressen |

Group 1

The participants with cognitive disabilities were generally very positive towards the prototypes, stating that they were calmer and provided a better overview. 4 out of 5 subjects ranked both prototypes higher than their original predecessors. Subject E, with dyslexia, also said that the prototypes were easier on the eye but preferred Aftonbladet because the overall layout and texts made it simpler for her to “cheat read”, i.e. getting the general subject without having to strain herself too much. Otherwise, Aftonbladet was ranked the lowest by two subjects, while the other two ranked Expressen lower. BBC and The Guardian were ranked both high and low, and DN very often somewhere in the middle. Depending on their respective diagnosis, the points of criticism tended to differ as the subjects all faced different challenges when consuming news, but there were several recurring opinions throughout the study.

Both Expressen and Aftonbladet received criticism for having too much content, where some participants mentioned feeling stress or even angst before opening the site. Here all participants thought negatively about the advertisements, which was distracting and claimed a lot of

space. It was also pointed out that it was sometimes difficult to distinguish advertisement from real news. Subject A, with ADD and Autism, mentioned that it felt like she was not in control when reading these sites because of the content competing for attention, perceiving it negatively.

DN received more positive criticism, where the subjects considered the site as being more “clean” because of less content and a simpler color scheme. Subject D with dyslexia stated that she sometimes found it difficult reading the text because of thinner and occasionally cursive fonts. Additionally, DN sometimes uses red text which was considered more difficult to read. Otherwise, DN was praised for having color coded subjects, something that is missing from both international news sites. Subject E thought the images were too big in size, making the text underneath them difficult to focus on.

Regarding the long scroll on the Swedish sites, 2 subjects stated that they did not like this method of navigation. Subject C mentioned that a long scroll is useful for free browsing, but not when the reader wants to find specific content. Subject D liked to use the scroll function to remove rows of text to help with the reading within articles. Subject A had no opinion on scroll at first, but liked the navigation of the prototypes.

Both BBC and The Guardian were praised for their different layout, with grouped content and a clearer structure. The Guardian received some criticism by the users with dyslexia for the background colors, making the text more difficult to read. Only subject E did not like these sites, much because of their unfamiliar structure. The notion of having to learn how to efficiently navigate these sites was also brought up by subject A and C. Two participants mentioned that BBC did not look like a news site, one of them noting a resemblance to a mailed newsletter, although it was perceived as neither positive or negative. Additionally, it was also mentioned that articles on BBC without pictures failed to attract attention, much because of images being considered important to all test subjects of this group.

Similar to BBC and The Guardian, both prototypes received positive criticism for their structure and grouping. All users thought that the pages felt more spacious than the other sites because of more margin in between articles. Furthermore, having wide side margins further added to this perception, Subject A stating that it resembled reading an A4-paper, considering it a natural and pleasant experience. Here it should be noted that the width of the main content is the same as the original Expressen and DN, only centered with the advertisement moved to the main column. This center placement was also considered as positive. The participants also found the option to hide and show content satisfying, but they rarely discovered this feature unless pointed out by

Table 3: Summary of major opinions from both groups, including existing sites and prototypes.

| Group 1 (<u>with</u> cognitive disabilities) | | Group 2 (<u>without</u> cognitive disabilities) | | Both | |
|-----------------------------------------------|----------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------|------|-------------------------------------------------|
| + | Important with images and text combined | + | Good with more content provided there is structure, which provides better overview | + | Clean and calm design |
| - | Feeling of stress and angst by Expressen and Aftonbladet | | | + | Uniform design, grid. |
| - | Difficult to read thin, cursive or red text on DN | + | Acceptable with long scroll if fulfilling certain criteria, used to it | + | Color coding |
| - | Generally negative with long scroll | + | Can filter content internally, ignore content of less interest | + | Wide margins and centralized |
| | | | | + | Clean and structured design creates credibility |
| | | | | - | Too many different sizes on text and images |
| | | | | - | Images too big in size |
| | | | | - | Advertisements |
| | | | | - | Animated content (autoplay) |
| | | | | - | Too much content |

the researcher. The font size could have been bigger on both prototypes.

On the question whether appearance affects the trustworthiness of a news site, all participants agreed and ranked the prototypes higher than their original versions, with one explanation that it feels more trustworthy if articles do not try to attract attention with colors, big fonts or animated content. BBC and The Guardian also ranked high with the motivation of both having a more professional looking design, as well as having a reputation of an internationally known brand.

Group 2

In the second group, consisting of participants without cognitive disabilities, the DN prototype also ranked the highest based on average score, while Expressen ranked lowest with Aftonbladet just above. Here BBC and The Guardian both ranked higher than Expressen’s prototype, where this prototype was ranked second by the first test group.

Just like in Group 1, the major criticism of Expressen and Aftonbladet were that of the amount of content, which was repeatedly described as being too much and distracting. Despite of this, some participants mentioned that they did not experience much problem when using the sites, stating that they were probably used to it and knew how to filter unwanted information. One male participant, subject L, even ranked Expressen the highest, but was unsure as of

why. This participant thought Expressen was very “chaotic”, but liked this aspect regardless because of the visual stimulation, being able to get a lot of information simultaneously. The same participant also enjoyed the moving thumbnails of TV reportage because it was a neat feature, something that has been described negatively by all other users. The structure of the advertisement was also regarded as negative by all users, but some were less bothered by them than others. Subject N, who was exposed to Expressen first followed by Aftonbladet, mentioned that he probably got used to the amount of advertisement from Expressen, making them simpler to overlook on Aftonbladet’s site. Additionally, the same participant stated that he almost stopped looking at images altogether in favor for text, because of the graphical advertisements blending together with actual news content. Subject M also mentions the advertisements as distracting, but said that she had an “internal filter” as a result of habit, enabling her to cope with that.

Again like the first group, Group 2 also found DN better than the other Swedish sites because of less content and a more professional look, although not perfect. Several users complained about the content being of different sizes and uneven placements, suggesting that it can benefit from changing this in order to improve the “clean” look further. One user mentions the different sized images as something positive however, making it not feel “uniform and boring”. Two users thought the images were too big and would

instead prefer more articles, provided that there is a better structure.

Regarding the scrolling mechanism, the opinions were varied. Here 4 participants stated that they were used to this method and it felt like a natural way of navigating a news site. 2 participants thought that a long scroll can be used if there is hierarchy, i.e. recent or bigger news higher up, but if the scroll is too long another method may be preferable. The same participants would instead like to see more categorisation and/or filter options implemented together with the scrolling, if such needs to be used. One user did not like the long scroll at all and another user preferred the scroll instead of clicking between content. Subject J mentions that scrolling is a nice way of navigating on smart phones, but on a computer a better overview is preferred. The remaining participant had no particular opinion about the scroll.

Both BBC and The Guardian were praised for their grouped structure and ability to fit more articles on the screen. Several participants mentioned that the sites have a lot of content, but it works better in this context thanks to the grid-like design. Subject I liked the design but thought that there was a bit too much still. As for The Guardian, the participants mentioned both “clean” and “boring”, where subject L thought that it looked very serious and much like a medical newspaper, finding the design not very interesting. Subject M described The Guardian as looking more professional, which added to the feeling of trustworthiness. Only one participant noticed the hide and show features of The Guardian, the others noticing after pointed out. This feature was however received positively by almost all users, where one of them mentioned that he would rather like an option for showing more content. Additionally, both BBC and The Guardian received positive criticism for not having as much advertisements as the Swedish sites. Both sites could however have used more color coding as mentioned by 4 participants. 4 participants also criticised BBC for not having a clearer border between articles.

Overall, the prototypes received mostly positive criticism by all participants, who again liked the grouped content and spacious design. A recurring opinion was that of uniform design and grid-like structure, which was done better in the prototypes than the originals according to those who mentioned this design choice. On this note, DN’s prototype did better than Expressen, where the latter’s article structure was mentioned to be less uniform. Subject F mentions that she found it difficult to say whether the prototype of DN and the original was better because of old habit, but states that it is “probably easier to get tired of the old version”. All participants thought that the wide margins felt better, with advertisements moved to the main column.

Regarding the aspect of trustworthiness, all participants believed the design to have a considerable impact on the credibility of the site. Here several participants thought that the design of the prototypes felt more professional and added to the credibility. Subject F stated that the clean design of the prototypes fitted DN more than it fitted Expressen as a gossip paper, and that the professional design goes against the expectations. On the other hand, subject M stated that Expressen would only benefit from looking more professional, since they are a newspaper as well.

DISCUSSION

When comparing the results between both groups, there seem to be recurring opinions and similarities indicating general problems. However, where participants with cognitive disabilities face obstacles that makes it difficult for them to use the site at all, the second group speaks more about personal preference. Examples of such are the main issues with the Swedish news sites that almost every participant commented on - the amount of content, as well as advertisements. Here users of the first group mentioned that they could barely use sites that contain too much content, and even less so if there are animated elements, which is distracting and sometimes even overwhelming. The second group, without known cognitive disabilities, also criticised these aspects for the same reasons, but some users mentioned that they could overcome it by internally filtering content of interest and ignore any other elements. This corresponds well to the literature about cognitively disabled users having problems with processing information [Borg et al, 2015]. Another clear example of this “problem vs preference” aspect is the image size, where some users of the second group thought images of DN were too big, claiming more space than actually needed that could be used for other articles, whereas the users with dyslexia found that the image size made it difficult to read the text below. This aspect suggests that there are problems that may be excused or simply overlooked by the second group, but when putting them in contrast with the first group they might become more attractive to solve because of necessity.

Another similarity is the word “clean”, which was repeated multiple times by both groups throughout the study. In this context, the word was used to describe a site that was structured with less distracting elements and more space. “Clean” was often used together with “calm”, where the participants mentioned that sites such as Aftonbladet and Expressen evoked a stressful feeling, perceiving it negatively. This is one of the aspects that were praised by both groups in the prototypes, the feeling of cleanliness and calmness that improved the general experience. In some way, this may be tied to one of the seven principles of universal design; the ability to communicate necessary

information effectively, i.e. without unnecessary disturbances, which is arguably one of the most important qualities on a news site that specializes on providing information.

Additionally, when discussing credibility of a news site, both “clean” and “calm” were mentioned to be important factors that contribute to the feeling of trust. This is an interesting observation, as it points towards the theories of Aranyi et al [2016] and O’Brien et al [2013], who discusses ‘beauty’ to be promotive of the perception of usability, as well as trustworthiness to the general experience. In this study, it is difficult to say whether “beauty” is a fitting term for the perception of the designs, but it can be established that a clean and calm website is generally preferred in the news context, and this in turn promotes the perceived credibility as mentioned by the test subjects. In other words, apart from the brand name, trustworthiness is also affected by the visual appearance of the media. Furthermore, the results of the first test group indicates this design to be more accessible as well.

In comparison to this particular visual preference among the test users, one of the explanations to why designers have previously shied away from universally accessible solutions was the belief that an accessible website may be regarded as “boring” by ordinary users [Yates, 2005]. In this case the conception would refer to the guidelines promoting less content as well as distracting elements such as animations, or colors that complicates reading. Based on those assumptions, a “cleaner” website could very well be described as boring, which was also commented upon in DN’s own user study, as well as by one of the users in this study who thought of The Guardian as boring because of its design. However, it would seem like it was preferred by the majority of the test users, who mentioned looking for a more serious design in a site specializing on news. If this was the case, together with the notions that it increases the credibility and fits the rule of effective communication of information, perhaps universal accessibility is more befitting to news sites than others.

Another interesting subject that was brought up was habit and expectations. As previously mentioned, many participants of the second test group mentioned habit as an important factor to their preferences. The main example here is the scroll navigation, where the users who stated that they liked the long scroll to browse news thought that it had a lot to do with habit, i.e. they were used to this method of navigation on news sites. However, all subjects from the second test group who had these opinions answered that less scroll fitted the design of the prototypes, and would probably be preferable with longer use, if not directly. Meanwhile, the suggestion of having to learn how a website works was also mentioned when the participants did not

understand the color coding of for example The Guardian, or the red line connecting articles on DN. Papers on accessibility sometimes discuss this, as one of the challenges for some cognitively disabled users is to understand information, where learning is often required [Borg et al, 2015]. This further demonstrates the accessibility guidelines of aiming for an intuitive design with additional options of interaction, in order to provide other means of understanding if the user encounters problems with the main alternative. Regarding expectations, it was mentioned by several users that they expected a specific design from certain news sites. As mentioned in the Results-section, there were different expectations between morning and evening papers, in this case DN and Expressen. The common opinion was that a brand like DN would be more befitting of a serious and structured design, while evening papers like Expressen and Aftonbladet should have another more playful design that fits their reputation. However, if said design excludes users by being too disorganized, it can be argued whether it really is worth it. As previously mentioned, an accessible design does not necessarily mean a “boring” design, just decreasing the content and keeping a uniform and structured design throughout makes a considerable difference without affecting the graphical profile too much, which was one of the goals when designing the prototypes.

However, the biggest and perhaps most difficult part of the discussion is that of individuality. Just as other studies within the field mention [Borg et al, 2015], every user is different regardless of disability, which was shown by the results of this study as well. Even though there were similar opinions within the groups, the results were not entirely homogeneous. In the first group there was still one person who completely went against the other users and ranked Aftonbladet above the sites that in theory should be more accessible. The same happened in the second group, where once again one user alone preferred Expressen, while at the same time acknowledging the problems with this particular site in terms of user experience. This individuality is the issue that designers face when trying to design for all users. So is it really possible to create a design that fits all?

This is quite a difficult question to answer, and perhaps the answer does not lie in the result at all, but in the process. According to the results of this study, it would seem like taking accessibility questions into account, as well as performing user studies on disabled users in an early stage of development, can help with highlighting general problems that affects all users in some way or another. It does not aim to create a design that fully fits all, but to create awareness of user problems from a wider perspective, where comparisons between user groups can clarify problems within each group. Individuals must be allowed to be individual, and in this case interactive digital

solutions provide great opportunities to customize each user experience. As suggested by the “preference vs problem” theory that was previously mentioned, the process in itself may be able to highlight problems that might be overlooked by non-disabled users, because they are either used to it or finds it slightly annoying but can overcome it by internally filtering content.

On that note, the indication that actual user testing is important since automatic testing, simulations and guidelines cannot present the entire picture was further implied by this study. With the large amount of guidelines available, it becomes very difficult to follow each one, especially when they depend on context, which was experienced first hand when developing the prototypes. Through the user testing, some theories were confirmed while other unexpected opinions were brought up, such as some users preferring Expressen and Aftonbladet for different reasons.

When discussing the results with two representatives from the design and developing team of Dagens Nyheter, this ‘universal design’ approach was received positively and described as a “soft start” in the process of making a website more accessible, as it includes design choices that are familiar in general while creating a good foundation for additional changes that are more specific for disabled users. Furthermore, some changes are rather small, such as changing image sizes, but can make a big difference in terms of user experience. This mindset is very positive indeed and constitutes one of the goals of this thesis, to demonstrate the benefits of accessibility and that it does not have to be very complicated. Regarding the “clean” and structured design, one of the users from Group 2 interestingly mentioned the site *Reddit* to have a satisfying design, with a very gridlike structure using the same image and text style throughout (*Reddit* was mentioned by other users as well who used it for news consumption as an alternative to traditional news sites). This particular aspect had also been heard briefly by one of the designers from DN. Implementing the news feed of Bonnier News’ sites in a similar manner would therefore be quite interesting in order to see how this very scaled down design would be received among users with and without disabilities, or if it proves to be too extreme in the context of traditional news on bigger screens.

Method criticism

There is a possibility that the criticism of the prototypes was affected by the relationship to the researcher and creator of said versions, i.e. being more positive than otherwise. To account for this, the creator of the prototypes were described as “them” instead of “I”, with questions such as “What could *they* do different?”, as well as avoiding telling the subjects where the prototypes actually came from. The

participants were also specifically encouraged to find anything negative about the designs that they could think of, whereas several aspects that could be improved were brought up. On that note, the intention of the prototypes was not to create perfect designs from the beginning, but to investigate each design choice and compare to the other websites.

During the study it became apparent that the printed versions of the sites could be perceived differently than when observing them on a computer screen. This was mentioned by one user in particular who wanted to change their previous opinion of a site when compared on paper to the other printed sites. The ranking of the sites were however discussed with each participant, comparing their opinions to what had been said earlier in order to avoid results being affected by perception.

Since all users in this study were native Swedish speakers, having English speaking sites could potentially affect the results. However, almost all users mentioned English speaking sites as part of their daily news sources, thus being used to it. Furthermore, the study did not actively test the users reading abilities, but focused on the general design and appearance, where the interactive tasks required minimal language skills. However, if the study would include older subjects who might not be as practiced on other languages, using sites with their native language would probably be advisable regardless.

In order to get more accurate results, more users with cognitive disabilities should be used in the research. Initially, Group 2 was supposed to match Group 1 in numbers, gender and age, a preferable method as explained by Sears et al [2012]. However, since only 5 participants with cognitive disabilities were willing to participate, more users were added to Group 2, including males. This decision may be excused by the research and design being developed with disabled users in mind from the beginning, with user testing on non-disabled users being more important in a later stage. Apart from that, there is an equal number of female participants of the same age in both groups. The results did not indicate any particular differences between genders, although a bigger test group could prove otherwise. This thesis can however not draw any conclusions on differences between genders with cognitive disabilities as only female users participated.

Future studies

For future studies, a bigger test group with additional disabilities could bring up more interesting results that were not mentioned in this thesis, although the current results do indicate a trend that should be taken into consideration when designing the current news sites. The next step could instead be to develop working prototypes with a real time

article feed and test them on users with and without disabilities for a longer period of time. In addition to see how using the sites in a real life setting would affect the users, it would also pinpoint issues of users having difficulties in learning how to effectively use the site.

Even though advertisements are generally criticised by many users, they generate a considerable part of the economic income. Apart from news content, it would also be necessary to incorporate real ads (some of which are animated) in the prototypes to see how it affects the experience.

Although this thesis focused on the news business, similar studies can also be done within other fields to see whether the universal design method works equally in other contexts, further investigating the notion that some accessibility guidelines seem to fit news sites in particular, as previously discussed in this paper.

CONCLUSION

This thesis has investigated accessibility on news sites, and whether designing with cognitively disabled users in mind can improve the experience for everyone, regardless of functionality. The results demonstrated what has been discussed in previous studies; that all users are individuals with different needs and preferences, making a universal design difficult to achieve. However, there were also common opinions between the test groups, such as the wish for a “clean” and “calm” news site, which also seems to increase the credibility of the content. This thesis argues that although a truly universal design may be close to impossible, it should not deter designers from adapting such a design method since the process in itself may shine light on general problems that would otherwise be overlooked.

ACKNOWLEDGMENTS

The author would like to thank Peter Frey of Bonnier News for green lighting the project, as well as Sandra Gerger, Richard Furberg and Jenny Andersson from the developer team of Dagens Nyheter for providing general knowledge and results from previous research. Thank you also to Ann Lantz at KTH for your expertise in the field of accessibility. And finally, many thanks to my supervisor Andre Holzapfel and the student supervision group.

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APPENDIX

Expressen Prototype

EXPRESSEN
Måndag 16 oktober 2017 ÅRETS DAGSTYCKNING 2016

Har kan ni svälja allt det som SD-topparna håller på med?
Lars Lindström

När Ulf Kristersson pratade var jag med om något unikt
Alex Schulman

START NÖJE SPORT TV LIVSSTIL PODCAST KULTUR LEDARE VÄDER A TILL Ö SÖK LOGGA IN

Senaste Nytt - Göm

En man skadad i knivdåd vid skola

Misshandling vid skola i Stockholm - gärningsmannen hade stöckvapen

Vet du mer om händelsen? Tipsa Expressen - hör av dig till [71717](tel:0871717)

Text och TV

Nya staketet ska rädda Gävlebocken

Nu byggs bocken upp igen - Skyddas med nya rutiner - "Satsar alltid hårt på säkerheten"

Panik före inflyttningar i omtalade husprojektet

Björn Ulvén:s storfirare i bolaget - Kunder försöker sälja sina bostäder med förlust - "Vissa är jätterädda"

Jeffrey, 64, försvann 1977 - hittades vid liv i torsdags

Försvann spårlost - Alla trodde att han var död

Nya beskedet: USA sätter in kärnvapenflyg dygnet runt

Första gången sedan kalla kriget - "Ytterligare ett steg för att förvissa oss om att vi är beredda"

Tilde: "Herregud - det är så konstigt"

Tilde de Paula reagerar efter Lars-Åke Lagrells uttalande

"Jag blev chockad av hans uttalande"

Landslagsstjärnorna reagerar starkt på utspelat

Förbundet agerar nu: "Allt ska upp till ytan"

Håller extrainsatt möte efter uppgifterna om sexuella trakasserier

Räkna på vad ditt lån skulle kosta

Börja räkna på lånet

[Visa mer](#)

Nyheter

1. Virtanen anklagas för sexövergrepp
2. Kvinna hittad död i skog - finns tecken på yttre våld
3. Carl-Gustaf, 67, fällde ovanlig älg
4. Två barn har förts till sjukhus efter krasch
5. Kranföraren berättar om misstaget som mörklade hel stad

Nöje

Bevisen som kan fria & fälla Timell

Julia Roberts ilska efter åldersfrågan

Lindsey Lohans nya liv - efter skandalerna

Wistam i terapi för att fixa äktenskapet

TV4 i personalmöte efter polisanmälan

Sport

Björn Borgs son byter jobb - igen

"Så jävla förbannad - jag kan explodera"

Jannes ilska: "Det är häpnadsväckande"

"Jobbigt - jag har inget svar på det"

Norske ikonen stal en halv miljon av dottern



TV4 stoppade Kikki - fick inte vara med



Kvinnornas sextarm fällde Martin Timell



Titos lögn avslöjad - har inga pengar kvar



TV4:s nya besked om Timells framtid i rutan



TV-profilen: Timell visade mig sitt kön



Tittarnas ilska - efter beslutet

Agerandet i slutet av programmet får flera att reagera starkt.

Därför försvann Kicki plötsligt ur sändning

Därför fick hon inte vara med på utflykten - berättade inte sanningen i programmet.

Hoppas artisterna piggnar till framöver

Anders Nunstedt: Sömnigaste "Så mycket bättre"-premiären någonsin.

Så bra var tolkningarna i "Så mycket bättre"

Anders Nunstedt: De var absolut bäst.



Gunilla Persson: Många säger att jag borde bli statsminister

Hollywoodfruns ord i "Nyhetsmorgon": "Chockade"



Stjärnans förändring - Går nästan inte att känna igen

Skädespelaren näst intill oigenkännlig - på nya bilderna

Bida till forskningen så att fler överlever cancer

Skicka till
901 95 14

Cancerfonden

Följ Expressen Nöje på:



@expressennöje

expressen-noje

[Mer nöje](#)



Vännens försvar efter uttalandet

Michael Nylander pekats ut som "värste lagkamraten någonsin"



Förra Gais-tränaren har tackat ja till Öis

Trebarnsfamiljen skulle till Karbién på höstlovet: "Det känns som att vi blivit blåste på 43 000"



OS-hjälten fast för doping - stängs av

Skidskytten Teja Gregorin stängs av tills vidare efter upptäckten



Svaret till Asllani - efter hårda kritiken

Svenska landslagsspelaren får svar efter iskan



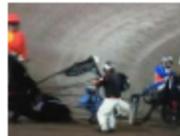
"De var inte glada över att jag bytte landslag"

Pappa Luc var bäst i världen - nu tävlar Estelle för Sverige



Iskan mot Neymar bland PSG-spelarna

Världens dyraste spelare skapar konflikter i sin nya klubb



Otäck olycka: "Aldrig sett något liknande"

Reporters rop i direktsändning: "Oj, oj... jävlar! Ta bort kameran!"

[Mer sport](#)



Cookies

ANNONS



Rabattkoder



Om Expressen



Appar

Ansvarig utgivare: [Thomas Mattsson](#)
Redaktör i tjänst: [Magnus Mjöhagen](#)

Telefon till redaktionen: 08 - 738 30 00
Tipsa oss: via mobil 71717 eller mejla 71717@expressen.se
Mejla redaktionen: redaktion@expressen.se
[Anmäl till Pressombudsmannen](#)

Annonsvänligt Sverige
[Anmäl störande/felaktig annons](#)



© AB Kvällstidningen Expressen

E-DN DN.ARKIVET DN.KORSORD DN.VR DN.ÅSIKT KUNDERBJUDANDEN

DAGENS NYHETER.

Nyheter [♥ Mitt DN](#) [Ekonomi](#) [Kultur](#) [Sthlm](#) [Sport](#) [Ledare](#) [DN Debatt](#) [DN.TV](#)  | [MENY](#) =

Senaste Nytt [- Göm](#)



Promenadmöten - en genväg till bättre hälsa

Inlämningsförmågan, koncentrationförmågan och därmed effektiviteten förbättras av rörelse



Las Vegas-skyttens hårddisk saknas

Datorn hittades i hans hotellrum. Ska ha köpt programvara för att radera filer.



Omstritt presidentval i Kenya har inletts

Oppositionsledaren Raila Odinga har uppmanat sina anhängare att inte rösta

Kevin Spacey tar en timeout och söker hjälp

"Kevin Spacey tar sig den tid han behöver för att utvärdera situationen"



Terroristdömds mor vädjar om nåd

Mamman vill ta hand om den livstidsdömde hungerstrejkande sonen själv



#metoo



Medarbetare vittnar om många år av sexism

DN granskar krisen på Aftonbladet - Anställda: Det finns en tystnadskultur

Krönikörens framtid oklar

Aftonbladets Sofia Olsson Olsén: Har agerat kraftfullt på uppgifter om sexuella trakasserier.

TV-branschen kallar nu till stort krismöte

Produktionsbolag ringer runt till medarbetare och samlar vittnesmål

SVT fortsätter sina sändningar

Trots utredning mot SVT-profil

"Ser mycket allvarligt på uppgifterna"

Schibstedts svenska vd Raoul Grünthal kommenterar avslöjanden om Aftonbladets arbetsmiljö

"Jag kan inte förneka att jag skickat bilderna"

Ex-landslagsspelaren i fotboll om sextrakasserier mot Gunilla Axén



[+ Visa mer](#)

Annon



Utvalt för dig ?

[- Göm](#)



Sverige
Nya filmbilder ska fria
Kent Ekeröth i hovrätten



Kultur
Manliga kolleger om
sångaruppropet: "De stora
namnen har haft fria
händer"



Världen
Jeff Sessions beordrar
utredning av Clinton



Sverige
Elva åtalade efter
nazistdemonstration



Sverig
Lusti
köns
resp



”'Monster' höstens mest originella”

DN tipsar om veckans bästa på tv.

Quiz: Vad kan du om skräckfilmer?

DN testar dina skräckkunskaper.

DN tipsar: 10 ruggiga och bra skräckserier

Nicholas Wennö om den bästa tv-skräcken du kan strömma i helgen

Bida till forskningen så att fler överlever cancer

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Cancerfonden



Stinkspray-attack mot författare polisanmäls

Författaren som skrivit en bok om Södertäljensätverket attackerades



Taube: ”Oss kommer briterna inte att kasta ut”

Aktuell i ”Påklädaren”. DN har träffat den 82-åringen i hemmet.



Stor uppståndelse efter kyrkans Jesus-tweet

”Jesus skulle ha valt de mjuka taco-skalen - för Jesus älskar det goda”

Elva meter Weinstein bränns på bål

”Inte mer än rättvist”, säger en representant som beställt dockan till Guy Fawkes-brändet i England



House of cards-kollegor anklagar Spacey

Flera anställda vid inspelningen ska ha utsatts för sexuella trakasserier



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Sjöström Europas bästa kvinnliga idrottare

Sarah Sjöström första svenska idrottare att få utmärkelsen. "Är glad och stolt"



Sundgren har lämnat sjukhuset: "Mår bättre"

Orsaken till AIK-spelarens andningsbesvär ännu okänd



"Konkurrenterna var rädda att vi skulle dö"

Skeletonbrödernas resa mot OS går i 140 knyck - med huvudet först

Elva meter Weinstein bränns på bål

"Inre mer än rättvist", säger en representant som beställt dockan till Guy Fawkes-brändet i England



House of cards-kollegor anklagar Spacey

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