Audio-visual podcasts as the future of news reporting

An experiment in audience engagement across different podcast formats

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ABSTRACT

Podcasts are a growing phenomenon in digital media for their ability to supply audiences with extremely varied content across a wide variety of interests. Yet, video streaming platform YouTube is the most widespread used platform to listen to these podcasts, hinting at a wish from the audiences to have visual stimuli included in the stories, as they may add a new dimension to the stories. As podcasts are concerned with immersing their audience into a world to fulfill their needs, these stimuli might have a positive effect on the engagement of the audience. The study was concerned with how these visual elements as well as the length of the stories people are subjected to impacts the way in which they engage accordingly. By creating an online survey experiment in which participants were subjected to either a short or a long podcast that included visual elements or did not, the importance of stated variables was uncovered. This was executed in order to not only find out which of these conditions would generate the best response from audiences in terms of engagement, it will also provide publishers with greater insights into what motivations drive audiences to consume podcasts. It was found that length did not impact the engagement with the news to a strong degree. A connection between length and visual stimuli was found in the resulting engagement being strongest in the long video podcast. However, the inclusion of visual stimuli made the experience more enjoyable for audiences and led to higher engagement. Even though the podcasts are concerned with the news, entertainment and social values can be seen as drivers to engagement with podcasts. The inclusion of visual elements was able to bring this out more, opposed to a level of intimacy usually felt from audio-only podcasts and therefore puts into perspective the plethora of ways in which podcasts could and should be utilized. Video podcasts show the potential to aid the citizenry by clarifying news stories more in-depth and provide information in a way that simultaneously fulfills other gratifications podcast listeners seek out and should therefore be reconsidered as a main way of disseminating news online by producers and publishers of the medium.

KEYWORDS: *Podcast, Audience Engagement, Online News, Visual Stimuli, Story length*

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1. Introduction

In recent years, the media environment has expanded massively. Due to a growing plethora of social media platforms, constantly mounting possibilities due to technological advancements and economic possibilities, traditional forms of media have also been reinvented for modern times. One of these being the podcast, which has been coined as the revival of traditional radio (Markman, 2015). Just like the media environment itself, the variety of podcast genres and topics is endless. With over 2 million shows to choose from (Futuri Media, 2019), the podcast has positioned itself as a provider of content for comedy, politics and news as well as more niche interests such as review shows of particular series or Greek mythology. The abundance of options available combined with the accessibility and linearity of audio content has contributed to its growth in popularity over the last decade (Wrather, 2016). For example, if you had asked any U.S. citizen 10 years ago whether they ever listened to a podcast, only 23% would have responded positively. Currently, that figure sits at 55% and illustrates an immense increase in podcast popularity in this era (Edison Research & Triton Digital, 2020).

Podcasts have increasingly been used in other aspects of life as well, most notably in education (Hew, 2009; Shahid & Zuraina, 2017) as well as language training (Şendağ, Gedik, & Toker, 2018). However, discussions about the ideal podcast length have been raised when debating the effectiveness on information retention and knowledge transmission in these podcasts. With programming across all forms of media being directed towards shorter stories in order to retain audience's attention, news has increasingly become limited to ''being a powerful headline service'' (Wormald, 2012), and thus prevents deeper-dives into particular stories that could serve the public good. In TV news, the median length of stories sits at 2 minutes and 23 seconds while on YouTube this is only 2 minutes and 1 second. Additionally, over 50% of the most popular stories on this platform run under 2 minutes (Wormald, 2012) and thus fail to adhere to societies' wants for greater explanation of important items.

1.1 Social relevance

News podcasts have gained attention because of their ability to disseminate the news through storytelling narratives and by adhering to audiences' wishes for digging deeper into stories, explaining terminology and clarifying why certain sources were used (Wilner, Montiel Valle & Masullo, 2019). Podcasts permit this level of depth, as the increased length of stories complements the mediums' strength of analysis and explanation. Its' popularity is reflected in the numbers, as the news genre only makes up 6% of the podcast ecosystem yet 21% of the most popular podcasts rated by listenership are classified under news (Newman & Gallo, 2019). Although podcasts are an aural-based medium, video streaming platform YouTube is the most sought out platform for podcast consumption (70.2%), reaching

more than double the audience of any music streaming platform like Spotify (33.9%) or iTunes (32.6%) (Futuri Media, 2019). This can be partly attributed to the widespread reach of YouTube as one of the most recognizable websites globally. Yet more importantly, it includes a feature which cannot be found on other platforms, video. This allows creators who use YouTube as their distribution channel to add features that are not realizable through aural-based platforms.

Since the discrepancy between listenership on audio-only versus audiovisual platforms is significant, the success of YouTube as a podcast platform through the addition of visual stimulation cannot be overlooked. In fact, age groups ranging from 18 to 54 who listen to podcasts also chose YouTube as their favorite social media platform. The only age group for which it was the 2nd preferred platform, after Facebook, is the age group of 55 and over (Futuri Media, 2019). The inclusion of visual elements in news stories is considered to have societal implications due to its' power to influence public opinion of certain phenomena or social issues, therefore encouraging engagement with online news (Koivunen-Niemi & Masoodian, 2019). Therefore, a greater level of engagement through adding visual elements to these news stories presented on podcasts is expected. In the past few years, the news' ability to exercise influence on the public has received major attention which mostly impacted the publics' perception negatively. Podcasts have the potential to help counter this distrust in the news by explaining stories more in-depth as would be possible in a segment of a TV show or an article in a newspaper. It can include explanations as to why certain stories that are being produced are important and clarify why people should care. According to Masullo, Curry and Whipple (2020), encouraging audience engagement and nurturing personal connections with the audience are drivers of this trust, giving the podcast an opportunity to contribute to the cause on both a macro and personal level. To conclude, there is a gap between news production and consumption patterns which has not been investigated into yet. By diving into the effect of the podcast features of length and visual elements in podcasting on audiences, societies' requests for in-depth information could be served more effectively, while also providing opportunities for newsrooms create a better relationship with its' viewers and listeners.

1.2 Scientific relevance and research question

Audience engagement studies on podcasts have been undertaken, mostly focused on the motivations and preferences of users' afforded by this platform, emphasizing the audio features of podcasts (Perks, Turner & Tollison, 2019), such as the way in which a deeper relationship between audiences and hosts is established through aural immersion (Swiatek, 2018). However, with the recent developments in how audiences evaluate news (Wilner et al., 2019) and the proven added value of

visual elements in reporting (Koivunen-Niemi & Masoodian, 2019), investigating its' effects on podcast listeners' interaction with news fills a gap in the current literature on this medium. Furthermore, the role of visual elements (Djerf-Pierre, Lindgren & Budinski, 2019) and story length (Lang, Shin, Bradley, Wang, Lee & Potter, 2005) in journalism and in-depth reporting has been scrutinized by various studies, yet their role in podcasts specifically has not been delved into. The study will take a quantitative approach whereas nearly all studies on podcast audiences are conducted from a qualitative point of view. This contributes to enriching research on audience engagement by presenting findings which are more generalizable and can thus help better inform podcast producers' on how to reach their audiences and bridge the gap between consumer needs and creators' offerings. In order to investigate further into this phenomenon, the research question this study will answer is: *To what extent do podcast length and visual stimuli affect audience engagement in news podcasts?*

This thesis is structured so that it will go through the process of answering the research question by first presenting the theoretical background consulted in chapter 2. Chapter 3 will include an explanation and justification for the research, will look into the methods used to carry out this project, discuss the research design and explain the measuring instrument and its validity and reliability in depth. Chapter 4 will focus on the results gathered from the online experiment and will interpret them in relation to the hypotheses and research question. Finally, chapter 5 will answer the research question, discuss implications and limitations and provide relevant recommendations for future research.

2. Literature review

In this chapter, the existing body of literature on podcasts will be scrutinized and analyzed in-depth. A podcast can be outlined as an audio or video file which can be downloaded through media technology for playback at any later moment (McClung & Johnson, 2010). It is characterized by a plethora of listening genres that are not restricted to live listening and provide an alternative platform for journalism through storytelling, a distinctive feature in the current media landscape (Perks et al., 2019). Therefore, podcasts can secure a relationship with audiences and drive engagement by fulfilling motivational needs of consumers that lead to the consumption of entertainment products. Audience engagement needs to be defined and understood in the context of digital news from multiple perspectives. By looking into inclusion of visual stimuli, length of the podcast, podcast intimacy, user motivations and the impact on age the argument for the study is built.

2.1 Audience engagement

Trends like growing mobile functionality, interactivity, and multi-platform consumption have dominated the development of how audiences consume news, leading prominent news media to adjust their offerings to better match audience needs (Gutsche, 2019). The podcast plays into these needs effectively, because of the ability to easily incorporate them into our already media-rich lives resulting from its' technical affordances (Perks et al., 2019). Contrastingly, traditional news media like television opt fast and short stories to retain audiences' interests (Lang et al., 2005). Podcasts offer a different perspective by turning away from brief news items, and continue to grow as a medium which people utilize to stay up to date with current affairs (Newman & Gallo, 2019). As audience engagement knows multiple dimensions and explanations, measuring it in podcasts needs to be further understood in the context of this study.

Meier, Kraus & Michaeler (2018) define audience engagement in digital news in terms of 5 dimensions; *communications, storytelling, editorial analytics, personalized news* and *membership.* For podcasts, engagement through *communications* can be established by allowing the audience to start discussion with others and comment, or engage through contribution of their own information, knowledge and opinions. *Storytelling* may be the most relevant dimension of engagement for this medium as a vehicle for intensive immersion in a story. This allows audiences to be more intensively involved in the topic of discussion and can be informative in terms of active participation with optical elements supplemented (Meier et al., 2018), and interlinks with the main gratifications podcast audiences seek out, transportation and immersion. (Perks et al., 2019). *Editorial analytics* can strengthen engagement by supporting the targets and strategies of the producer to warrant high quality

content being more visible and having greater reach. The *personalization* of news can facilitate these gratifications as users partake in the process of selecting news of interest to them, which increases loyalty. Finally, participation can be fostered through *membership*, which goes beyond subscriptions and allows users to participate in fact-checking or accountability activities (Meier et al, 2018). Accordingly, audience engagement can be understood as ''a paradigm changes away from a lecturing towards a dialogue approach to journalism'' (Meier et al, 2018, p. 1060).

Nelson (2019) outlines audience engagement as a combination of the marketing practices of news producers and the media consumption patterns of audiences. Every action from audience attentiveness through page views or shares, online discussion through comments or user-generated content can be described as tangible and measurable actions carried out by audiences (Nelson, 2019; Krebs & Lischka, 2017). Additionally, there are two types of engagement distinguished. Reception-oriented engagement focuses on audiences, for example by looking at amount of comments or time spent with a story. Production-oriented engagement represents how audiences are involved in the production of stories and the amount of citizens involved in creating a story. (Nelson, 2019).

2.2 Visual Stimuli

The first element to investigate is the visual element of the video-podcasts. Audiovisual media have significant benefits which cannot be obtained from aural media, and complement certain audience gratifications when it comes to news consumption. In this section, these benefits will be explored further in the context of podcasts. The concept of visual stimuli needs to be examined, as the notion can bring up a plethora of ideas, some of which may not be associated with podcasts naturally. In terms of podcast art and logo, setting the tone is done visually by attaching a specific aesthetic and adding an expectation for what the audio space provides, illustrating that visual elements are important for audio-only podcasts too. (Hancock & McMurthy, 2018). While audio-only podcasts leave the visual element free to be explored by users individually and allow audiences freedom for exploration (Perks et al., 2019), incorporating visual elements increases the realism of news stories. The use of visual elements can have different meanings across subgenres. For talk shows, it is often relevant to show the host as it aids in establishing a personal connection while for investigative journalism, graphs and statistical evidence bear more relevance. All in all, visual stimuli in this study will be defined as any image, graph or visual representation which is used to clarify an element of the story or provide background context.

2.2.1 Learning from the news

The cognitive theory of multimedia (Mayer, 2014) provides insight into the potential advantages audiovisual podcasts provide. This theory is based on three main principles of learning, in which auditory- and visual processing of information are separated through different learning channels each with its' limited capacity for handling information. This manifests itself in 5 distinct ways in the context of processing multi-media information, illustrating that individuals learn better and retain more information that is provided in an audiovisual manner, as opposed to strictly auditory, referred to as the multimedia principle (Mayer, 2014). This explains the significant expansion of video news on platforms such as YouTube, coincidentally the most used platform for podcast consumption (Gutsche, 2019; Futuri Media, 2019). Nonetheless, on YouTube the majority of journalistic material comes from traditional television and current affairs shows which are repurposed online, yet adhere to the standards and practices set for traditional news platforms. Content wise, these news items were not acclimatized to the online environment as they mostly comprised of recycled clips for television (Djerf-Pierre et al., 2019). In terms of audience engagement, this provides opportunities for podcasts by providing greater transparency through in-depth storytelling combined with visual evidence of those events which in turn increases trust in the news. When visual and verbal cues reinforce each other, the positive effect of multimedia information processing is strongest because visuals cues can serve as an additional mode for audiences to store information and recall news items (Opgenhaffen & D'Haenens, 2011).

The motivations for audiences on this platform contribute to the greater retention of information as well. As a medium through which audiences have full control over the content they listen to at any given time (Perks et al., 2019), the potential for efficient processing of news is amplified due to the increased level of motivation and concentration displayed by audiences. They actively seek out specific stories, so greater attention is paid to the news and associations between new and existing knowledge is made more often (Opgenhaffen & D'Haenens, 2011). Nonetheless, this does not imply that inclusion of visual cues always has a desirable effect, as there is a limited amount of information which can be processed at a certain time. If too much information is presented at once, the brain is forced into making decisions on which pieces of information to pay attention to, how connections between different pieces of information are made and how these connect with existing knowledge (Mayer, 2014).

2.1.2 Impact on audiences

The non-linearity of online news and level of control users have could also lead to higher knowledge levels. Through being able to control news consumption, people can individualize their learning process, increase autonomy over content which causes a higher motivation to learn.

Contrasting arguments can be made regarding the overall knowledge people are exposed to online, as news is more selectively scanned and therefore news that is not deemed interesting gets passed over. Since the flow of news can be controlled, this can lead to less exposure to diverse stories and leads citizens to be less informed. The absence of linearity also has a positive effect on learning. Non-linearity is often associated with increased interactivity, which can aid absorption of information as it has beneficial effects on the cognitive processes and leads to better recall of content. Prerequisite to this is the assumption that individuals are familiar with the online platform these podcasts are accessed through, as lack of technological knowledge can lead people to be unable to correctly process information (Kruikemeier, Lecheler & Boyer, 2018). As the level of news in the form of data is increasingly ample, it may be hard for readers to fully understand its' meaning without visual aid. By including it, the data would become more accessible and comprehensible (Koivunen-Niemi & Masoodian, 2019). For audiences including these elements works well as they perceive presented news as more realistic, which simultaneously has a positive impact on their impression of the medium itself (Opgenhaffen & D'Haenens, 2011).

In the technological expansion of news, the differences between various media are decreasing as online and offline news become more similar in terms of relying on visual cues as a driver of attention. Optimization of these visual processes leads the news to be easier to follow as journalists' steer how the audience should read. Therefore, visual attention is an antecedent of learning from news (Kruikemeier et al., 2018). On top of that, when multiple levels of cognitive engagement are stimulated, more active engagement with news can be achieved (Djerf-Pierre et al., 2019). Beyond engagement, transparency within news can be enhanced this way as audiences have insight into how news is produced, making news producers more accountable to their audiences. Especially visualizations of data, characteristically included in online news, can help realize this (Kennedy, Weber & Engebretsen, 2020). On a societal level, it helps to increase media literacy and the ability to distinguish real and fake news, which can re-establish trust in the news. These opportunities ultimately present chances for news media to fortify journalistic credibility (Meier et al., 2018). Not only would this contribute to the greater good of better informed citizens, it also provides opportunities for media research itself when used as a tool for recognizing shifts of public opinion or narratives in the dominant discourse (Koivunen-Niemi & Masoodian, 2019).

H1: *Audience engagement with news is higher when visual stimuli are included*

2.3 Intimacy

The lack of visual stimuli in podcasts can be explained by the aural nature of the medium, providing various benefits such as the level of intimacy that can be established between producer and consumer by allowing individuals to connect with others in distant places, being able to hear personal stories at self-determined times which are delivered in an intimate manner (Swiatek, 2018). As a more informal way of communicating through an audio narrative, content is considered to be more conversational and less crafted (Llinares, Fox & Berry, 2018). The sonic-only medium is able to establish this through the uniqueness of the medium as 'the sonically generated relationally of podcasting, gives listeners the impression of directness and closeness, making it a compelling way to bridge spatial and temporal divides.' (Swiatek, 2018, p. 176). Listeners take a part in someone else's personal journey, and monetary motivations, social wishes and industrial structures have moved into the direction of supporting this format of podcast.

With news podcasts enjoying high popularity, they have taken on a role of public service media in a highly competitive environment which places premium value on getting attention from individual listeners by presenting an intimate version of the host within a topic of public interest. To some extent this dynamic exists in other media forms, but in podcasts its' eminence is amplified (Sienkiewicz & Jaramillo, 2019), showing establishing a relationship with audiences is largely influential in a show's success. In the case of niche subjects, the notion of intimacy can be especially helpful in the context of bridging the gap between viewing the producer-audience relationship as one described as a friendship rather than seeing the producer as a detached expert (Favaro, 2017). This helps build a level of identification and creates a sense of belonging to an online community (Favaro, 2017; Sienkiewicz & Jaramillo, 2019), as being a private, silent participant in other people's conversations concerning a subject you are passionate about, generates a deep sense of connection (Llinares et al., 2018). For marginalized and hidden communities this also has beneficial effects on the space they can claim in public opinion through the perceived privacy and safety the podcast brings (Sienkiewicz & Jaramillo, 2019) and imbues a sense of inclusivity for producers and listeners alike (Llinares et al., 2018). These notions have shown that intimacy, which is mainly achieved through listening and relying on sounds only, additionally makes podcasts an effective format for knowledge transmission. The listening process in audio-only podcasts therefore leads to active, intentional and conscious listening, in contrast to hearing information whilst focusing on visual cues (Swiatek, 2018).

The power of the audio podcast in creating an intimate setting for its listeners is very strong. Intimacy is highly applicable in niche markets and for those looking to immerse their audiences into a

fantasy world. Yet, for news podcasts it may be less important, as they do not have a similar aim. Intimacy is not a necessity for success with news podcasts as the added personal touch can obscure the political or socio-cultural elements of the story since the common good and objectivity may be in contrast with individual experiences (Sienkiewicz & Jaramillo, 2019).

Generational equivalence between producer and audience is an important factor in the relationship, as it strengthens the perceived shared identity between these groups (Favaro, 2017). New ways of establishing this level of intimacy, and further monetize the podcast, led a number of producers to increase the sonic interactivity the medium affords by creating apps in which audiences have even more freedom and control over how they listen to their podcast. For example, through allowing customization of various aural competencies such as adapting play speed and introducing playback options such as a silence remover. This helps enhance the ubiquitous listening experience by alleviating the process of integrating the medium into audiences' everyday lives and capturing audience attention through a continuous stream of additional content (Morris & Patterson, 2015). This practice does not remain limited to audio podcasts, as this extra channel can also be applied to video-podcasts. Considering the importance of audio formats for intimacy, we expect that:

H2: *Audio-only podcasts achieve a greater level of intimacy*

2.4 Podcast length
The numbers suggest a surge in podcasts' position in the media landscape, yet they are often utilized as a secondary channel through which existing news streams can be distributed as additional content from established institutions (Llinares et al., 2018). This impacts the length of the items produced in podcasts from traditional media companies who have made the switch to digital. They are focused on producing news-bulletins or news roundups in which the most important news of the day is swiftly discussed and last up to 10 minutes. Contrastingly, digital or native podcasts generally opt for deep-dives into specific subjects who are not as easily reached through traditional media channels and are therefore able to reach more niche audiences (Newman & Gallo, 2019). The importance of the length of podcasts has been scrutinized within the context of effect on learning and retaining information. In this context, a podcast length of 12 minutes proved optimal for acquiring knowledge (Shahid & Ali, 2017), while Sendağ, Gedik & Toker (2018) argue a podcast used for this purpose should not be longer than 10 minutes. However, opposing findings were also shared, as shorter podcasts of 3 to 5 minutes contribute to increased learning as well, particularly in the context of video podcasts. More information can be processed at once which requires audiences' focus for a shorter period of time.

Other factors come into play in scrutinizing the ideal podcast length, as too lengthy podcasts may tire or bore people and a too short podcast would not provide a sufficient amount of information to capitalize on the podcasts' strength (Shahid & Ali, 2017).

The structural inclusion of features to help the audience manage and process information and increase what they take away from news also increase cognitive processes of information retention (Lang et al., 2005; Mayer, 2014) However, commercial podcasts setting out to adhere to providing in depth-information generally run for 25 minutes and have enjoyed the largest successes with audiences. This length has therefore been adopted as the industry standard (Newman & Gallo, 2019). The preferred direction towards a shorter podcast also depends on the arguments that quality of audience attention is likely to decrease over time and results to less engagement and interest in the stories whereas a shorter engagement time is linked to experienced digital news users who are efficiently able to navigate and scan online news environments for relevant content so they can engage with it more intensely. As speed and efficiency are valued within digital media, a lack thereof is widely disliked as it intensifies the experience of time, whereas television and newspapers are often used in moments of relaxation and seen as a calming ritual (Groot Kormelink & Costera Meijer, 2019).

Between the time allocated for the average news podcast (Newman & Gallo, 2019) and the time academics support (Shahid & Ali, 2017; Sendağ, Gedik & Toker 2018), there is a large discrepancy concerning the length of a podcast. Therefore, strategies producers use to keep audiences engaged with their content as long as possible and the actual experiences of digital news users do not align and lead to lower levels of engagement as a result. For news productions, it is a problem to make audiences commit to a story online as the amount of consumable content is vast. In general, digital media users are only willing to exceed this time spent when it concerns news which generates new understandings and is constructive of nature, such as insights into complex political matters. (Groot Kormelink & Costera Meijer, 2019).

H3: *Increased podcast length has a negative effect on audience engagement*

2.5 Age

The length of news stories furthermore has a greater effect on younger audiences as they are associated with seeking out shorter news stories and prefer fast-paced programming, whereas this has a negative effect on older audiences. Especially mature adults, age 55 and over, remain loyal to television networks for news consumption and a large proportion of this audience segment relies on TV news only or uses it as the primary means for news consumption, while other traditional media and the Internet

are used significantly less (Lang et al., 2005). This can be linked to the motivations for news consumption of this demographic, who mostly tune into content for opinion-forming and information seeking purposes which traditionally are achieved through watching network television or talk shows (Lee, 2013). However, for younger age cohorts the Internet is the main means of news consumption and frequent changes between news sources is common (Lang et al., 2005). Younger audiences tend to follow a different set of motivations as older counterparts, as social and entertainment motives prove strongest (Lee, 2013). Through digital media these segments make use of the portability and convergence to bypass traditional channels for their news consumption. Even though this means that this generation of users is more fragmented, it also allows people with heightened interests in the news constant exposure. Therefore, this age group can be referred to as born digitals, who almost exclusively use the internet for staying up to date on current affairs. Their media use can also be classified as digital press, who rely on both internet and newspapers, but are not interested in TV news (Papathanassopoulos et al., 2013).

This is reflected in the statistics of podcast consumers, with 12-34 year olds (48%) being overrepresented and 55 or over (20%) underrepresented (Edison Research & Triton Digital, 2020) There is no evidence supporting the impact of gender with regards to the stimuli to be tested. Other socio-economic factors tend to play a role in the type of information media accessed, such as level of income and education as podcast listeners tend to skew towards adults up to 34 with a high level of education and advanced digital prowess (Perks et al., 2019) yet this does not influence the chosen variables either.

H4: Audience engagement among younger audiences is higher in shorter podcast formats

2.6 User motivations

Engagement from audiences can only be achieved if their entertainment needs are met, which means the motivations of podcast audiences need to be taken into account in this process. User motivations for consuming news can fall under one or more of the following categories: seeking information, entertainment, opinion validation and formation and social motivations (Lee, 2013; Krebs & Lischka, 2017). These motivations drive audiences to different types of content, yet the podcast provides an opportunity to capitalize on these different consumption incentives as they are not mutually exclusive and can all attribute to leading to podcast consumption (Lee, 2013). Yet, social and entertainment motivations are most strongly linked to podcasts (Perks et al., 2019). The nature of the podcast functioning as a dialogue-based narrative can mimic the traditional newscasts or televised talk shows and current affairs program that fulfill the information seeking and opinion validation

motivations. Ultimately, the information seeking aspect plays a role in any type of news program and is therefore still the fundamental motivation (Lee, 2013) that needs to be understood further, especially in the context of video-podcasts. A major component of news are visual stimuli, in which the audio-driven medium is naturally lagging behind, yet the inclusion of these elements can provide great benefits for audiences as described in this chapter.

Motivation towards news consumption furthermore follows different patterns in the context of online news due to greater control over consumption and higher variations of linearity in news, meaning that audiences can personalize and individualize their consumption process more flexibly. As people can manage which news they are exposed to and are empowered to select content of interest to them, the motivation to learn from news is fueled. Contrastingly, the selectivity audiences display in their choices of news content can have a negative impact as individuals are exposed to a less diverse range of news stories and become less informed as a result (Kruikemeier et al., 2018). Incentives for people for accessing podcasts may be stronger as they more often fill a niche market as traditional media channels (Newman & Gallo, 2019), and are thus more likely to complement their knowledge as different news media provide different types of news, as opposed to using different news media for accessing news that overlaps with other channels (Papathanassopoulos et al., 2013).

Motivation to learn from news can be seen as a 'learner's internal state that initiates and maintains goal-directed behavior. It is reflected in the learners' willingness to exert effort to engage in appropriate cognitive processing during learning'' (Mayer, 2014, p. 65) and can be viewed as an internal and personal process (Mayer, 2014). The Internet is considered to be a goal-oriented medium in comparison to traditional media since audiences are actively searching and aware of the motives they want to gratify during their online activity. Yet, the gratifications audiences seek out from online activity do not always line up with those obtained.

The relationship between motivation and engagement can be linked to the interactivity presented, and can be differentiated between medium and human interactivity. Medium interactivity refers to interactive communication through the medium itself and focuses on users' ability to control the communication and how the medium is utilized, covering factors related to the specific format that is chosen. Comparatively, human interactivity consists of the interpersonal interaction and communication which happens between people, occuring through a medium and refer to the hosts and each individual listener reached (Yoo, 2011). Therefore, the study expects the impact of certain gratifications sought out by audiences to lead to higher levels of engagement as others.

H5: *Low levels of motivation have a negative effect on audience engagement.*

2.7 Interaction between length and video

Building on the literature on inclusion of visual elements and time spent on the podcast, a negative relationship between length and video is expected. Building on the theory of multimedia learning, a short video podcast would work better as a lengthy video podcast, since the audiences' are stimulated both aurally and visually which makes them able to retain more information in a shorter period of time, but also leads them to reach their information limit sooner since multiple streams of cognitive abilities are at work simultaneously. The longer video podcast may still be able to immerse the audience into the story, yet can more easily create a cognitive overload of information and lead to negative associations (Mayer, 2014) as soon as this level is met. On the other hand, a podcast with visual elements included has several benefits in terms of engagement in terms of volume and in number of options through its' technical affordances and increased coverage of the media environment. Antithetically, the lack of including visual elements is expected to have the opposite effect. Podcasts excluding video are expected to lead to better results in terms of engagement if they are lengthier, as audiences do not need to focus on multiple streams of information and can immerse themselves through aural stimulation only which allows them to concentrate for longer. On top of that, it allows for a more intimate listening experience which boosts engagement as well.

The literature on podcasts provided in-depth information on how to elicit audience engagement through focusing on important elements of this media product in different formats. This format can be understood in terms of two important changing elements, visuals and podcast length. On the one hand, audio-only podcasts are expected to create a stronger bond between consumer and producer through the intimate nature of the podcast, yet learning from the news may be strained more due to a lack of senses being stimulated. The video-podcast contrastingly will allow learning from the news to be done more efficiently, yet one of the major strength of the podcast, intimacy, may strain audience engagement. In table 2.1 below, the research design is provided visually as well.
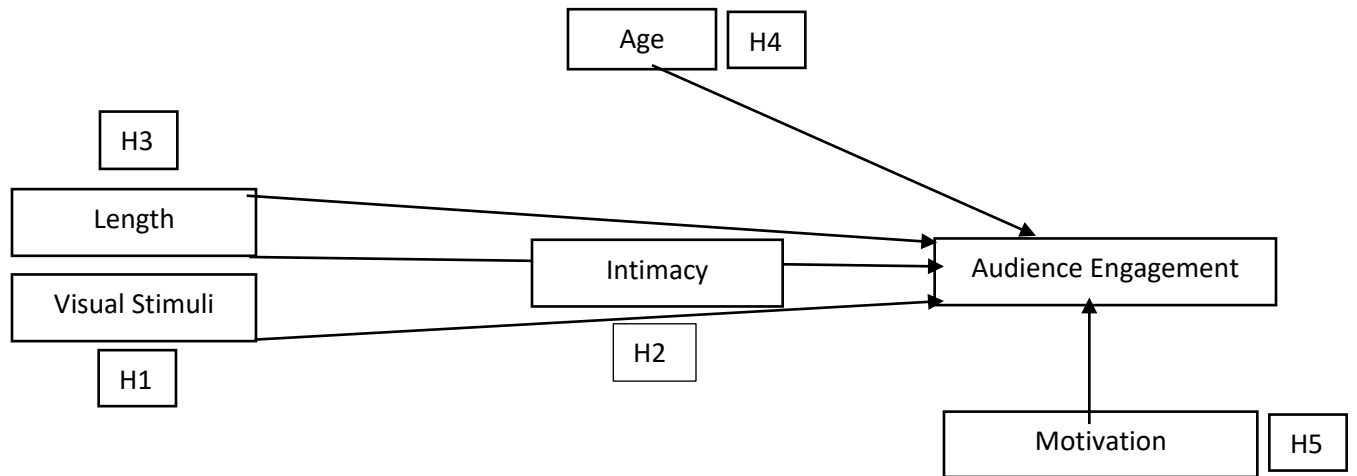
Figure 2.1: Research model and overview of hypotheses

3. Method

3.1 Choice of method

Overall, the aim of the research was testing the effect of manipulating podcast length and the inclusion or exclusion of visual stimuli on audience engagement with news podcasts. The research followed a deductive approach, which is commonly used in quantitative research to formulate hypotheses and test them by using standardized measures to gather numerical data for statistical analysis, as the main assumption regarding the relationships between the variables is derived from the theory presented. Moreover, the study is grounded in a positivist approach to the social sciences (Neuman, 2014).

A quantitative research method was chosen as it helps give broader explanations for how and why certain podcasts lead to higher engagement as others. It is not focused on gaining in-depth information on a limited number of cases but aims at uncovering the effect of manipulating podcast content on a wider spectrum with the goal of inferring findings to the whole population (Neuman, 2014; Babbie, 2016). The research takes on an explanatory approach as the purpose of the study is to test a theories' prediction while simultaneously enriching its' explanation through further inquiry. It extends the theory of multimedia learning to a new topic in the media landscape to identify the source of specific social behaviors in the context of media usage (Neuman, 2014) by identifying a few factors which can explain variations in engagement (Babbie, 2016).

Experimental research specifically was employed as this is the most applicable quantitative method for its' ability to focus on cause and effect relationships, which is not achievable through other quantitative methods and is done in three consecutive steps (Geuens & de Pelsmacker, 2017). First, the experiment was manipulated by methodically adapting the independent variables visual stimuli and podcast length on the dependent variable, audience engagement. This was achieved by assigning participants to one of four conditions, all of equal sample size. Second, random assignment of the participants contributed to decreasing research bias as demographic and other relevant characteristic are distributed equally (Neuman, 2014). Third, the research needed to exercise a level of control over the experiment so external variables not part of the experiment did not interfere with the validity of results (Wharrad & Silcocks, 2009). The experiment was conducted as an in between groups experiment and was able to test the statistical differences between the four groups as it evidenced how modification of the podcast based on different treatment lead to a change in audience engagement.

The ability to exercise these measurements of control is vital to the research as in everyday life there are many factors interfering with people's preferences for podcasts and their interaction with the

content, so it would be impossible to distinguish whether the test variables length and visuals were drivers or if the effects were caused independent of this. Because of these measures, the level of internal validity is high in experimental research since the approach is more controlled as other research methods. On the other hand, external validity scores lower based on the argument that the strict control of conditions cannot be compared to a real life situation (Wharrad & Silcocks, 2009; Babbie, 2016). For example, a percentage of podcast listeners do this while performing other tasks such as cooking or driving (Newman & Gallo, 2019) which decrease concentration on the important factors. In this instance, manipulation of the scenarios was necessary to achieve the research goal. Depending on the experimental condition, participants were exposed to either a short podcast of 5.5 minutes with or without video, or alternatively to a podcast of 7.5 minutes with or without video. For the study no control group was used as the study is not concerned with finding differences in engagement based on the absence of a stimuli, but rather the differences between stimuli (Babbie, 2016).

3.1.1 Online experiments

Since the study measures engagement with digital media, the participants did not physically have to be present for the experiment. This enabled to use of online surveys as the instrument, allowing participants to remotely contribute. As participants can take part from home and use their own devices, the barrier to enter the experiment was lower as people could remain in a place of comfort. Additionally, the use of a web based survey experiment allowed a larger variety of nationalities to be included as place and time the research is conducted is less rigid and more flexible. It is additionally the cheapest and fastest way to conduct the study which alleviates administrative issues (Neuman, 2014; Hooley, Marriott & Wellens, 2012). The flexibility of this questionnaire type also facilitated the inclusion of visual elements in a straightforward manner. This made it easier for complex questions to be asked and diluted researcher bias due to a lack of direct communication or interference at play (Neuman, 2014). This method of data collection was utilized as it implements a number of crucial features of experiments into the research design, such as random assignment and the manipulation of the independent variable. The dependent variables were subsequently measured by using scales (Babbie, 2016). Online survey experiments additionally have the advantage that data is not collected in the artificial atmosphere of a laboratory, which makes it easier to create a realistic setting and combat low levels of external validity (Wharrad & Silcocks, 2009; Hooley et al., 2012).

On the contrary, there are also issues arising from administering the experiment through online questionnaires such as protecting the respondents' privacy and confidentiality through using a secure website, encrypting data and eliminating non-vital identification information of respondents. On top of

that, the design of the survey is more complex, so checking and verifying compatibility of software and hardware play a role as well as ensuring easy readability and consistency of the content to combat mistakes and miscomprehension. Minimizing these problems was countered during the pre-testing stage (Hooley et al., 2012; Neuman, 2014), and will be discussed later in this chapter. There are still potential issues which could not be minimized this way and fell outside of the grasp of the researcher, such as the way the participant engages with the study and whether they are simultaneously doing other tasks (Hooley et al., 2012). The online survey was distributed using the software tool Qualtrics and can be found in Appendix A.

3.2 Sampling

The units of analysis in the experiment were podcast listeners. They were located through using various channels on which fans of podcasts can be found. Primarily, the social media platform Reddit was used for this purpose as subscribers of large sub-reddit communities focusing on podcasts were approached. These include r/podcasts, r/podcasting and r/podcast and provided a total number of 2 million potential participants. Additionally, the Reddit sub community /samplesize, in general meant for finding survey respondents, was used as well (Reddit, 2021). Although smaller in size, various Facebook community pages have also been utilized for this purpose, for example Podcasters' Support Group, the Podcast Movement Community and Promote your Podcast (Facebook, 2021).

The sample of this study was divided into 4 sub samples based on the conditions. Each of these subgroups needed to consist of a sample size of 30 participants which was achieved with a roughly 45 participants in each condition, totaling 176 valid responses. Thus, the targeted amount of 120 participants was reached. As a result, comparisons of attitudes and motivations are evocative among different conditions as these lead to higher statistical power. It can lead relatively small differences between subsamples to be statistically significant. A requirement to this remains that it is also substantial enough to draw conclusions about either accepting or rejecting a hypothesis. If the statistical power is too high, type 1 errors can egress leading non existing effects to be found of statistical significance. Type 2 errors can occur as well in the case statistical power is too weak and fosters results that lack meaningful scientific significance, which happens in the case an existing effect cannot be measured though an hypotheses. This marks the importance of finding a balance in the level of statistical power in order to avoid both types of experimental errors (Geuens & de Pelsmacker, 2017). It is therefore vital that the experiment was designed to be valid, so the differences between results represented the effect of the treatment which was being examined. This way, the differences between

conditions can be interpreted and the effects can ascribe the variance in audience engagement (Lipsey, 1990).

3.2.1. Sampling Method

In quantitative research, probabilistic sampling methods are often utilized to sample participants as it provides a directive for making statistical inferences from findings in the sample to the population as a whole (Neuman, 2014). It offers benefits such as time and cost savings since a relatively small number of respondents can help generalize results for the entire population of podcast listeners. The U.S. alone already has around 155 million monthly podcast listeners, thus relying on a representative sample through probability sampling enforces the accuracy of this sampling method (Babbie, 2016). This type of sampling, however, relies on an existing sampling frame as it is a crucial element for creating a relevant sampling. Access to such a frame is not always attained which can make probability sampling hard to effectively use in many studies as is the case now (Babbie, 2016). Conversely, using non-probability sampling allowed the researcher to circumvent these issues. One of the non-probabilistic sampling strategies used was convenience sampling, which relies on the participants who are easy to reach and produce results swiftly and cheaply. It is also unreliable as it may not represent the population due to the haphazardly way of sampling, and may result in a loss of important elements of the research (Neuman, 2014). For example, age skewed towards a younger audience because of the media used to approach respondents. Therefore, the convenience sampling strategy was enriched by including purposive sampling. This method has similar drawbacks like uncertainty over accurate representation of the population. However, it is a viable strategy in this study because of the nature of the population. Even though the overall population is big and its' subsets can be easily identified, the group as a whole stay rather anonymized which makes inventorying all of them impossible. Another benefit of purposive sampling is that it allows the researcher to select the participants which can contribute to the study based on representativeness and usefulness (Babbie, 2016). Snowball sampling was not actively practiced, although may result naturally from participant contribution due to the spreadable nature of the media accessed to distribute the experiment.

The convenience or purposive sample relies on voluntary participation, and both fall within a sampling strategy known as self-selection sampling. This brings advantages such as reduced recruitment time and financial resources (Sterba & Foster, 2011). However, it also brings some pitfalls as the motivation for people to participate results from their already established interest in podcasts. This may lead the sample to not be representative to the entire population as it skews towards a subgroup of the population (Sterba & Foster, 2011). However, targeting audiences more familiar with podcasts were

reached in this manner as well. Other personal characteristics such as education, gender, socio-economic status or nationality as well as characteristics of listenership were not included in the sampling criterion.

3.2.2. Sample description

This research divided its' participants into 4 groups that were exposed to different conditions based on random assignment. The participant distribution went as follows: $N = 45$ listened to the short version of the audio podcast, while $N = 42$ listened to the long audio podcast. $N = 45$ were submitted to the short video podcast, while $N = 44$ watched the long video podcast. The data gathered from the experiment was analyzed by using data analysis tool SPSS. Guaranteeing comparability between subgroups aids the validity of the experiment, particularly in the case of populations with heterogeneous relevant characteristics (Geuens & de Pelsmacker, 2017) which occurred due the way participants were approached.

In total, a number of 181 responses were recorded. Out of these responses, 5 participants were excluded because of a missing birth year. None of the participants' responses had to be deleted due to straight lining, the almost identical answering of most questions in the dataset. Some participants failed to answer all questions, yet this issue was circumvented through pairwise exclusion. This finally leaves a sample of $N = 176$ valid responses for analysis, of which 80 males (45.5%) and 89 females (50.9 %). 3 participants (1.7%) stated their gender as non-binary and 3 participants preferred not to state their gender at all (1.7%). These numbers differ from existing reports, stating that 51% of podcast audiences are male and 49% are female (Edison & Triton, 2020). The disparity between the gender identities is even larger when comparing the study to the statistics for news podcasts, as 62% of audiences are male and only 38% are female (Nielsen, 2021). Although these numbers differed significantly, this did not impact the results of the study as gender was not a major variable used in this study.

The average age of the sample is 30 years ($M = 29.65$, $SD = 8.54$), which is slightly above the average age of all podcast listeners. Looking at the distribution of the educational level of participants shows that 100 respondents have obtained a Bachelors' degree (56.8%) and only 3 participants have obtained less than a high school degree (1.7%). In total, 128 (72.7%) participants stated they have a bachelor's degree or more thus are highly educated individuals. which confirms the existing distribution of podcast listeners tend to be a younger and highly educated demographic (Perks et al., 2019).

The sample ($N = 176$) was varied in terms of nationalities, as responses were recorded from 22 different nationalities. However, the majority of responses were recorded from a few countries only, namely the USA (45.5%), the Netherlands (22.2%), Germany (6.8%) and the UK (5.7%). Although a large

share of participants was from a small group of countries, the sample is still quite diverse with regards to nationality. This emphasizes how conducting the data collection online and distributing the survey experiment via international specific-interest groups on Reddit and Facebook offered the advantage of including participants from different countries in the sample.

The most popular streaming platform for the podcast audiences is YouTube, with 88 participants (50.0%) stating they use this platform, closely followed by Spotify, used by 86 participants (48.9 %) and Apple Music, used by 58 participants (33.0%). The corresponding question in the survey experiment allowed the selection of multiple answers, accounting for the fact that participants might use more than one platform. These numbers reflect patterns which can be found when looking at how podcast listeners are distributed among different streaming services, with the 3 most popular platforms in the study reflecting those of the general population. However, +some discrepancies were present as well. According to industry reports, about 70% of listeners listen through YouTube, while only 34% is expected to listen through Spotify. On average, participants spent 67 minutes per day listening to podcasts (M = 67.18, SD = 74.38).

3.2.3 Random assignment

Random assignment is an essential element to consider in experimental designs so sample characteristics can only differ by chance. This is necessary to ensure statistical inferences can be made (Geuens & de Pelsmacker, 2017). Random assignment means every participant has the equal chance to get assigned to a particular condition, which is important for two reasons. First, it makes sure that all the groups are comprised of participants with characteristics as similar as possible, which forms the basis of the comparison between these groups. Second, it aids in ruling out confounding factors. If one of the experimental groups would differ significantly from the others in terms of one specific characteristic, the changes in the measured outcome variable cannot be solely ascribed to the manipulation of the experiment, but could be caused by the differences between these groups. Therefore, random assignment of the groups is vital in ensuring the internal validity of the studies' chosen measurement (Neuman, 2014). In this research, Qualtrics was utilized to ensure randomization. By enlisting the randomization function in the software, the equal distribution among conditions was safeguarded. Apart from creating the conditions for which the process was necessary, the researcher was not involved in this randomization process.

3.3 Operationalization

The operationalization of the variables used in the research entails the establishment of a manner in which the concepts are made quantifiable. Thus, operationalization is a process of converting

abstract concepts derived from theories in a measurable way. In this experiment, this was done through the online survey. This section delves into the operationalization of the theoretical concepts and how the main variables podcast length, visual stimuli, intimacy, age, and audience engagement were measured. It also comprises of an overview of additional variables measured.

3.3.1 Independent variables: podcast length and visual stimuli

Podcast length serves as one of the two independent variables in the research. Based on the literature reviewed on podcast length, it was determined to have a major role in the level of audience engagement of a show. It is therefore hypothesized that *podcast length* is able to predict engagement. Various reviewed studies have supported the assumption that the longer the podcast is, engagement with it is likely to decrease and information retention is lower (Shahid & Ali, 2017; Sendağ, Gedik & Toker 2018). It was operationalized as a categorical variable, with the 2 categories representing the different conditions which were compared. In the survey, the variable was not directly assessed as it represents one of the stimuli which was tested. The stimulus consisted of podcasts of 2 different lengths, representing the short and long form podcast. The shorter podcast of 5.5 minutes was a simplified version of the lengthy podcast of 7,5 minutes, and contained the same information in a condensed form to ensure cohesion in the experiment. In Appendix B, the transcript for the varying podcasts can be found.

Extending the length of the podcast was not desirable in the experiment, due to the potential pitfall of mortality which could threaten the internal validity of the experiment (Neuman,2014). To establish the right length before the data collection process was carried out, the stimuli were examined with a pilot test. Since the research interfered with a natural occurring situation the respondents were aware of being studied. Therefore, deception was necessary to complete the research goal and a cover story was included (Neuman, 2014). The second independent variable which was used as a stimulus in the research is *visual stimuli.* According to the reviewed literature, it is assumed that the inclusion of visual elements in news stories leads to higher engagement (Opgenhaffen & D'Haegens, 2011) as well as cognitive benefits (Mayer, 2014). Similar to *podcast length*, *visual stimuli* were operationalized as an experimental condition rather than a variable measured through the survey experiment. It was operationalized as a categorical variable, with the 2 categories representing the different conditions which were compared. Naturally, the visual stimuli were adapted to reflect both scripts accurately. For the scope of the research and due to a lack of necessary resources, a video podcast with complete visual stimulation including visualization of the host could unfortunately not be recorded, the visual elements that were included in video form are provided in Appendix C.

When recording, a few options for podcast topics were informed on, and were taken from some of the most interesting stories for the researcher in the past few months. Eventually, the topic of NFT's, Bitcoin and block chains was thought of. In order to gain information on this topic, various online sources were consulted to create a story that was coherent and matched the content of an actual podcast. The necessary materials to create a professional video podcast, including a studio or audio resources were not able to be utilized. Instead, a video podcast incorporating various graphs and images that contribute to the overall story were included. Although this may look less professional, it still provided extra content for the story. In the pre-test phase, professionalism will be reported on further due to minor issues that were found during this phase. The podcast was recorded using podcast app Anchor.fm and were embedded in the survey itself. In order to ensure smoothness within this procedure, Soundcloud was used as a platform to distribute the audio podcasts, while YouTube was selected for the video podcasts respectively. On top of that, due to the widespread familiarity of both platforms, their technology was supported through Qualtrics, reducing technical problems.

3.3.2 Variable: audience engagement

The dependent variable which was measured in the study is *audience engagement.* As it is common in the social sciences to measure abstract concepts such as the attitudes and behaviors of individuals by using scales, audience engagement is measured as a continuous variable (Neuman, 2014). It favors using multiple-item scales, since they allow more detailed insights to be taken from the concept under study. Additionally, the use of scales previously used in studies is preferable. Since they were previously applied in other studies, they ensure the variable is correctly measured and help build reliability (Geuens & De Pelsmacker, 2017). The concept audience engagement was measured directly through H1 and H3.

Audience engagement as the dependent variable is hard to directly measure. To gain insights into participants' engagement with the different formats, the User Engagement Scale is an effective measuring tool. It uncovers how the variables interact with audience engagement and gained popularity in evaluating search, social networking and entertainment applications in user-centric research (O'Brien & Cairns, 2015). The original scale takes an attribute based approach to audience engagement and measures 6 factors; focused attention (Cronbach's α = .92), perceived usability (Cronbach's α = .91), aesthetics (Cronbach's α = .89), (Cronbach's α = .90), endurability (Cronbach's α = .86), novelty (Cronbach's α = .58) and involvement (Cronbach's α = .70) based on 26 items. The scale is measured based on a 5-point Likert scale. For this study, the scale is slightly adapted as it includes questions which

are not relevant to the study such as 'I continued to listen to the podcast out of curiosity' as the experimental conditions made these items useless.

3.3.3 Variable: intimacy

Intimacy is another variable that was treated in the study, since the intimacy level was expected to differ based on the format of the podcast. Intimacy is a moderator variable that affects how positive or negative and how strong the effect between the independent variables and the dependent variable audience engagement is (Geuens & De Pelsmacker, 2017). Podcasts excluding visual stimuli were expected to contribute to eliciting intimacy, while this feature is expected to decrease when they are included. To measure the variable intimacy items from the Podcast Uses & Gratification scale (Perks et al., 2019) were adapted. From the literature reviewed, it is clarified the storytelling and immersive experience establishes intimacy and is one of the major motivations for users to engage with podcasts. The storytelling transportation factor taken includes 5 items which are measured on a 5-point Likert scale and asks participants to which extend they agree with statements indicating the perceived intimacy such as ''this podcast made the time go by quickly'' and ''I can picture the stories told through podcasts in my mind as I listen''. The variable is tested through H2.

3.3.4 Variable: Motivation

The last of the major variables to be tested in the study is the independent variable *motivation.* Derived from the studies on user motives and motivations for podcast consumption, different categories of motivation were found. These were found to be linked to both the age of the participants as well as the format and therefore possibly affects the direction and strength of the relationship between the predictor and criterion variable (Geuens & de Pelsmacker, 2017). The variable was tested through adapting the scale for motivation in news consumption by Lee (2013). The original scale tests 4 categories, entertainment-driven (Cronbach's α = .90), motivation-driven (Cronbach's α = .82), opinion-driven (Cronbach's α = .88) and social-driven (Cronbach's α = .92) based on 21 items (Lee, 2013). The items were tested in order to answer H5.

3.3.5 Additional variables

Besides the main variables listed above, 7 additional variables were measured in the survey experiment. Although not the main focus of the research, they are able to provide necessary information as these variables can provide further insights into potential unexpected relationships. They also contribute to the understanding of the effects between independent variables and the dependent variable. At the start of the questionnaire, a number of introductory questions was asked. These

questions were mainly used to distract from the actual purpose of the research. The questions asked were related to participants' usage and motivations for podcasts and platform use and help create a realistic context for the measurement. This provided more detailed information about the participants, which could also be used to enhance the analysis of their attitudes and intended behaviors.

Audio platform is a categorical variable that measured which platforms participants use to listen to podcasts. It was measured by a multiple-choice question that allowed the selection of more than one answer, since participants might use multiple platforms. The eight answer categories consisted of some of the most popular and widely used audio platforms, including YouTube, Spotify and Apple Music. The open text field gives participants the option to state platforms they use which were not part of the list. The audio platforms included are based on usage reports by Edison Research & Triton Digital (2020) and Futuri Media (2019). Furthermore, the answer option *'I do not use any music audio platforms'* was included. Participants selecting this answer option were not allowed to proceed with the experiment because they did not fulfil the sampling criterion.

Average minutes is a continuous variable and measured the average amount of time spent listening to podcasts per day. An open text field was used so that participants could enter their own estimation of their daily listening time.

Listening behavior is a continuous variable describing the role that podcasts plays in participants' daily life. The corresponding question in the survey experiment asked participants what their benefits they gained from listening to podcasts. It consisted of 12 items measured on a 5-point Likert scale from strongly disagree to strongly agree. The statements described different user behaviors linked to podcast taken from the Users & Gratifications scale by Perks, Turner & Tollison (2019).

A manipulation check was added afterwards, in order to check both stimuli presented by asking participants how long they thought the podcast lasted and whether any visual elements were included at all. It was used as a means of testing whether the participants paid attention during the experiment, and whether they perceived the manipulation of the stimuli correctly (Geuens & de Pelsmacker, 2017). In this case, the manipulation check allowed the research to evaluate whether respondents' attitudes were actually measured based on the podcast format they are exposed to. Otherwise, it cannot be stated that their behavior was caused by the presence or absence of the stimuli. The inclusion of the manipulation check is especially relevant in online experiments, due to low control over participants (Geuens & de Pelsmacker, 2017).

The last section of the survey experiment was dedicated to document important demographic variables, a standard procedure in quantitative research (Neuman, 2014). Demographic data was used

to compare the experimental conditions and to test whether the procedure of random assignment was successful. The demographic variables used in this research are the following: *Age* was measured as a continuous variable by asking participants to state the year they were born in an open text field. Age plays a more important role as the other variables, as it is expected to influence the preferred format and therefore contributes to answering H4.

The categorical variable *gender* was measured with a multiple-choice question, that included the additional answer categories 'non-binary' and 'prefer not to say'. *Education* was recorded as the highest level of education participants have obtained by asking a question with six answer categories. Finally, the variable *country of residence* was used to uncover the location of participants, since the question 'In which country do you currently reside?' bore the least ambiguities. To answer the question, participants could choose the respective country from a comprehensive list

3.4 Pre-test

Before initiating the data collection, a pre-test was carried out. This section provides information on the procedure, the rationale behind the test and its outcome as well as how it affected the final questionnaire design. The pre-testing phase is carried out in between completing the design of the experiment and data collection, in which a survey is tested and critically reviewed. It is vital to implement the pre-testing phase in the study as a failure to do so can lead to issues in the process. The results of the study may be invalidated during the analysis if these problems are not adjusted during this phase. Additionally, pre-tests are a way of increasing both reliability and validity of the measurement. The importance of including a pre-test stems from the potential mistakes that could occur during the research design (Hooley et al., 2012). Foremost, questions should be posed in a way that eliminates ambiguity and misunderstanding. The positioning of the questions matters, since some questions could lead to biased responses if they are asked in an unfavorable order (Neuman, 2014).

A prerequisite for the experiment to produce reliable results is the deception of participants. They will be introduced to the survey under a false pretense, in order to conceal the real purpose of the experiment. In general, the pre-testing phase is vital to retrieve feedback (Neuman, 2014). For online experiments, it is especially valuable since this method of analysis does not receive direct feedback from participants as much as other methods (Hooley et al., 2012).

When it comes to the visual stimuli included, some issues were encountered during the pre-test. One of the issues that occurred with the video was the design itself. By incorporating a visual approach to the stimuli that was influenced by technological aesthetics, the actual content did not seem to be highlighted to the extent participants wanted or expected, which has been assuaged by restructuring

the visual elements and expand the size and quality of visuals. This also aided in creating a more professional overall effect, which was a feature that was commented on by multiple participants. Combatting the feeling like the podcast was created in an amateur fashion is important for the success of the project. If participants do not believe the podcast is realistic or professional, this impact the way they engage with it more as would the actual stimuli under study, potentially invalidating the research. Especially since similar dissatisfactions and issues did not arise from the audio-only podcast and would only increase discrepancies between one of the major variables tested. Fortunately, other issues did not arise from the audio-only podcasts either, confirming the content and podcast itself met the requirements. Another point of feedback which was incorporated concerned the length of the podcast. Since the questionnaire itself already took 10 minutes to complete, the longer podcast of 9.20 minutes would compute to almost 20 minutes. These participants did not have an issue with this, yet feared this might be the case for others because of the randomness of participants and lack of personal ties to the researcher. The shorter podcast of 6.40 was not viewed as too long, and the total time of 16 minutes felt appropriate to these participants. Yet, in order to ensure the length between the revised podcasts still remains relevant, this podcast was shortened and re-released as a 5.5-minute podcast whereas the longer podcast contains 7.5 minutes of content.

In order to diminish the concern for the level of professionalism, an extra question was included in the final version of the survey experiment. As there is a chance the participants still share the sentiments of the pre-test group on the quality, they were asked to assess the quality of the podcast on particular features of interest. In order to measure this, a scale for assessing consumers' perception of media quality was adapted. The scale by Suryani, Fauzi & Nurhadi (2020) mentions clarity, attractiveness, relevance and interaction as the 4 main factors impacting perceived quality. Based on these measures and the feedback provided by the respondents, the measures for clarity and attractiveness specifically were employed in the research to help assess the quality and professionalism of the podcast. In this case, the relevance of the other 2 factors was not found and therefore they were left out of the study as these were concerned with the technical quality of the online platform. After analyzing results, it was found that there is no significant statistical difference between the audio (M = 3.48, SD = .61) and video podcasts (M = 3.53, SD = .59) t (174) = -.58, p = 0.562.

Furthermore, the questionnaire itself was adapted after the feedback. In general, the respondents found the questions and answering options to be clearly outlined and the measuring tools to be adequate for what was being measured. Some of the participants felt that the 7-point Likert scale gave them too many answering options resembling each other which made them feel unsure of their

answers. Therefore, all questions that were measured on a 7-point Likert scale were reduced to a 5-point Likert scale. The answering options 'somewhat agree' and 'somewhat disagree' were taken away. On top of that, the order of questions 7 and 8 were altered in order to provide a more transparent and logical questioning sequence. As question 8 originally measured the attitudes the respondents had towards the podcast they just experienced, this question was asked right after the submission of the stimuli in order to provide the most accurate and reliable recollection and opinions from the respondents. On top of that, the 5-point Likert scale also lead to a more responsive mobile viewing experience. The order of the demographic questions was adapted as well. Participants were first asked about their birth year in an open text field and some respondents did not answer this question as they immediately focused on the next question asked as a multiple choice question. The order of the demographic questions was flipped in order to better embed the age question and prevent the question from remaining unanswered.

Since the length of the podcast was mentioned by the participants as a potential pitfall in the final version, a measuring tool for this was incorporated as well. Apart from shortening the podcasts themselves, a timing measure was added through Qualtrics preventing participants to resume without being exposed to the full podcast. The last main feature which was introduced to the survey after pre-testing was an option for playing the video both using a Flash player and one without. One participant was unable to open the corresponding video due to the technical affordances of the phone they used. After the adaptation, participants whose' phone or other device does not respond well with Flashplayer would automatically be submitted to an audio- or video player, respectively in MP3 or MP4 format.

3.5 Research design

The final survey was administered after the necessary changes in the pre-testing phase were implemented. The survey consists of six sections, the introduction, the set-up of the cover story, the presentation of the stimulus, measurement of the variables, manipulation checks and demographics. The introduction provided the respondents with general information about the purpose of the study and thanked them for their participation. In this section, the participants were asked to give their informed consent. This option was made mandatory to move onto the next steps in the survey. Then, the participants were asked which audio platforms they use and how many minutes they spend listening to podcasts on weekly average. This section provides background information on the participants and helped eliminate the responses that are invalid if people do not meet the sampling criterion.

In order to deceive the participants, a cover story with additional questions was asked to the participants. People were told that based on their answers, they would get to listen to a podcast based

on their personal preferences and therefore it was geared towards asking questions about participants' behavior when listening to podcasts. *Listening behavior, usage purposes* and *motivations* were examined in this section.

After filling out this section, the participants were administered to one of the conditions. Depending on the condition a participant was assigned to, they were submitted to one of the four adaptation of the podcast. After being exposed to the content, the dependent variable *audience engagement* was tested. As the User Engagement Scale measures engagement based on 4 factors, for each factor a separate question will be added. Each of these categories represented a factor positively or negatively impacting the level of engagement. Questions on the extent to which participants felt absorbed in the experience and lost track of time, the attractiveness and visual appeal, and both the negative and positive effects associated with the interaction were asked. Measuring the dependent variable before any other variables is vital to limit unwanted influences of the other measurements (Geuens & De Pelsmacker, 2017). After this question, the survey followed one joint path again, as in following sections it was not necessary to divide based on the condition administered. Afterwards, the questions to test the remaining variables *motivation* and intimacy were tested. Then, two questions measuring the success of the manipulation were asked before the last section uncovered the answers to the demographic questions, asking participants about their *age, education, nationality* and *gender.*

3.6 Validity and reliability

During previous sections the different steps in constructing the survey experiment were evaluated in order to improve the validity and reliability of the measurement. This section dives into these steps to provide insight into how the survey experiment ensured that the relationship between the different concepts are measured as they were intended. Furthermore, the results of the factor analyses are reported.

3.6.1 Validity

Within experimental research, a distinction between internal and external validity is made. Generally, internal validity scores high in this type of study, while the threat of lower external validity is looming (Wharrad & Silcocks, 2009). Internal validity refers to the exclusion of confounding factors to strengthen the capacity of measuring causal effects and is determined by the meaningful interpretation of data collected, while external validity depicts the degree to which effects observed in an artificially created experimental setting can be generalized to real-life situations (Neuman, 2014).

One way to promote internal validity in the research is the use or adaptation of scales used in previous research. As these have already proven to be valuable, they generate a higher degree of

internal validity (Geuens & de Pelsmacker, 2019). Since this research measured audience behavior with multimedia content, the used scales were taken from studies' focusing on the relationship between humanity and digital multimedia as a whole, as well as those specific to news or podcasts. For example, the Users & Gratifications' Scale and Motivation Scale which have been widely used in the field and have themselves been adapted from scales focusing on traditional and mass media entertainment. Furthermore, these studies are all concerned with measuring human behavior and attitudes and therefore related insights can be adapted to this research. Another step taken to reach high internal validity in the research was the inclusion of the pre-test of the stimuli and questionnaire. Without this test, it could not have been assured that changes in the two variables could not be ascribed with full certainty to audience engagement.

Then, external validity needed to be addressed too. From previous sections, it becomes clear that ensuring this form of validity is more difficult in experiments, especially if they take part online because the situations are hard to replicate in real-life under similar conditions (Neuman, 2014). One solution to this problem was the inclusion of random assignment in the experiment to ensure groups were similar in make-up. In this study, a non-probability sample was used and making use of random assignment can therefore help to combat the lack of representativeness of the overall sample. If participants are assigned randomly to the experimental conditions, the validity of comparisons between these conditions is ensured.

The manipulation check which was added to check if participants recalled the type of podcast they were exposed to revealed the following results. Out of the respondents submitted to an audio podcast (N = 87), 66 participants (75.9%) were able to correctly recall the podcast format they were submitted to. Out of the respondents submitted to a video-podcast (N = 89), 70 participants (79.5%) were able to verify the podcast format they were submitted to. The second manipulation check which asked participants about the perceived length of the podcasts revealed that the participants submitted to the short format (N = 85) perceived the podcast to be slightly longer as it was (M = 6.06), which simultaneously was the case for respondents (N = 79) whom were exposed to the longer podcast (M = 8.39). 12 respondents across both formats failed to answer this specific question.

3.6.2 Reliability

Similar to validity, reliability ensures the effectiveness of the research. Reliability is achieved when the measurement tool would produce similar results when carried out by a different researcher. Even though the scales used in this survey experiment have been tested in previous studies, it was useful to verify the reliability of the measurement by conducting factor analyses and reliability checks

for the continuous variables. The insights from these analyses provide important information for the data analysis about possible underlying dimensions in the data. In addition, it is shown whether the scales, based on which variables for the analysis are created, were reliable in this research (Pallant, 2005). Before conducting factor analysis, it should be ensured that the data fulfils the requirements. They need to be continuous, normally distributed and each scale should consist of a minimum of three items (Pallant, 2005). In the study, all of these conditions are met.

Intimacy. For this variable a factor analysis was conducted. The 6 items which were measured on a 5-point Likert scale were entered into a factor analysis using Principal Components extraction with Varimax rotation based on Eigenvalues (> 1.00), $KMO = .87$, $\chi2$ ($N = 176, 15$) = 526.30, $p < .001$. All items loaded onto one factor and the resultant model explained 64.1% of variance in intended behavior. Subsequently, the reliability for all items of the unidimensional scale was tested. It revealed a Cronbach's α of .89, which indicates that the scale has high reliability.

Quality perception. In preparation of the factor analysis, one of the items in this scale had to be reverse coded. This variable was added after the pre-test in order to determine whether the quality of the study impacted people's answers towards their engagement with the podcast. The 5 items which were measured on a 5-point Likert scale were entered into a factor analysis using Principal Components extraction with Varimax rotation based on Eigenvalues (>1.00), $KMO = .74$ $\chi2$ ($N = 176, 10$) = 184.57, $p < .001$. All items loaded onto one factor and the resulting model explained 49.0% of variance in quality perception. Furthermore, the reliability for all items of the unidimensional scale was tested. It revealed a Cronbach's of 0.72, which indicates that the reliability of this scale is sufficient. None of the items were deleted, as this action would lead to a lower Cronbach's α in each situation and would bring the reliability analysis under the required minimum of 0.70.

Motivation. The 12 items which were measured on a 5-point Likert scale were entered into a factor analysis using Principal Components extraction with Varimax rotation based on Eigenvalues (>1.00) $KMO = .80$ $\chi2$ ($N = 176, 66$) = 630.77, $p < .001$. The resultant model explained 58.2% of the variance. Items loaded onto 3 factors, which are presented in Table 3.1. The factors found were:

Education. The first factor included 3 items ('I can learn something new', 'I can educate myself', 'I can expand my mind') and is reliable with a Cronbach's α of .79. The second factor *Convenience* included 3 items as well ('I can listen when I want', 'entertainment at convenient times', 'entertainment') and is reliable with a Cronbach's α of .73. The last factor is *Storytelling* and includes 6 items ('Learning about experiences', 'picturing stories', 'quickly passing time through storytelling', ''make time go by quickly', 'consuming fresh and novel content', 'hearing about other experiences') and

is reliable with a Cronbach's α of .71. The item 'I like to hear about the experiences of people who are different from me' loaded onto both the first and the 3rd factor with similar loadings. When using this item, the first factor however, the reliability of Cronbach's α decreased from .79 to .71, whilst it increased the reliability of the 3rd factor to an acceptable level, leading to this item to be included in the 3rd factor.

Table 3.1: Factor and reliability analysis for Motivation

	Edutainment	Convenience	Storytelling
I can learn something new from podcasts	**.80**		
I can educate myself when I listen to podcasts	**.79**		
I can expand my mind from podcasts	**.77**		
I can listen to the podcast I want when I want		**.66**	
Podcasts provide entertainment at times that are convenient for me		**.82**	
Podcasts are entertaining		**.76**	
I like to learn about other people's experiences through podcasts			**.55**
I can picture the stories told through podcasts in my mind as I listen			**.53**
Time passes quickly when I listen to podcasts that feature storytelling			**.82**
Podcasts make the time go by quickly			**.53**
Podcasts allow me to consume fresh or novel content not otherwise available in the media			**.46**
I like to hear about the experiences of people who are different from me	.46		**.45**
R^2	.34	.15	.09
Cronbach's α	.79	.73	.71

Engagement. The 12 items which were measured on a 5-point Likert scale were entered into a factor analysis using Principal Components extraction with Varimax rotation based on Eigenvalues (>1.00) *KMO* = 0.86 χ2 (*N* = 175, 66) = 1161.25, *p* < .001. The resultant model explained 70.4% of the variance. Items loaded onto 3 factors, which are presented in Table 3.2. The first factor *Immersion* included 6 items (''I lost track of time'', ''I blocked out things around me when I was listening'', ''I was

absorbed in the experience'', ''listening was worthwhile'', ''the content incited my curiosity'', ''I felt involved in the podcast'') and is reliable with a Cronbach's α of .89. The second factor, *Aesthetics* included 3 items (''It is visually appealing'', ''I liked the graphics/images'', ''it appealed to my visual senses'') and is reliable with a Cronbach's α of 0.89. The third factor *Control* included 3 items (''The experience was demanding'', ''I felt frustrated while listening and I could not do other things'') with a Cronbach's α of .63. In order to increase reliability of this factor, the item, ''I felt frustrated/annoyed/discouraged while listening to this podcast'' was deleted, resulting in a Cronbach's α of 0.69. Although the deletion of this item increased Cronbach's α by the required amount of .05, it unfortunately does not reach the desirable level of .70.

Table 3.2: Factor and reliability analysis for Engagement

	Immersion	Aesthetics	Control
I was so involved that I lost track of time	**.77**		
I blocked out things around me when I was listening to this podcast	**.74**		
I was absorbed in the experience	**.76**		
Listening was worthwhile	**.74**		
The content incited my curiosity	**.78**		
I felt involved in the podcast	**.70**		
This podcast was aesthetically appealing		**.70**	
I liked the graphics and images of the podcast		**.90**	
The podcast appealed to my visual senses		**.87**	
This experience was demanding			**.83**
I could not do some of the things I wanted to do while listening to this podcast			**.81**
I felt frustrated/annoyed/discouraged while listening to this podcast			.53
R^2	.45	.16	.09
Cronbach's α	.89	.88	.69

News consumption. The 10 items which were measured on a 5-point Likert scale were entered into a factor analysis using Principal Components extraction with Varimax rotation based on Eigenvalues (>1.00) *KMO* = 0.75 χ^2 (*N* = 175, 45) = 581.06, *p* < .001. The resultant model explained 66.1% of the variance. Items loaded onto 3 factors, which are presented in Table 3.3. The first factor, *Social,* consists

of 3 items (To keep up with people, to appear informed, to have something to talk about) and is reliable with a Cronbach's α of .82. The second factor, *Information* consists of 4 items (to find out what's going on, to make yourself an informed citizen, it helps you learn about others, to help me form opinions) and is reliable with a Cronbach's α of .72. The third factor, *Entertainment* consists of 3 items (it's exciting, for laughter, because it's a habit I have). It is not reliable with a Cronbach's α of .68. Deleting one item (because it's a habit I have) increases the reliability and results in a Cronbach's α of .75.

Table 3.3: Factor and reliability analysis for news consumption

	Social	Information	Entertainment
To keep up with what people around me are talking about	.81		
To appear informed with to the people around me	.68		
To have something to talk about with others	.85		
To find out what's going on in the world		.86	
To make myself an informed citizen		.84	
Because it helps me learn about others		.60	
To help me form opinions on issues		.56	
Because it's exciting			.85
For laughter			.85
Because it's a habit that I have			.47
R^2	.35	.18	.13
Cronbach's α	.90	.89	.75

4. Results

In the following sections, the results of the analyses are reported and explained. The results of the different tests conducted in this study are shown and explained. Furthermore, the hypotheses are scrutinized in this chapter by interpreting them in relation to the research question and literature. Apart from the hypothesized relationships between the podcast formats and audience engagement stated, additional effects will be taken into account as well.

First, all the direct effects of the independent variable *visual stimuli* will be examined. In the research model, it was hypothesized that there is a relationship between this variable and the dependent variable *audience engagement* (''Audience engagement with news is higher when visual stimuli are included'')*.* The corresponding t-test, in which *audience engagement* is treated as the outcome variable, showed that the overall model of engagement showed significant difference between participants whose podcast did not include a video (M = 2.91, SD = 0.63) and those who did watch a video (M = 3.16, SD = 0.67), t (174) = - 2.51, p = .013. This supports H1, and shows that the video podcast leads to higher engagement.

When looking at the 3 factors which make up the variable *Engagement*, the following differences between those that were and were not subjected to the video were as follows, stemming from individual t-tests of the factors. For *Immersion,* there was not a significant difference between those who did not watch the video (M = 3.10, SD = 0.92) and those who did watch the video (M = 3.35, SD = 0.83), t (174) = - 1.92, p = .057 For *Aesthetics,* there is a significant difference found between the participants who did not watch the video (M = 2.66, SD = 0.87) and those that did (M = 3.09 SD = 0.98), t (174) = -3.11, p = .002. showing that respondents that were subjected to audiovisual podcast formats reported higher levels of engagement. For *Control,* there is also no significant difference found between the participants who did not watch the video (M = 2.97, SD = 0.94) and the ones that did (M = 3.02, SD = 1.00), t (174) = -.35 p = .728.

The lack of significance in the *Immersion* factor of engagement can be explained by some of the items in this factor representing items similar to those in the intimacy scale, as this partly makes up the way in which audiences engage with the podcast. *Control* also shows an insignificant difference, which may stem from the setting of the experiment rather than the content and shows a limitation of the experiment study which will be explained further on in the conclusion of this study. Overall, this leads to a partial acceptance of H1. *Aesthetics* through inclusion of visual stimuli showed to be significantly impacting the assessment of the podcast while *Immersion* showed a marginal significance and *Control* showed no significance.

The next variable under study was the variable *Intimacy.* It was hypothesized that the participants which listened to an audio-only podcast would feel a greater level of intimacy in their podcast as their counterparts who watched the video simultaneously. The results show that there is a statistical significant difference between the participants who listened to the audio-only podcasts (*M* = 3.00, *SD* = 0.80) and those that listened to the audiovisual podcast (*M* = 2.63, *SD* = 0.84), *t* (174) = 3.03, *p* = .003. In tandem with the theory, the significant differences between audio-only and audiovisual podcasts was expected. Intimacy is one of the most prominent features that make audio podcasts what they are, and differentiate them from other media content available. The participants subjected to the video podcast felt a lower level of intimacy between the producer and themselves as audience as more than one of their senses was being activated. By focusing on images as the story is being told, the participants may have felt a shift in focus which prevented a stronger relationship between their imagination and the story being told. Thus, H2 is accepted.

Next, *podcast length* is also hypothesized to have an effect on *Engagement.* From the literature discussed it is expected that the lengthier podcasts would negatively impact the engagement with the podcast (''Increased podcast length has a negative effect on audience engagement.'') In order to test this, a T-test was conducted in which the 5-minute podcast and the 7-minute podcast were compared. Overall, engagement does not seem to be affected by podcast length to a great extent as no statistical significance was found between short (*M* = 2.99, *SD* = 0.67) and long (*M* = 3.08, *SD* = 0.65) formats of the podcast, *t* (174) = -.88, *p* = .378, and thus leads to the rejection of H3.

When looking into the factors specifically, the following results were found between the longer and shorter podcast formats. Diving into the specific factor *Immersion,* the short podcast (*M* = 3.26, *SD* = .96) and longer formats (*M* = 3.19, *SD* = 0.80), no statistical significance was found either between length and engagement, *t* (174) = .58, *p* = .564. Looking at *Aesthetics,* there is no significance between the short (*M* = 2.88 *SD* = 0.95) and long (*M* = 2.88, *SD* = 0.96) formats, *t* (174) = .04 *p* =.969.

This can be explained as both short and long podcast formats included a group that did and did not watch a video, and although some additional images were included in the longer format of the podcast, the combination of length and visuals together did not change the Engagement factor itself. Finally, control was measured on its own and showed the following results when looking at the length specifically. In this case, a statistical significance was found between the level of control the participants felt between the short (*M* = 2.83, *SD* = 0.94) and the long (*M* = 3.17, *SD* = 0.98) was found, *t* (174) = -2.34, *p* = .018. This illustrates that the longer the podcast went on, the larger the chance was that participants felt control was an important feature for them when listening, as the increased length

might have made them more aware of it.

In order to test whether *age* is an influential factor in determining engagement with podcasts, it was hypothesized that younger audiences have a preference for shorter podcast formats, regardless of their inclusion of visual elements. To test this, a new variable for *Age* was created, comparing the younger and older age groups with each other, cut off by the median of the sample (*Mdn* = 27). The interaction effect between the influence of *podcast length* and *age* needs to be understood further as per the next hypothesis (''Age has a negative influence on audience engagement with podcasts''). Thus, a Two-Way ANOVA test was conducted in order to compare the 4 different conditions with each other and find out if there are statistical differences between the groups. At first sight, the effect of age on audience engagement does not seem to be substantial. The younger half (*M* = 3.05, *SD* = 0.69) and older half (*M* = 3.01, *SD* = 0.63) on first sight do not seem to share many differences in the way they engage with the podcasts. The Two-Way ANOVA test furthermore specifies there is no significant statistical difference between groups in terms of *length* F (1, 172) = .76 p = .386, η_p^2 = - .01 The interaction effect between *age* and *length* is not significant either F (1, 172) = .00 p = .992 η_p^2 = .06. The interaction effect between the groups and *Age* is shown not to be statistically significant as well F (1,172) = .13, p = .721, η_p^2 = .06. Figure 4.1 below show the interaction effect visually.
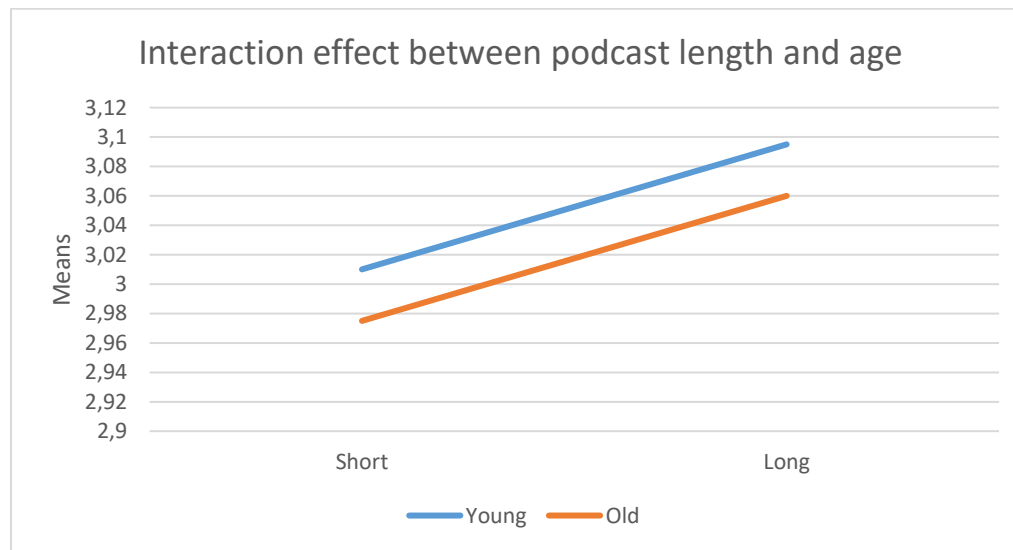
Figure 4.1: Interaction effect between podcast length and age.

Furthermore, motivations of participants were expected to moderate the effect on audience engagement and thus needs to be scrutinized more in-depth. In order to do so, a regression analysis was conducted comparing the people with high levels of motivation towards those with low levels of

motivation (*Mdn* = 4.03). The test determined that motivation was not a strong predictor for audience engagement *F* (1, 174) = .568 *p* = .452, *R2* = .00. Therefore, motivation cannot be seen as a moderator of audience engagement through podcast format. Motivation can be divided into different types of motivation as shown on Table 3.2, and are divided similarly to the overall motivation variable. The cut-off points for each of these overall motivations was the median of 4, relevant in *Edutainment, Convenience* as well as *Storytelling.* In order to see if any of the specific motivator factors on their own influence.

To test this, a multiple regression analysis with *Engagement* as the criterion and *Edutainment, Convenience* and *Storytelling* as predictor variables. The resulting model explained 4.7% of the variance in the criterion variable and was found to be significant *F* (3,172) = 2.84, *p* = .040. *R2* = .05 Only *Convenience* was found to be significant as a separate factor (β = - .25 *p* = .006), while *Storytelling* was marginally significant (β = .18 *p* = .059), and *Edutainment was not significant* (β = - .04 *p* = .645). The regression analyses thus also provide a significant effect between the motivator predictors and *Engagement* and lead us to partially accept H5.

Another way of interpreting motivation is by diving into the news consumption patterns of the participants. Although this is not a hypothesized value in the study, it may provide some more insights into the goals for which people listen to podcasts and what their effects are on its assessment. The factors presented in Table 3.3 will form the basis for this analysis in order to further explain the results. The overall news consumption model shows significance as type of news consumption the respondents deem as relevant to them impact their level of engagement with the podcast. The regression analysis for this variable shows it to be a good predictor for engagement, *F* (1,174) = 28.29, *p* < .001. It had a positive significant influence on *Engagement* (β = .374, *p* < .001). The individual factors of news consumption have been scrutinized individually as well. For *Social* consumption as well as *Information* they found median was 4. For the factor *Entertainment,* the median was 3.

To test this, a multiple regression analysis with *Engagement* as the criterion and *Social, Information* and *Entertainment* as predictor variables. The resulting model explained 17.7% of the variance in the criterion variable and was found to be significant *F* (3,172) = 12.33, *p* <.001, *R2* = - .18 Only *Entertainment* was found to be significant (β = .37 *p* <.001), while *Social* was marginally significant (β = .13 *p* = .086), and *Information was not significant* (β = - .02 *p* = .791). The regression analyses thus also provide a significant effect between the motivator predictors and *Engagement* and lead us to partially accept H5 in combination with the other statistical results from *Motivation*.

Finally, the interaction effect between *length* and *visual stimuli* needs to be understood further.

Thus, a Two-Way ANOVA test was conducted in order to compare the 4 different conditions with each other and find out if there are statistical differences between the groups. When looking at the statistics for the separate conditions, the results for this are as follows for the 5.5-minute audio podcast (M = 2.95, SD = .62), the 7.5-minute audio podcast (M = 2.86, SD = .65), the 5.5-minute video podcast (M = 3.03, SD = .73) and the 7.5-minute video podcast (M = 3.29, SD = .57). The Two-Way ANOVA test furthermore specifies a significant statistical differences between groups in terms of inclusion of *visual stimuli, F* (1, 172) = 6.52 *p* = .012, *R2* = .06. The interaction effect between *visual stimuli* and *length* is marginally significant *F (1, 172)* = 3.22 *p* = .074 *R2* = .06. The interaction effect between the groups and *podcast length* is shown not to be statistically significant *F (*1,172) = .73, *p* = .395, *R2* = .06. Figure 4.2 below shows the interaction effect visually.
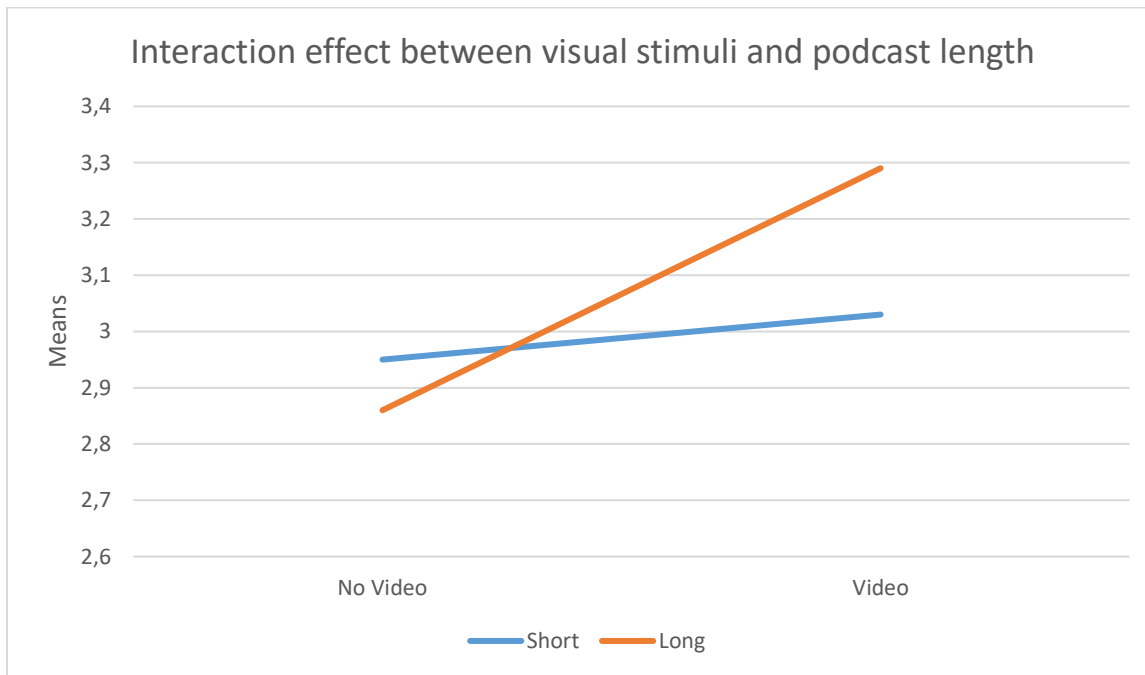
Figure 4.2: Interaction effect between podcast length and visual stimuli

5. Conclusion

In order to provide a cohesive conclusion to this research and to answer the overall research question, the following sections provide an overview of the results and discuss them in the light of the theoretical concepts they relate to. On top of that, this section will reflect on how this thesis contributes to the current knowledge in different areas of research and what its' limitations are. Lastly, indications for future research on this topic are given.

5.1 Discussion
5.1.1 Summary of results

First of all, the findings of the study provide insight into the perceived difference between podcast formats. As was hypothesized, the inclusion of video did impact the level of engagement in comparison to audio-only podcasts. There were 3 main factors that were influential in this regard. Yet only aesthetical choices influenced the participants on its' own as a driver of engagement while the remaining factors were not able to find a direct influence. In line with the multimedia theory of learning, adding visual elements to the story will allow people to better understand more complex news stories by providing extra context in the form of pictures and graphs. Visuals cues have the ability to serve as another manner for audiences to store information more effectively and enhance the overall involvement (Opgenhaffen & D'Haenens, 2011) as was experienced in this study as well. The results therefore highlight the potential for video podcasts to be used more extensively as the difference in engagement scores heavily stems from *Aesthetics* and can thus be attributed to the stimulation of multiple senses which activates the audience in a comprehensive manner (Mayer, 2014).

The control factor that was found to be a driver of engagement did not seem to be impacted by the inclusion or exclusion of visual elements and although being a driver for engagement on its own, does not find valid answers to the difference in the format. Kruikemeier, Lecheler & Boyer (2018) already stated that the control variable may not be effective due to contrasting results, as it allows people to filter out news about topics that are not of interest to them, while it can also generate a higher level of engagement with the story if the topic of discussion falls within the field of interest to the listener and intrinsic motivation is involved. Unfortunately, the non-linearity element of which podcasts consist was not able to be proven to effect podcast format itself. In the experiment, a complete real life situation where participants would access the podcast through their preferred platform and at a self-chosen time was not replicable and possibly affected these results.

When discussing the lack of meaningful differences between the podcasts formats stemming from immersion in the story, some important notions need to be taken into account. Part of the way in

which immersion manifests itself in the podcast is through the storytelling feature. It is apparent from the results that intimacy plays a large role in this, and thus this aspect of engagement especially needs to be looked at interlinked with intimacy. As theorized, intimacy is one of the main strengths and is part of a few key features that differentiate a podcast in the media landscape (Sienkiewicz & Jaramillo, 2019). The respondents subjected to the video format reported lower levels of intimacy. Even though the video format positively influences engagement, it does so while diminishing a unique selling point of this medium. This does not necessarily present an issue for news podcasts as evidenced by the engagement numbers. Moreover, news podcasts are more so focused on disseminating information rather than immersing the audience in a fantasy world through storytelling so the lack of intimacy did not impact their attitudes towards the podcast on its own. Intimacy still remains a vital component of podcasts and its' importance to the overall podcasting sphere must not be underestimated, especially within genres that have a different goal, such as with more niche communities. This is significant, especially because part of the intimacy that is felt through podcasts is related to the relationship the producer and audience can share. Since the podcast does not come from an established source, this could have strained the process. However, it also proves that audio as a format is indeed vital in creating a certain feeling in listeners and illustrates how the listening experience feels more integrated as opposed to video format, as it makes the experience more focused and conscious (Swiatek, 2018). The preferential differences in sensory stimulations in the video podcast seem to offset the comparative lack of connection between the visual elements and the story and the link that was provided mattered for listeners to understand the story better and value it more favorably.

Next, the impact of the length of the podcast was further investigated, and its impact can be understood from multiple perspectives. First, it was stated that there would be a negative relationship found between an increase in podcast length and engagement. Corresponding results were not found, diminishing the influence the length of the story had on engagement. We have established inclusion of video favors engagement, yet the effect the amount of extra content exposed to was less relevant. This shows an appreciation for visual elements, yet tells us that its' simple presence outdoes magnitude in numbers as engagement was not impacted directly by podcast length. Immersion in the story was also not impacted by length, showing that format seems to yield more importance in determining behaviors as length. The impact of control over the experience seemed to be more apparent in podcasts that last longer, which supports some claims made previously. Following Groot Kormelink & Costera Meijer's (2019) argument, people need to feel in control over when they are able to access their news, and when a story takes up more time it becomes significantly important for the story to give them a deepened

insight into a specific topic. It shows that although length is not as vital of a predictor for engagement as proposed, it does demonstrate increase in length holds value. As the longer video podcast elicited the highest level of engagement, the added depth of the story had a positive effect on audiences. This corresponds to the publics' appreciation for detailed explanation of stories possible through podcasts. When putting this information in the context of our media landscape, this result is promising as it means producers of podcasts can be more certain additional content in the form of visuals can impact their audiences in a more positive way as would increasing the length of the story. Although the goal is often to get audiences hooked on the produced content for as long as possible, the results show that this doesn't always contribute to actually aiding its perception of quality and leads to a possibility for multiple shorter podcasts being able to produce desirable results.

Length was furthermore linked to age. In this case, the expectation of age negatively impacting engagement was not met either. First, it has to be stated that the overall age of the participants skewed towards a younger generation in general, with only 11.4% of participants being aged 40 or over, which does not represent the total podcast population completely. Regardless of this, the generational differences that were expected were not in place as much. The gratifications between younger and older audiences were expected to be different, with younger audiences leaning more towards news which is high in entertainment value and older audiences would be more susceptible to opinion-forming and information providing sources. For this reason, the effect of motivation on engagement was taken account as well when discussing these findings. Since entertainment as a consumption goal for news predicted engagement with the news accurately for both younger and older audiences, this seems to be a more accurate predictor as age itself is. Earlier, the overall small differences in total run time were stated as a potential issue with a lack of overall significance concerning length however positive effects can also be derived from it. It may stem from a rather complete integration of the podcast into the lives of a wider audience already with its' growing popularity. This confirms the growing acceptance of podcasts as a type of medium with potential for further exploration.

Motivations for podcast users have been discussed shortly before, but their significance in predicting engagement in this research needs to be scrutinized further as user motivations were important indicators of engagement. Moreover, control over listening was theorized as influential due to being able to access the podcast on-demand at any place (Papathanassopoulos et al., 2013). Earlier, control was shown to not impact engagement during and after the listening process, but it does play an important role in the earlier stages of the selection process. The lack of non-linearity due to the nature of the experiment and a device in the survey which required participants to watch the full video

contradicts with the expectation the podcast listeners may have had. The relevance of controlling what and when you listen may have been impacted by the structure, and reminded respondents of how important this is too them.

News consumption followed the patterns which were established from the theory, stating that in terms of engagement with podcasts specifically, social and entertainment-based factors are expected to be influential whilst opinion-forming and information seeking motivations would not have such an impact (Lee, 2013), and this expectation was further proven by this study. When combining this finding with the expected motivations across age ranges being similar to the ones theorized, we can more certainly say that age as a distinctive variable being used to group people's media use together may slowly become less relevant and motivation stemming from a specific goal should be trusted more. Podcasting is not a new phenomenon anymore, and neither are older age groups exploring different media. Regardless of age, the internet is considered to be a goal-oriented medium, and therefore the motives for using media through this source are more active comparatively (Mayer, 2014). Information-seeking not being a valuable motivational predictor may be explained through the multimedia theory of learning (Mayer, 2014), as seeking out news stories implies an intrinsic motivation to learn and obtain information. Being a goal-oriented medium, the seeking out of news stories leads participants to expect the information aspect of it to be covered accurately, while entertainment and social reasons are specifically sought out.

All in all, the interaction between the two main concepts studied provides us with a clear overview of the statements made above. The corresponding results were in line with the rest of the study, and show length to not impact audience engagement. Now, we have more insights into the reasons for this. The study made apparent that the participants subjected to the longer podcast including a video showed the most positive engagement rates, followed by the shorter video podcast. The inclusion of visual elements in both instances had a positive effect and needs to be understood from multiple perspectives. The increase in information by adding a new source seemed to activate some of the aspects that led participants to feel more engaged with the podcast and shows an appreciation for aesthetics in telling a story. From a learning perspective, the participants obtain a clearer picture of the story while inclusion of video simultaneously meets audiences listening goals Since we have found the entertainment and social motivation to be of importance in relation to engagement, it can be stated that visual elements help audiences meet these gratifications more effectively and are representative of capturing a podcast audience. Although length and visual stimuli interlinked showed some relevance for the podcast audience, the large discrepancies between the two opposites of the experimental

conditions, the long video podcast contrasted to the short audio podcast, means length cannot be ruled out as insignificant factor all together and is valued to a greater extent in combination with video for its' ability to dive deeper into stories.

5.2 Conclusions and implications

The research question of the thesis asked what the influence of visual stimuli and podcast length was on the level of audience engagement with podcasts, in order to figure out the relevance and place that audio-visual podcasts hold within the podcasting spectrum. The experiment which was conducted to test the theories presented results that can have great consequences on the way digital news is presented through this medium.

The study was able to prove the added value visual stimuli had on the audiences as the difference in levels of engagement between video and audio podcasts was substantial, suggesting the medium could fill an important gap in today's media landscape. The favoring of video podcasts presents the opportunity for news media to better play into the audiences wishes for content based on in-depth reporting and investigate journalism aided by visualizations, as it leads to a more informed citizenry. The long format of video podcasts is able to capture people's attention through the added benefits of multiple senses being stimulated. Yet, the same features increasing a metric often used to gauge success for producers also decrease the impact of a unique selling point of this medium, the level of shared intimacy. Thus, video podcasts should be employed mostly in situations where realism and believability are vital components of successful media content. Alternatively, video podcasts may be approached in a way that does not compromise the valuable contribution of intimacy to podcasting, but rather integrates it within the process of visual stimulation to integrate the findings of this study with the podcasts existing strengths.

Podcast length proved not to be a driver of audience engagement in podcasts, yet this should be interpreted in a positive light. Based on these results, the claim made for young audiences' preferences for short stories is diluted and shows that generational influences are not representative when discussing engagement in news podcasts. Furthermore, it brings advantages for podcasters as it allows them more freedom in producing and experimenting with different lengths of podcasts to test how audiences would evaluate these to better match their needs. Producers of podcasts tend to lean towards extending the podcast length, so the lack of preference for short podcasts is favorable for both sides. Rather than length, entertainment and social goals audiences are expecting to have fulfilled are a better driver of engagement. To capitalize on these findings and build on the opportunities of long video podcasts, the visual stimuli should be interpreted and represented in ways that fulfill these motivational

needs for news consumption to elicit the highest levels of audience engagement.

The audience preferences may also imply a change in importance of the podcast in traditional media. The long video podcasts being viewed most favorably can lead more traditional companies to use the podcast as a primary source. Content presented in the podcast could be re-used for other online, or even traditional channels, to increase content distribution in a media savvy way and bring this medium to the forefront.

All in all, the research contributes strongly to the existing literature on podcasts, as well as online news and digital media by uncovering the preferential podcast format amongst audiences. It confirms the overall strengths of immersion and explanation through deep-diving into a story and proves the relevance of the video podcast in news dissemination. By answering the questions posed in this study, audiences are better understood in terms of motivations and preferences and producers are given insights into how these audiences should be reached effectively. Finally, it also provides a direction for how to approach digital news in the current and future media landscape by shedding a light on the incorporation of podcasts as a primary news medium.

5.3 Limitations

The research of this thesis has been conducted after assessing the relationships between the concepts which were studied. Furthermore, a plethora of methodological considerations have been taken into account to be able to create a tool of measurement high in validity and reliability and avoiding any confounding factors which may impact the results of the experiment. However, some limitations to this research were still found. This part will provide an overview of the most important limitations which were encountered.

First, the sampling strategy chosen needs to be critically reviewed because of the combined use of non-probability sampling techniques. These are methods which are generally not recommended for the use in quantitative research because of their inability to generate representative samples. In order to combat this, randomization of participants in each experimental condition is utilized to ensure comparability, and partially balances the disadvantages these sampling methods bring with them. Because of this, using the study to generalize to the whole population need to be done carefully. Second, the platforms accessed to find participants were mostly focused on communities of podcast listeners on various social media, and therefore it is presumed that the participants taking place in the survey experiment already had a pre-existing knowledge and interest in podcasts which motivated them to partake. Therefore, some bias for the participants themselves can occur, since they may be more reflective about how them interact with podcasts in comparison to respondents who are less familiar

with it.

Besides that, a number of possible limitations stem from the experimental design itself. It is possible that participants based their ideas on pre-existing notions of video or audiovisual podcasts. If a participant is used to only listening to the podcast through audio and gets assigned to the video-podcast, this may impact their results as the podcast does not reflect the features the audience is used to. In terms of length this is a similar problem. Besides the survey, the participants were also required to listen to the podcast, adding a few extra minutes to the total activity. This results in a total time of 15 minutes, and can have impact on the completion rate.

Moreover, a number of aspects in the survey experiment had to be simplified due to practicality and the time constraints given for this master thesis. It seems like the results have been impacted by that, therefore some of these aspects need to be mentioned. For instance, the visual elements that were included in the final version were less extensive as originally intended. Part of the reason for this was the inability to make use of professional materials, which meant the quality of the visual elements unfortunately dropped and could have a negative effect in their ability to instill audience engagement. To a lesser extent, the audio was also affected by this quality drop, yet this wasn't as impactful as found out through the pre-testing phase. This same phase changed the total runtime of the podcasts to minimize incomplete answers further. On the one hand, that had a positive impact in terms of data collection yet it also resulted in the difference in length having to be adjusted. This did not only lead to less elaborate stories and corresponding visual elements on their own, it also decreased the relative difference in length between the two formats. The resulting differences when discussing length could have therefore been stilted by these circumstances. Seeing as intimacy proved to be an important factor, it also needs to be taken into account that a podcast was produced and was not taken from an existing producer with some brand recognition.

Furthermore, while the survey experiment was designed with the aim of providing context realism and imitating the process of a real podcast, it is not known with certainty to what degree these measures of increasing external validity were effective. This limitation is mostly connected to the assumptions made regarding the control, or lack thereof, the participants experienced. As their own agency is an important aspect of the listening process, the realism could not be achieved correctly in terms of technical features. Thus, a more elaborate visual design could have for example imitated the interface of an audio platform, or website, through which the podcast can be accessed. Possibly, a feature that made the participants feel more in control over the choice of podcast would have helped too.

5.4 Future research

Overall, the insights provided by this thesis emphasize future directions in different areas. The proven benefits of video podcasts could lead to further investigation into this topic. This study was focused on the role of visual elements, yet did not explore the effect of and difference between the potential ways to visualize the news story, or which visual features would garner the most positive response in terms of engagement. Media scholars may look into which visual elements work best in different genres of news podcasting. For example, talk shows might benefit the most from including the host(s), while documentaries or investigate journalism profits more from data visualizations or written texts.

Considering the relevance of intimacy, investigating into which forms of visual stimuli are able to achieve this might make podcasts an even more preferable platform for news consumption. Alternatively, it may show that visual elements circumvent the necessity of tools increasing intimacy, as the aesthetical improvements provide a similar result for engaging audiences. This way, it can be tested if the connection and relationship that is apparent in audio-podcasts can be achieved through video podcasts too. As a result, a wider spectrum of podcast genres would be able to benefit from the engagement activating qualities found through optical enhancement.

Although this study was not able to prove length as a determining factor for audiences, it is still relevant to investigate into this due to the minimal differences in length among the presented stimuli. As longer podcasts were viewed favorable in combination with video, a similar study could expand on the research by increasing the differences between formats to find out the relevance of length on a wider spectrum. An interesting focus for future research could mean investigating the importance of length when it concerns podcast listeners on the go. Podcast listeners have become more prone to listen to content while performing other tasks or during day-to-day activities which might make them more susceptible to consider time as an important value. The effect of video for these listeners should be researched as well, as the inclusion of video might help with keeping their focus on the podcast more effectively. Alternatively, it may lead to overstimulation of senses for these audiences and therefore have a negative connotation for mobile users.

Lastly, the use of podcasts as a learning tool could be extended beyond its' current form in the world of language training and education by experimenting with its' format and uncovering ways to integrate it in educational systems more comprehensively. Stimuli like data visualizations might make more abstract courses more understandable and provide alternative forms of studying for individuals who learn best through visual immersion.

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Appendix A: Questionnaire

First, let me introduce myself. My name is Jeroen de Waal and I'm inviting you to participate in a research about podcasts. I am currently studying Media, Culture & Society at the Erasmus University in Rotterdam and am carrying out a study on audience behavior in podcasts. More specifically, I am interested in finding out how listeners evaluate certain podcast features and what their impact is on listening behavior.

 Please answer the questions based on your own opinion and experience, there are no wrong answers. The survey and experiment will take approximately 15 minutes in total. It is important to me that your privacy and the confidentiality of your answers remain, so all answers are recorded and processed anonymously. The answers will solely be utilized for the purposes of this research.

 If you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. If you have questions about your rights as a study participant or are dissatisfied at any time with any aspect of this study, you may contact me –anonymously, if you wish— 540159jw@eur.nl

 Many thanks for your participation in this research, all your answers will be very valuable for my study!

Q1 By clicking 'I Agree' you confirm that you have read the information above and want to partake in this survey.

 If you sign this consent form, your signature will be the only documentation of your identity. Thus, you do not need to sign this form.

○ I Agree

○ I Disagree

Page Break

Q2 Please select the audio streaming platforms you currently use from the list below. Multiple answers are possible.

☐ Amazon

☐ Apple Music

☐ Google Play Music

☐ Pandora

☐ SoundCloud

☐ Spotify

☐ Stitcher

☐ YouTube

☐ Other _____

☐ None

Q3 How many minutes do you listen to podcasts on an average day?

Q4 For which purposes do you listen to podcasts? Please state how much you agree with the following statements. I listen to podcasts because...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I can learn something new from podcasts	○	○	○	○	○
I can educate myself when I listen to podcasts	○	○	○	○	○
I can expand my mind from podcasts	○	○	○	○	○
I can listen to the podcast I want when I want	○	○	○	○	○
Podcasts provide entertainment at times that are convenient for me	○	○	○	○	○
Podcasts are entertaining	○	○	○	○	○
I like to learn about other people's experiences through podcasts	○	○	○	○	○
I can picture the stories told through podcasts in my mind as I listen	○	○	○	○	○
Time passes quickly when I listen to podcasts that feature storytelling	○	○	○	○	○
Podcasts make the time go by quickly	○	○	○	○	○

Podcasts allow me to consume fresh or novel content not otherwise available in the media	○	○	○	○	○
I like to hear about the experiences of people who are different than me	○	○	○	○	○

Based on your answers of the previous questions, you will now receive a podcast which is suited to your listening preferences. Please refrain from carrying out other activities during this time.

 For the best experience, please listen with headphones in and enjoy the podcast!

You have been selected to listen to an episode of the daily news podcast Newsscape. With short 5-minute audio podcasts, the channel wants to inform citizens on the most intriguing and important issues in today's world.

 Please go to the next page to start the podcast!

Browser
Version
Operating System
Screen Resolution
Flash Version
Java Support
User Agent

Flashversion Please listen to the audio below. The survey will auto-advance once its' complete.
[Jeroen](#) · [Short Audiopod](#)

MP4version Please listen to the audio below. The survey will auto-advance once its' complete.
[Jeroen](#) · [Short Audiopod](#)

Timing

First Click
Last Click
Page Submit
Click Count

End of Block: Block 3

Start of Block: Block 4

You have been selected to listen to an episode of the daily news podcast Newsscape. With short 8-minute audio podcasts, the channel wants to inform citizens on some of the most intriguing and

important issues of today's world.

 Please go to the next page to start the podcast!

Browser
Version
Operating System
Screen Resolution
Flash Version
Java Support
User Agent

Flashversion Please listen to the audio below. The survey will auto-advance once its' complete.
Jeroen · Long Audiopod

MP4Version Please listen to the audio below. The survey will auto-advance once its' complete.
Jeroen · Long Audiopod

Timing

First Click
Last Click
Page Submit
Click Count

End of Block: Block 4

You have been selected to listen to an episode of the daily news podcast Newsscape. With short 5-minute video podcasts, the channel wants to inform citizens on some of the most intriguing and important issues of today's world.

 Please go to the next page to start the podcast!

Browser
Version
Operating System
Screen Resolution
Flash Version
Java Support
User Agent

Display This Question:

*   If If You have been selected to listen to an episode of the daily news podcast Newsscape. With short 5-... Flash Version Is Not Equal to -1*

Flashversion Please watch the video below. The survey will auto-advance once its' complete.

Display This Question:

*   If If You have been selected to listen to an episode of the daily news podcast Newsscape. With short 5-... Flash Version Is Equal to -1*

MP4version Please watch the video below. The survey will auto-advance once its' complete.

Timing

First Click
Last Click
Page Submit
Click Count

You have been selected to listen to an episode of the daily news podcast Newsscape. With short 8-minute video podcasts, the channel wants to inform citizens on some of the most intriguing and important issues of today's world.

Please go to the next page to start the podcast!

Browser
Version
Operating System
Screen Resolution
Flash Version
Java Support
User Agent

Flashversion Please watch the video below. The survey will auto-advance once its' complete.

MP4version Please watch the video below. The survey will auto-advance once its' complete.

Timing

First Click
Last Click
Page Submit
Click Count

Q5 Please indicate to what extent you agree with the following statements about this podcast.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I was so involved in the experience that I lost track of time	○	○	○	○	○
I blocked out things around me when I was listening to this podcast	○	○	○	○	○
I was absorbed in the experience	○	○	○	○	○
This experience was demanding	○	○	○	○	○
I could not do some of the things I wanted to do while listening to this podcast	○	○	○	○	○
I felt frustrated/annoyed/discouraged while listening to this podcast	○	○	○	○	○
This podcast was aesthetically appealing	○	○	○	○	○
I liked the graphics and images of the podcast	○	○	○	○	○
The podcast appealed to my visual senses	○	○	○	○	○
Listening was worthwhile	○	○	○	○	○
The content incited my curiosity	○	○	○	○	○
I felt involved in the podcast	○	○	○	○	○

Q6 Please indicate to what extent you agree with the following statements about your listening experience?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I lost awareness of the real world while listening	○	○	○	○	○
I lost track of time while listening	○	○	○	○	○
Events in the podcast feel like they are really happening	○	○	○	○	○
Events in the podcast are more vivid/memorable than in real life	○	○	○	○	○
I felt like I was part of the story	○	○	○	○	○
I feel transported into another world	○	○	○	○	○

Q7 To what extent do you agree with the following statements about this podcast?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
This podcast displays good quality content	○	○	○	○	○
The podcast appears to be of poor quality	○	○	○	○	○
The information presented by this podcast is reliable	○	○	○	○	○
The information presented by this podcast is easy to understand	○	○	○	○	○
The informatio presented by this podcast is accurate	○	○	○	○	○

Q8 To what extent do you consume news for the following purposes? I consume news.....

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
To find out what's going on in the world	○	○	○	○	○
To make yourself an informed citizen	○	○	○	○	○
Because it helps you learn about others	○	○	○	○	○
Because it's exciting	○	○	○	○	○
For laughter	○	○	○	○	○
Because it's a habit that I have	○	○	○	○	○
To help me form opinions on issues	○	○	○	○	○
To keep up with what people around me are talking about	○	○	○	○	○
To appear informed to those around me	○	○	○	○	○
To have something to talk about with others	○	○	○	○	○

Q9 Did the podcast you just listened to include visual elements?

○ Yes

○ No

○ I don't remember

Q10 How long did you think the podcast you listened to was in minutes?

_____

Q11 What is your gender?

○ Male

○ Female

○ Non-binary / third gender

○ Prefer not to say

Q12 Please state the year you were born.

_____

Q13 What is the highest level of education you have completed?

○ Less than high school

○ High school gradaute

○ Trade school

○ Bachelor's degree

○ Master's degree

○ PhD or higher

Q14 In which country do you currently reside?

▼ Afghanistan ... Zimbabwe

Your answers have been recorded, thank you very much for filling out this survey! Before you exit the survey, I would like to give you some background information on the study to clarify some things.

The purpose of the study was to figure out how manipulation of certain podcast features, in this case the length of the podcast and the inclusion/exclusion of visual stimuli, impacts audience engagement with and learning from the podcast in order to uncover what the best format is for producers of (news)podcast in reaching their audiences and informing the citizenry.

I hope this message clarified any potential confusion that might have come up on your side during the survey. If you have any further questions, comments or complaints, please do not hesitate to get in touch with me (540159jw@student.eur.nl).

You can close the browser window now.

With kind regards,

Jeroen de Waal

Appendix B: Transcripts

Short format

Good morning and welcome to today's episode, my name is Jeroen de Waal and you are listening to Newsscape.

On this episode, we will dive into the world of cryptocurrencies by taking a closer look at the trend of digital art sold as NFT's.

To uncover the popularity of the NFTs, we have to go back to the origin story of cryptocurrencies, and in particular, Bitcoin, which began all the way back in 2008. Bitcoin's founder, Satoshi Nakamoto released this mysterious paper which opted for a decentralized system in which there is a fixed number, set at 21 million bitcoins, of which no more can ever be created. Since this came out around the time the world was in a financial crisis, people weren't convinced of the centralized bank system anymore. Since the decentralized system proposed by Nakamoto was not controlled by a person or institution, but rather was this permission-less distributed computer network, people actually felt it was more trustworthy.

Still, cryptocurrencies only remained interesting to a small group of people. As its popularity increased, new ways to spend Bitcoin were thought of, some people are buying clothes with it and some websites start accepting it as a form of payment. Other cryptocurrencies also start popping up, most of these, like Dogecoin were not to be taken too seriously, but there is also this movement of people who start using the technology as a base for other things starts developing. Things like, tracking the rights to online content through the technology of the Ethereum block chain. This practice really started taking off in 2017 since people started realizing they could make a lot of money from it. Since 2021, the worth of a stock in Ethereum even tripled, from around 1100 in January to over 3000 at the beginning of May.

What is an NFT?

An NFT is a non-fungible token. Non-fungible refers to the fact that it's a unique token, and cannot be replaced. A bitcoin, for example, is fungible. You can trade one for another and you will have the exact same thing. An NFT on the other hand, is unique and one of a kind. NFTs are tokens that we can use to represent ownership of unique items.

Before this technology, things that were on the internet were infinitely copy able. The Ethereum block chain though, allows people to brand these digital objects with a certificate of authenticity to say this is the original of this item, and you can't copy or fake the digital signature attached to it. So, the NFT is not the image or the video clip itself. It's the certificate of authenticity that attaches to that thing and links to it.

Anything that is unique and needs provable ownership can be an NFT. A unique digital artwork, a unique sneaker in a limited-run fashion line, an in-game item, an essay, a digital collectible, a domain name, even a ticket that gives you access to an event or a coupon.

The most expensive sale of an NFT artwork, currently sits at €69 million. Even popular memes like Nyan Cat and Overly Attached Girlfriend are worth nearly a million dollars.

What is the societal impact?

For artists, the rise of the popularity of the NFT can have a huge impact. Artists are now able to sell "true digital originals" and track this closely, monitor their sharing, control billing, and participate transparently in payments from sales. Especially in photographic art, this can have enormous positive consequences for photographers and rights exploiters. that only the person who owns the token is the legal owner of one of these "prints," avoiding the illegal (but common) third-party sharing since the content can no longer be acquired or stolen arbitrarily on the net as before. Besides that, it increases the value of the token (the print) for its exclusivity aspect.

So why are people buying this?

In the 'offline' world, rich people spend millions of dollars on sculptures and pieces of art for their walls. The NFT is like a new Chanel bag or owning a Picasso. So a large part of why these people want to own an online image or painting can be tracked back to the emotional values tied to it, they give you a certain status. NFTs allow these people to replicate the scarcity that objects can have in the offline world. Yet, there is also a bigger change happening from the rise of NFTs that is linked to this generational transformation that's happening as more of our lives move onto the internet.

We spend so much time in the offline world sort of curating our surroundings and expressing ourselves through the consumption of scarce goods and building identities around the physical objects that we own. And now, with NFTs, that aspect of life can also be online. So maybe the thing that gives you status and identity is not a physical object, maybe it's a token on the block chain.

Thank you for listening, that is all for today. My name is Jeroen de Waal, see you tomorrow!

Long format

Good morning and welcome to today's episode, my name is Jeroen de Waal and you are listening to Newsscape.

On this episode, we will dive into the world of cryptocurrencies by taking a closer look at the trend of digital art sold as NFT's.

To uncover the popularity of the NFTs, we have to go back to the origin story of cryptocurrencies, and in particular, Bitcoin, which began all the way back in 2008. Bitcoin's founder, Satoshi Nakamoto released this mysterious paper which opted for a decentralized system in which there is a fixed number, set at 21 million bitcoins, of which no more can ever be created. Since this came out around the time the world was in a financial crisis, people weren't convinced of the centralized bank system anymore. Since the decentralized system proposed by Nakamoto was not controlled by a person or institution, but rather was this permission-less distributed computer network, people actually felt it was more trustworthy.

This worldwide network of computers then can be used to keep track of every Bitcoin transaction ever made. Every time a Bitcoin is bought or sold, the transaction is recorded in this global database, kind of like a Google spreadsheet. Anyone with an internet connection can go on there and view changes that were made making the entire process very public and transparent.

Still, cryptocurrencies only remained interesting to a small group of people. As its popularity increased, new ways to spend Bitcoin were thought of, some people are buying clothes with it and some websites

start accepting it as a form of payment. Other cryptocurrencies also start popping up, most of these, like Dogecoin were not to be taken too seriously, but there is also this movement of people who start using the technology as a base for other things starts developing. Things like, tracking the rights to online content through the technology of the Ethereum block chain, this practice really started taking off in 2017 since people started realizing they could make a lot of money from it. Since 2021, the worth of a stock in Ethereum even tripled, from around 1100 in January to over 3000 at the beginning of May.

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How does this work?

When you've obtained the NFT, an auction needs to be set up to sell it. The sale can be set up similar to royalties. When the original artist sells an NFT, and the buyer then resells for a higher amount, the original creator will always get a portion of this sale, which makes it a very lucrative business model for various artists. When you sell physical art, you sell it to someone specifically. With the NFT, you can build it into the code that every time it gets resold, you get a portion of the proceeds. This allows the scarcity that was previously only allocated to physical goods to be replicated in digital goods as well.

What is the societal impact?

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Thank you for listening, that is all for today. My name is Jeroen de Waal, see you tomorrow!

Appendix C: Visual elements of the podcast

Image 1: Logo Newsscape podcast

Image 2: Original paper explaining bitcoins start.

Image 3: Bidding on the NFT

Image 4: Course of Ethereum stocks

Image 5: Certificate of authenticity

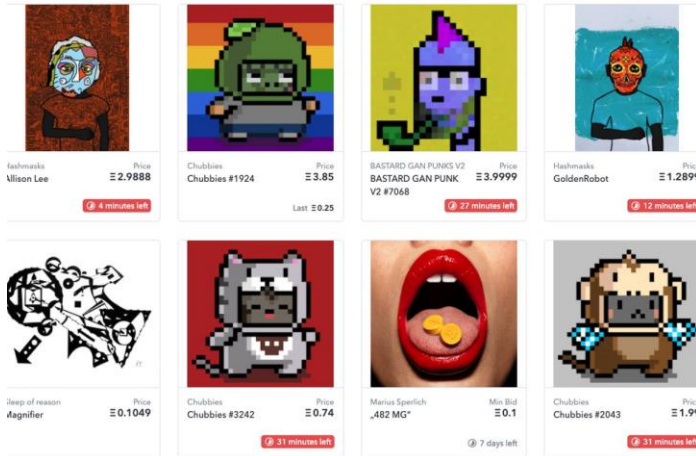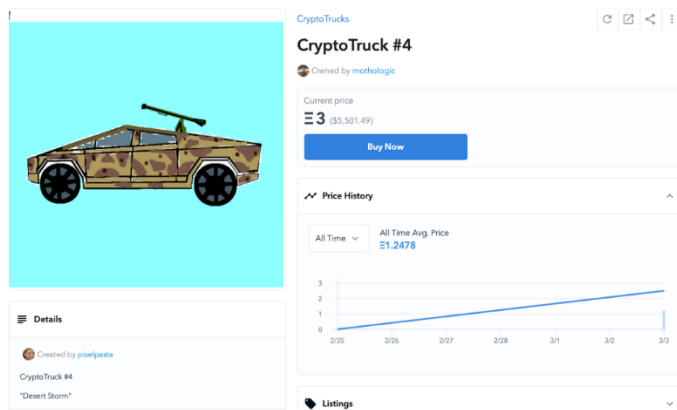Image 6: Most popular Memes as NFT's
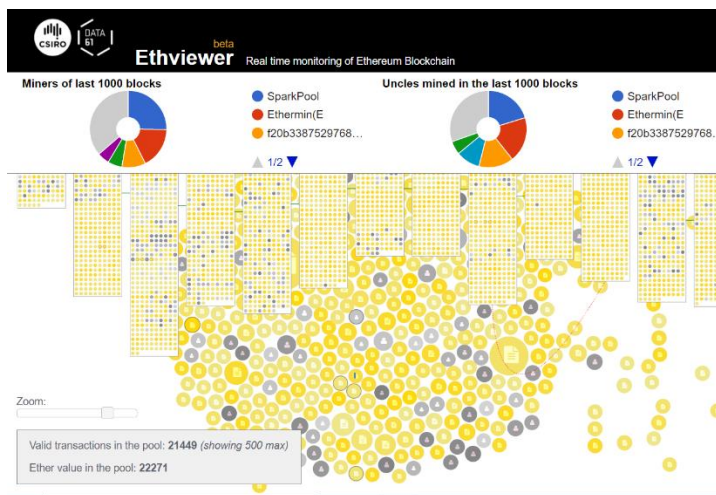
Image 7: NFT auction house

Image 8: Price of NFT over time

Image 9: visualization of the ethereum blockchain