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DIGITAL CONTENT CONSUMPTION: A FINNISH-AUSTRIAN CROSS-COUNTRY ANALYSIS

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Abstract

Online content consumption behavior has significantly changed. In particular, the growing success of legal media service providers such as Youtube, Netflix, or Spotify, has led to new modes of consumption. Research, however, still focuses predominately on illegal streaming and downloading behavior and its impact on media companies' commercial success. In order to paint a more comprehensive picture, we report on a cross-country study conducted in Austria and Finland, which explored digital content consumption habits and sources, young adults' attitudes towards illegal sources, and the importance of price, legality, ease of use as well as ease of access, and its influence on people's consumption behavior. Results show that young adults predominately use legal Internet sources, with music streaming provider Spotify becoming increasingly more popular. Also, respondents prefer free-of-charge (or advertisement-based) providers for which they still fall back to using illegal sources in cases where free alternatives are missing.

Keywords: Digital Media Consumption, Technology Acceptance, Cultural Differences.

1 Introduction

As Cummins and colleagues note, consumer behaviour has changed remarkably since the early days of the Internet (Cummins, Peltier, Schibrowsky and Nill, 2014) — particularly with respect to entertainment media. Yoo (2010) refers to this as 'computing in everyday life' or 'experiential computing' where the increasing ubiquity of consumption artefacts (e.g. smartphones, tablets, etc.) and the variety of different content ecosystems mediate the (co-)creation as well as consumption of digital media. One example for this 'new' form of computing may be found in today's streaming services, which allow their users to consume desired content wherever and whenever they want, and thus facilitate the continuous growth of companies such as NETFLIX, SPOTIFY, YOUTUBE and/or sport portals like DAZN. To this end, Deloitte's recent Digital Media Trends survey revealed that 69% of all participants had at least one video streaming account (Westcott, Loucks, Downs and Watson, 2019). It is the first time that this number is higher than the number of traditional pay-tv subscriptions (65%). The video streaming provider NETFLIX, for example, reported 139 million subscribers in January 2019. In addition, 41% of respondents reported to also have a music streaming account. In part, this success is accredited to providers frequently producing exclusive content for their subscribers. In fact, the major American streaming services had produced more scripted TV programs than their traditional television broadcasting competitors (Fiegerman, 2019).

Yet, despite the growing popularity of legal streaming services, illegal consumption of content is still omnipresent. A 2014 EU survey revealed that around 70% of the respondents stream or download recent blockbusters 'for free', mainly because they cannot afford to watch them legally (European Commission, 2014). Hence, when researching digital content consumption behaviour, one has to distinguish between its 'legal' and its 'illegal' (i.e. without permission from the copyright owner) manifestations. While both sides are part of the same medal, their study is rather divided, providing no sound ground for an overall understanding of digital content consumption behaviour. For example, there is an abundance of research on piracy behaviour connected to digital content consumption (e.g. Bhattacharjee, Gopal and Sanders, 2003; Al-Rafee and Cronan, 2006; Yoon, 2011). However, this research does not relate to a wider consideration of digital content research, other than to its negative effects on commercial success. On the other hand, when it comes to consumer behaviour in legal content consumption, there seems to be little research regarding the acceptance and use of modern streaming providers. Furthermore, popular theoretical research frameworks in media psychology such as the *Technology Acceptance Model* (TAM) (Davis, 1989) or the *Unified Theory of Acceptance and Use of Technology* (UTAUT) (Venkatesh and Davis, 2003) seem less suitable for today's environment dominated by ongoing digitalization and social media interaction. Working on closing this gap, this study aims to provide new, integrative insights on the actual behaviour of digital content consumers, and thus may be seen as a first step towards the development of new, potentially more relevant, research models.

2 Related Work

Considering today's ubiquitous digitalized environment, the consumption of digital products differs from consuming physical products in that they are often not subject to exclusive access (Quah, 2003). Borrowing a physical book, for example, means that only the current book holder is able to consume its content, i.e. read the book. Borrowing a digital book, however, usually means that one does not actually receive the distinct book but rather a digital copy. Consequently, the digital book's content may be consumed by multiple consumers at the same time through sharing digital copies. Such is possible as the multiplication of digital content is largely free of cost, which bears immense economic advantages for the reproducer, but also great challenges with respect to the adaptation of business models for the creator or copyright holder. While the re-production of physical products and content is largely impossible for consumers, the re-production of digital goods may be fairly simple, often achieved through copy and paste. This also facilitates illegal sharing and distribution of goods, which has greatly been fought by the music and film industry, leading to the introduction of ever more sophisticated

digital rights management controls and securing mechanisms (cf. Eskicioglu, Town and Delp, 2003). A 2003 survey by CBS, for example, revealed that 69% of Americans aged between 18 and 29 find it acceptable to share music online (Cosgrove-Mather, 2003). Yet, while the industry keeps complaining about their loss of income caused by the illegal distribution and consumption of digital content, in the past it was often the missing availability of alternatives which has driven consumers into such unlawful behaviour (Weijters, Goedertier and Verstreken, 2014). Also, consumers mostly do not distribute content for financial reasons, i.e. they usually do not aim to earn money by distributing illegal copies of books, music or movies. Rather, they contribute to what is referred to as the sharing economy — a societal change which fosters sharing between strangers achieved through peer-to-peer network technology (Martin, 2016). To this end, sharing is not necessarily limited to digital products such as books or movies, but also includes opinions, advice or knowledge.

2.1 Sharing of Digital Content

When sharing refers to inviting someone we know to use something we possess, we speak of 'sharing in'. On the other hand, when sharing refers to distributing goods or content between strangers we speak of 'sharing out' (Belk, 2010; Ingold, 1987). To this end, Belk argues that we have to distinguish between non-ownership sharing, and the transfer of ownership in exchange of some sort of appreciative gesture. In a digital environment, this distinction becomes rather blurry. Neither is a digital good divisible, nor do users own the full rights to share it among others. Additionally, users also tend to share information and knowledge free of charge. Examples are ratings given to products on AMAZON.COM, photos submitted to the photo sharing platform FLICKR.COM, videos uploaded to YOUTUBE or contributions to the online encyclopaedia WIKIPEDIA (Belk, 2014). In context of the previously mentioned sharing economy, sharing goods free of charge may span beyond the digital world and include the sharing of physical goods, such as gardening tools or children toys (Ozanne and Ballantine, 2010). Generally, we see that particularly young people show less interest in owning goods themselves, both physical and digital, but rather rent or borrow them from available pools (e.g. Belk, 2010).

2.2 Consumption of Digital Content

The above illustrates that people increasingly move from owning goods to consuming goods, especially in the digital realm. It seems that the experience of a medium, like books, movies or music becomes more important than its actual possession. Even though there is a wide range of legal content available, economic reasons may still lead to illegal consumption behaviour. Previous work has found that the illegal consumption of digital content is connected to consumers' age, with young people being heavy users of technologies facilitating piracy of content (Dilmperi, King and Dennis, 2011). Yet, much of this research happened at a time when no legal alternatives were available. More recent studies, however, have found a change in behavioural patterns, although so far this effect seems to be mainly found with the music industry and does not translate to the consumption of video content (Riekkinen, 2018). Weijters and colleagues, for example, highlight that consumers increasingly prefer legal and thus ethical offers, independent of their age (Weijters et al., 2014). Though, financing models vary, with younger consumers predominantly opting for ad-financed consumption models so as to save on the subscription costs. Those business models generate revenue streams from services accompanying the product. GOOGLE, for example, offers its software products largely free of charge but earns money from advertising (Belk, 2010). Similarly, music streaming providers such as SPOTIFY offer a version of their product which is financed via ads. Alternatively, they may use a 'metered model', common in the newspaper business, which restricts access, e.g. by offering readers 10 newspaper articles for free each month. In case they wanted more, they would have to buy a subscription (Halbheer, Stahl, Koenigsberg and Lehmann, 2014).

In both restricted and ad-financed business models the content selection is performed by the user, which allows for a complete content experience and consequently reduces the danger of being perceived as mediocre compared to the full subscription (Shapiro and Varian, 1998). The perceived content and service quality seems to generally have a significant influence on whether the transfer from

illegal to legal consumption takes place. Riekkinen for example argues that although subscription-based video on demand services such as NETFLIX see an uptake in adoption, their lack of inclusive content catalogues keeps consumers still turning to illegal sources (Riekkinen, 2018). In this context, a previous study found that frequent users of music streaming services are even more likely to engage in music piracy, because they are more tech-savvy. This behaviour was not driven by criminal motives but rather by peer pressure and the perception of low risk and limited punishment (Borja, Dieringer and Daw, 2015).

2.3 Current Research on Acceptance of Legal Content Providers

As mentioned above, the acceptance and consequent use of legal alternatives to pirated content has increased. Here, previous work has shown that for reasons of self-protection people may favour products by well-established brands over those, which are new on the market, as they perceive these brands to be more trustworthy (Griskevicius and Kenrick, 2013). Also, people are willing to watch content on video sharing websites such as YOUTUBE because they perceive the provided content as more useful and diversified than traditional media (Cha, 2014). In order to examine the acceptance of legal streaming services Youn and Lee extended Davis' TAM by experiences and value/risk perceptions as external variables (Youn and Lee, 2019). Results showed that social benefits like sharing and discussing content on social media platforms are a driving factor of using streaming platforms. On the other hand, perceived price risk (e.g. *"you don't see what you get"*) negatively affects the perceived usefulness of those services. These findings support Riekkinen's arguments about perceived service quality (Riekkinen, 2018). The method of extending the TAM is a good example for the weakness of this theoretical approach in today's era of digitalization. Focusing only on the perceptions of an isolated user, the TAM lacks social and emotional aspects (Bagozzi, 2007). Media content such as video or music is an emotional product and, as argued before, is likely to be shared in today's ubiquitous social-media environment.

Although the TAM has been further developed and extended by several influencing factors (cf. TAM2 — Venkatesh, Morris, Davis and Davis, 2000; or UTAUT — Venkatesh and Davis, 2003), those adaptations have been heavily criticized due to their inherent complexity. Bagozzi, for example, criticized that the UTAUT can easily lead to confusion as it needs at least 41 independent and 8 dependent variables (Bagozzi, 2007). In addition, these models were predominantly developed for business contexts (Davis, 1989; Venkatesh et al., 2000; Venkatesh and Davis, 2003). This becomes more obvious when reviewing the literature; i.e. there is hardly any contemporary literature applying them in a consumer context, and even less is focusing on consuming leisure content such as streaming movies or music. One of the few application examples in a consumer context is a study by Al-Qeisi and colleagues, who applied the UTAUT to discover website usage intentions (Al-Qeisi, Dennis, Alamanos, and Jayawardhena, 2014). And also, Baudier et al. used the UTAUT and TAM2 to examine students' acceptance of smart home technologies (Baudier, Ammi and Deboeuf-Rouchon, 2018). An analysis of 174 UTAUT-articles, however, revealed that the majority of the technology acceptance work has been focusing on a business context (Williams, Rana, and Dwivedi, 2015). Given that business systems and entertainment systems greatly vary in their goals and consequent usage patterns (i.e. using technology to reach a goal vs. using technology as the goal), we believe that more work and insight is required so as to build adapted models, which are capable of accounting for these differences. In other words, we believe that consumer behaviour has changed so much during the past decade that new frameworks and theoretical models are needed. Widely used models such as TAM, TAM2 and UTAUT have been useful, but their foundation comes from a time in which information and communication technology was primarily used in business contexts, independent of a social media driven society. However, this has changed, and thus we require additional information on how today's technology use increasingly changes the way content consumption happens in private settings.

3 Research Question and Analysis model

In order to support the building of more consumer-centred technology acceptance models, our work thus aimed to provide empirical data that combines areas of (1) consuming digital content from legal and (2) illegal sources (i.e. sources which provide access to copyright protected digital content without having the necessary permission by the copyright holder to do so), with (3) factors that affect the usage, and (4) attitudes towards the technologies that are used. In other words, we aimed to tackle the following research questions:

1. What is the digital content young adults typically consume and from which sources do they normally acquire it?
2. What are young adults' attitudes towards illegal sources?
3. What is the importance of price, legality, ease of use, ease of access, and similar factors when a consumer considers using digital content?
4. What are young adults' attitudes towards new digital technologies?

Each of these areas is dealt with through a set of questions. In the following, we elaborate on the data gathering instrument and the ways in which the data was analyzed.

3.1 Data Collection

The empirical data was collected at two public universities, the MCI Management Center Innsbruck in Austria and the University of Jyväskylä in Finland. The study was carried out in the course of an ERASMUS+ teaching exchange placement and as such shall be seen as an initial joined research effort which aims at studying differences in media access and consumption in western and northern European countries. To this end, the comparison between Austria and Finland should act as the starting point for further research. Given that the two countries are reasonably similar in terms of their GDP per capita and their Human Development Index, potential differences may provide interesting insights into so-far not considered aspects of media consumption. We wanted to particularly focus on tech-savvy young adults (Generation Y) as they seem to have the relevant skills to access, the necessary means to fully benefit from, and the relevant understanding of judging the legality of digital content. Hence, students from both Universities were actively invited to participate. In Austria this included two cohorts of the study program Management, Communication & IT, i.e. one cohort of fourth semester bachelor students (total cohort size: 59) and one cohort of second semester master students (total cohort size: 31). In Finland potential participants were approached via two bachelor level courses which ran right after the data was collected in Austria. By this means it was ensured that there was no significant temporal gap between the Austrian and Finnish subsamples.

Questionnaires were distributed during classes. Participation was voluntarily, not compensated by any monetary or academic means, and conducted in accordance with the Universities' research ethics rules and guidelines. Although generally our research was inspired by previous studies using either TAM or UTAUT (cf. Section 2.3), we were not interested in acceptance per se but rather aimed at investigating people's general attitudes and behaviour with respect to digital content consumptions. Hence we used a more targeted questionnaire whose question items are illustrated in Table 1. Depending on the item, participants had to respond based on a 7-point Likert scale [L7], a frequency scale [F] or select from a pre-defined list [S]. While the lack of an underpinning model (such as for example TAM) may have certainly reduced the explanatory power of this questionnaire, we strongly believe that this initial study required this rather direct way of questioning.

Questionnaire Items:
1. How often do you use the Internet to: listen to music, watch videos, watch TV series, watch other TV programs, read news, get information, play games, do something else? [F]
2. How often the do you use the following sources to get the digital content you like to have: YouTube, Spotify (free), Spotify (subscription), Deezer, Apple Music, iTunes Store, Netflix, File sharing via P2P networks, digital newspapers (free), digital newspapers (subscription), digital magazines (free), digital

	magazines (subscription), some else? [F]
3.	Have you ever used illegal sources to get digital content you like to have? [S] (Yes and I still do that; Yes but I have retired; Never; I am not aware which content is legal and which is not; I don't care which content is legal and which is not; I don't like to answer)
4.	Which of the following statements best describes your attitude towards illegal sources of digital content: [S] a. I am strongly against all illegalities b. I am against using illegal sources but sometimes it is difficult to know whether the material found in the Internet is illegal c. Basically, I cannot accept the illegal use of digital contents but it is very easy to slip into illegal side when many people do it anyway d. Using illegal material is acceptable when the material cannot be found from legal sources e. Everything in the Internet should be free to all users. Thus, the question of legality is more like a theoretical one. f. I am an advocate for piracy. In my opinion, any restriction of access to the digital contents in the Internet should be considered criminal. g. I cannot find above any statement that describes my thoughts
5.	When using the Internet to get digital content (music, videos, news etc.) that I like to have: a. it is extremely important to me that it is free-of-charge [L7] b. it is extremely important to me that it is legal [L7] c. ease of use is the most important thing to me [L7] d. ease of access to this material is the most important thing to me [L7] e. I prefer well-known commercial providers [L7]
6.	I use digital content available on the Internet for rather more serious purposes (e.g. studying) than for fun. [L7]
7.	I feel that the way I use digital contents available on the Internet is very much affected by: a. my friends [L7] b. my parents and other members of my family [L7] c. by public opinion [L7]
8.	I guess I'll use digital contents available on the Internet much more in future than today. [L7]
9.	I am enthusiastic to adopt all new digital technologies. [L7]
10.	I feel it is my duty to adopt all new digital technologies. [L7]
11.	My attitudes towards new digital technologies are very positive. [L7]
12.	I find new digital technologies can be harmful, even dangerous. [L7]

Table 1. Digital content usage in Austria and in Finland.

3.2 Data Analysis

We received a total of N=123 valid questionnaire responses ($N_{Austria}$ = 68; $N_{Finland}$ = 55), depicting a response rate of approx. 75%. The exact response rate (= actual respondents vs. potential respondents) is difficult to estimate, since particularly in Finland attendance to lectures is typically voluntary, which means that the number of students may vary even during one lecture. Bachelor and master level students were considered equally and since we were not interested in gender or age differences, this background information was also not taken into consideration. The data was analysed in two steps using Microsoft Excel® and IBM SPSS Statics 24®. First, basic descriptive values were calculated for both Austrian and Finnish data, as well as for its aggregation. The Likert scale variables were treated as interval type variables. For them we calculated frequencies, minimum, maximum, mode, median, mean, and standard deviation. The other variables were treated as ordinal type variables (Questions 1 and 2) or as nominal type variables (Questions 3 and 4). For the nominal type variables, we calculated only the frequencies. For ordinal type variables we calculated frequencies, minimum, maximum, mode and medium. Next, Pearson's χ^2 tests were performed to find possible differences between the Austrian and Finnish subsets. The χ^2 tests were conducted for all the relevant variables.

4 Findings

Below we report on the results of the analysis and discuss their meaning for digital content consumption behaviour.

4.1 Usage of Digital Content and Sources

Although our questionnaire covered only a limited set of digital content providers, we believe it was quite representative in terms of available content. This assumption was also supported by the data, since very few respondents selected the *"What else"* options. Also, even though additional research is certainly necessary, we believe the questionnaire covered most types of relevant media; i.e. audio, video, and literature consumption, general information retrieval, as well as playing games. In general, the data on digital content use and consumption did not offer great surprises (cf. Table 2). That is, nearly everyone uses the Internet mainly (i.e. daily) to obtain information. Reading news and listening to music are sharing the second place, both mentioned by 96 of 123 respondents. Next in line is watching TV series (45) and playing games (33).

		Frequency of use (%)				
Digital Content Activity	**Country**	*Daily*	*Weekly*	*Monthly*	*Seldom*	*Never*
Listening to Music	Austria	83.8	10.3	4.4	1.5	0
	Finland	70.9	21.8	3.6	3.6	0
Watching Videos	Austria	79.4	17.6	2.9	0	0
	Finland	69.1	20.0	5.5	3.6	1.8
Watching TV Series	Austria	38.2	45.6	13.2	2.9	0
	Finland	34.5	45.5	10.9	5.5	3.6
Watching other TV programmes	Austria	4.4	44.1	25.0	20.6	5.9
	Finland	14.5	45.5	21.8	12.7	5,5
Reading News	Austria	72.1	20.6	1.5	5,9	0
	Finland	85.5	12.7	1.8	0	0
Obtaining Information	Austria	92.6	7.4	0	0	0
	Finland	89.1	10.9	0	0	0
Playing Games	Austria	13.2	22.1	10.3	36.8	17.6
	Finland	43.6	20.0	9.1	20.0	7.3
$N_{Austria} = 68$, $N_{Finland} = 55$						

Table 2. Digital content usage in Austria and in Finland.

Although the profiles of Austrian and Finnish respondents are relatively similar, a remarkable difference can be found in their affinity to playing games, which seems to be more common among the Finnish respondents: Pearson's Chi-square test χ^2=16.016; p=0.003. Table 3 summarizes the sources used to obtain digital content. On a daily basis, the most common sources of digital content consumption are YOUTUBE and free-of-charge newspapers. Those sources are used significantly more often than free-of-charge magazines, subscription-based SPOTIFY, NETFLIX or the advertisement-based (free) SPOTIFY. It should be remarked, however, that if the two versions of SPOTIFY were considered as one source, they would come relatively close to the consumption of content on YOUTUBE.

		Frequency of use (%)				
Source of digital content	**Country**	*Daily*	*Weekly*	*Monthly*	*Seldom*	*Never*
YOUTUBE	Austria	73,5	22,1	2,9	1,5	0,0
	Finland	56,4	34,5	7,3	1,8	0,0
SPOTIFY (free)	Austria	23,5	14,7	4,4,	10,3	47,1
	Finland*	17,0	7,5	3,8	30,2	41,5
SPOTIFY (subscription)	Austria	26,5	1,5,	1,5	5,9	64,7
	Finland	38,2	14,5	3,6	14,5	29,1
DEEZER	Austria	1,5	0,0	1,5	2,9	94,1

	Finland	0,0	0,0	0,0	3,6	96,4
APPLE MUSIC	Austria	8,8	0,0	0,0	8,8	82,4
	Finland	3,6	0,0	0,0	7,3	89,1
ITUNES STORE	Austria	4,4	8,8	11,8	17,6	57,4
	Finland	0,0	1,8	1,8	16,4	80,0
NETFLIX	Austria	22,1	23,5	8,8	5,9	39,7
	Finland	27,3	30,9	10,9	12,7	18,2
P2P File Sharing	Austria	5,9	20,6	10,3	13,2	50,0
	Finland*	0,0	15,1	13,2	35,8	35,8
Digital Newspaper (free)	Austria	64,7	30,9	1,5	1,5	1,5
	Finland	74,5	20,0	3,6	0,0	1,8
Digital Newspaper (subscription)	Austria	5,9	5,9	4,4	13,2	70,6
	Finland**	14,8	3,7	1,9	14,8	64,8
Digital Magazine (free)	Austria	38,2	26,5	13,2	8,8	13,2
	Finland	29,1	38,2	14,5	9,1	9,1
Digital Magazine (subscription)	Austria	8,8	0,0	4,4	4,4	82,4
	Finland	3,6	7,3	5,5	10,9	72,7
$N_{Austria}$ = 68, $N_{Finland}$ = 55, Exceptions: * = 53, ** = 54						

Table 3. Sources of digital content.

In general, respondents prefer free-of-charge sources. This can be seen by comparing the frequency of using free newspapers or magazines to those of their chargeable counterparts. SPOTIFY marks an exception here, with its subscription-based version being used more frequently than its advertisement-based (i.e. free) version. Although this tells us only about frequency of use, and nothing about numbers of users. Thus, users of the subscription-based SPOTIFY may obtain relevant benefits from the service and consequently use it more frequently. Interestingly, when grouped into two categories (users vs. non-users of the subscription-based SPOTIFY version), we found a significant difference between countries. That is, in Finland the ratio of users vs. non-users was 71% vs. 29% whereas in Austria this ratio was 36% vs. 64% (χ^2=15.437; p=0.001). Also, while subscription-based SPOTIFY is more popular in Finland, P2P file sharing seems to be more common in Austria, with 20.6% of Austrian respondents using it weekly (5.9% daily) compared to 14.6% of the Finnish respondents (0% daily) (χ^2=11.775, p=0.012).

4.2 Digital Piracy Behaviour and Attitudes

Illegal use of digital content is an important concern of digital content research. As previously mentioned, the digitalization of products also simplifies their illegal use, which is obvious to both practitioners and researchers. Therefore, providers of commercial products do not only rival each other but also their illegal counterparts. Our study aimed at a better understanding of respondents' attitudes towards, and actual behaviour relating to digital piracy. Respective results are summarized in Tables 4 and 5.

Question: Have you ever used illegal sources to get digital contents you like to have?	**Selected by**		
	Austria	Finland	All
Yes, and I still do that	40	18	58
Yes, but I have retired	17	31	48
Never	1	2	3
I am not aware which content is legal and which is not	6	2	8
I don't care which content is legal and which is not	5	2	7
I don't like to answer	3	0	3

Table 4. Digital piracy behaviour.

Question: Which of the following statements best describes your attitude towards illegal sources of digital content?	**Selected by**		
	Austria	Finland	All
I am strongly against all illegalities.	3	1	4
I am against using illegal sources but sometimes it is difficult to know whether the material found on the Internet is illegal.	13	6	19
Basically, I cannot accept the illegal use of digital contents, but it is very easy to slip into illegal side when many people do it anyway.	21	20	41
Using illegal material is acceptable when the material cannot be found from legal sources.	23	17	40
Everything in the Internet should be free to all users. Thus, the question of legality is more like a theoretical one.	8	5	13
I am an advocate for piracy. In my opinion, any restriction of access to the digital contents on the Internet should be considered criminal.	1	2	3
I cannot find any statement above that describes my thoughts.	4	4	8

Table 5. Attitudes towards digital piracy.

In general, digital piracy seems to be very common among young adults. A great majority of both Finnish and Austrian respondents currently use or have used illegal digital contents. However, a significant difference between the Finnish and Austrian groups can be found in terms of current use of illegal sources. While most of the Austrian respondents still use illegal sources, a large number of the Finnish users who have practised digital piracy in the past, have ceased their illegal behaviour. The differences were statistically significant for the *"still use"* statement (χ^2=8.31; p=0.001), and for the *"have used but retired"* statement (χ^2=12.570, p=0.000). As next to TV series music seems to be the most favourite content young people consume, these findings may be strongly related to the increasing popularity of Spotify in Finland. When asked about the attitudes towards using illegal sources of digital content, two options were much more often mentioned than the others. These options were *"Basically, I cannot accept the illegal use of digital contents, but it is very easy to slip into the illegal side when many people do it anyway"* and *"Using illegal material is acceptable when the material cannot be found from legal sources"*. The answers were very similar in the Finnish and the Austrian subsets. Excluding these two alternatives, the most frequently selected option was *"I am against using illegal sources but sometimes it is difficult to know whether the material found on the Internet is illegal"*. However, very few of the respondents declared themselves as advocates for digital piracy.

4.3 General Factors Affecting the Use of Digital Content

Next, we asked about factors, which are important to consumers of digital content. All factors included in the questionnaire received high or relatively high importance values, although we found small variations between factors that are perceived as being *"extremely important"* and those, which are perceived to be *"the most important"*. Ease of use and ease of access had the highest importance values, exhibited by a $MEAN_A$ = 5.37 (SD = 1.14) and a $MEAN_F$ = 5.67 (SD = 1.20) for ease of use, and a $MEAN_A$ = 5.50 (SD = 1.25) and a $MEAN_F$ = 5.39 (SD = 1.07) for ease of access. Furthermore, the possibility of having the digital content free-of-charge was rated as very important ($MEAN_A$ = 5.53; SD = 1.39 and $MEAN_F$ = 4.39; SD = 1.44). The legality of the content was also perceived important, yet to a smaller extent than the other three factors ($MEAN_A$ = 4.11; SD = 1.56 and $MEAN_F$ = 4.33; SD = 1.37). As the deviation shows, responses concerning the importance of legality were relative scattered (cf. Table 6). Since social factors are recognized as important factors affecting the adoption of technologies, we also included three questions in our questionnaire that dealt with these issues. We specifically inquired the influence friends, parents and other family members, as well as the public opinion have on respondents' digital content consumption behaviour. Here it seems that these social factors have relatively little influence on the way respondents use digital content. On a 7-point Likert scale, friends showed the greatest impact ($MEAN_A$ = 3.81; SD = 1.66 and $MEAN_F$ = 3.26; SD = 1.51), followed by the public opinion ($MEAN_A$ = 3.43; SD = 1.44; and $MEAN_F$ = 3.30; SD = 1.40), and parents and other family members ($MEAN_A$ = 2.19; SD = 1.28 and $MEAN_F$ = 2.04; SD = 1.16).

Question: To what extent do you agree with the following statements? (1=strongly disagree, 7=strongly agree)	**Country**	*MEAN*	*SD*	*MODE*
When using the Internet to get digital content (music, videos, news etc.) that I like to have, it is extremely important to me that it is free-of-charge.	Austria	5.53	1.39	7
	Finland	4.93	1.44	5
When using the Internet to get digital content that I like to have, it is extremely important to me that it is legal.	Austria	4.12	1.56	4
	Finland	4.33	1.37	3
When using the Internet to get digital content that I like to have, ease of use is the most important thing to me.	Austria	5.37	1.14	6
	Finland	5.67	1.20	6
When using the Internet to get digital content that I like to have, ease of access to this material is the most important thing to me.	Austria	5.50	1.25	6
	Finland	5.39	1.07	6
When using the Internet to get digital content that I like to have, I prefer well-known commercial providers	Austria	4.63	1.48	5
	Finland	5.15	1.20	6
I use digital contents available in the Internet more for serious purposes (like studying) than for fun	Austria	3.34	1.38	2
	Finland	3.43	1.34	4
I feel that the way I use digital contents available on the Internet is very much affected by my friends.	Austria	3.81	1.66	5
	Finland	3.26	1.51	2
I feel that the way I use digital contents available on the Internet is very much affected by my parents and other members of my family	Austria	2.19	1.28	1
	Finland	2.04	1.16	2
I feel that the way I use digital contents available on the Internet is very much affected by public opinion	Austria	3.43	1.44	2
	Finland	3.30	1.40	2

Table 6. Factor affecting the usage of digital contents.

4.4 Attitudes towards New Digital Technologies

In the final section of our questionnaire we asked questions that aimed to reflect the respondents' attitudes towards new digital technologies (cf. Table 7). The goal was to understand, how the usage of digital contents will develop in the future, how enthusiastic respondents are towards adopting new technologies, and if the use of a new technology is also affected by other factors than the respondents' own 'free' will. Of these factors some may increase the usage; e.g. if the respondents perceive using the new technology as a duty; (note: a question to this end was included in the questionnaire) or decrease the usage; e.g. the harmfulness of technologies (note: also to this end a question was included in the questionnaire). With respect to these factors, we were not (yet) interested in how they may affect respondents' behaviour, but rather whether or not respondents perceive them as relevant in this context. Most of the respondents agreed with the statement *"I'll use digital content much more in the future than today"* ($MEAN_A$ = 5.24; SD = 1.25 and $MEAN_F$ = 4.89; SD = 1.45). Respondents were also very enthusiastic about adopting new digital technologies ($MEAN_A$ = 5.46; SD = 1.34 and $MEAN_F$ = 5.44; SD = 1.36), and they had very positive attitudes towards new digital technologies ($MEAN_A$ = 5.85; SD = 1.11 and $MEAN_F$ = 5.59; SD = 1.06). However, they evaluated the external statements *"It is a duty to adopt new digital technologies"* and *"New digital technologies can be harmful, even dangerous"* relevant. The statements were both agreed by a majority of the respondents. Actually, the statement "*I feel it is my duty to adopt all new digital technologies"* was rather strongly agreed to by the respondents ($MEAN_A$ = 4.43; SD = 1.77 and $MEAN_F$ = 4.61; SD = 1.61). Agreement on the statement *"I find new digital technologies can be harmful, even dangerous"* was slightly less, yet still clearly above the range's middle ($MEAN_A$ = 3.94; SD = 1.60 and $MEAN_F$ = 4.26; SD = 1.60).

Question: To what extent do you agree with the following statements? (1=strongly disagree, 7=strongly agree)	**Country**	*MEAN*	*SD*	*MODE*
I guess I'll use digital contents available on the Internet much more in the future than today.	Austria	5.24	1.25	6
	Finland	4.89	1.45	4

I am enthusiastic to adopt all new digital technologies.	Austria	5.46	1.34	6
	Finland	5.44	1.36	6
I feel it is my duty to adopt all new digital technologies.	Austria	4.43	1.77	5
	Finland	4.61	1.61	5
My attitudes towards new digital technologies are very positive.	Austria	5.85	1.11	6
	Finland	5.59	1.06	6
I find new digital technologies can be harmful, even dangerous.	Austria	3.94	1.60	5
	Finland	4.26	1.60	4

Table 7. Attitudes towards new technologies.

5 Conclusion and Outlook

In this paper, we have presented the main findings of a survey carried out in Austria and Finland. The primary goal of this study was to investigate the attitudes and actual behaviour of young adults related to the use of digital content available on the Internet. The focus was on the most typical content formats, i.e. music, videos, TV series, newspapers, magazines and general information. In addition, we included the common activity of playing games. Responses were received from 68 Austrian and 55 Finnish students (both bachelor and master level).

We have seen that Austrian and Finnish students are very similar. The only statistically significant differences that were found was in relation to playing games, the use of subscription-based SPOTIFY, P2P file sharing, and the general use of illegal sources. Young adults in both Austria and Finland use the Internet frequently to obtain general information. Most of them use it daily to read the news. Listening to music is also a very frequent activity. While watching TV series and playing games are common among young people, these activities are, however, clearly less frequent than the mentioned three most popular ones. While these results are not surprising, the crucial role of music consumption cannot be overemphasized. It seems to be one of the main leisure time activities enabled by the Internet. Thus, future research should more thoroughly investigate how these habits connected to music consumption shape young people's Internet behaviour. When considering the sources of digital content, young adults clearly prefer the free-of-charge sources to their chargeable counterparts. Thus, one can assume that this challenge for the commercial digital content providers, which has been present throughout the digital era, will remain relevant for the foreseeable future. Disruptive digital innovations may, of course, change the trend. However, we cannot be sure of this, so that it may easily be possible that the consumers, who have been accustomed to consuming digital contents free-of-charge, remain untouched by alternatives, even if providers promise better usability, wider selections and/or better features. Finally, our results have shown that the use of the Internet for playing games seems to be more frequent in Finland than in Austria. A reason for this may be found in the fact that Finland has put great efforts into supporting the gaming industry, which has led to significant results and success in the sector (e.g. Angry Birds by Rovio Entertainments[1] or Clash of Clans by Supercell[2]). As conclusion, we may thus argue that content consumption has changed over the last few years. No matter if it concerns a physical or digital good, the concept of 'owning' seems to have lost its popularity - especially with the younger people. Here, the resulting shared economy regards not only goods but also information and knowledge, which further influences consumption decisions. Additionally, social media platforms make sharing much easier.

Future research needs to consider those factors. Furthermore, we found that there is a lot of research on economic impacts of content piracy but only little on the actual driving factors. Our study, for example, shows that there is no criminal intention behind using illegal sources. It is not the goal to earn money with piracy, it rather results from a lack of alternatives. Although, the concepts of the sharing economy and the ease of sharing a digital good makes it difficult to identify distinct intentions. Hence, more research on the use and potential improvements of legal services is needed so as to better under-

[1] http://www.rovio.com/ (visited on Aug. 26th 2019)
[2] https://supercell.com/en/ (visited on Aug. 26th 2019)

stand people's actual motives. Finally, the changes in digital content consumption require better, more adapted research models. Existing frameworks, such as TAM and UTAUT, need to be further extended so as to consider the distinct peculiarities of the sharing economy. Previous work showed that users perceive social benefits in sharing digital, as well as physical goods. Especially younger generations, not only want to use available sources, but also share their own content or opinions. Based on the previously mentioned work and our own findings, we want to offer some suggestions as a first step to improve existing acceptance models. These suggestions are not only important for further research, but also for businesses in the industry, to gain a better understanding of users' behaviour and needs. We suggest to take the TAM as a starting point for improvements, since the UTAUT is often criticised as overly complex and error-prone. Here, social aspects should be added to the research framework. These should not only contain external social influences, but also the user's social intentions, such as taking part in the sharing economy. Consequently, the model needs to shift from a business context to a leisure context. Therefore, emotional aspects should be added as well. Last but not least, depending on the system, it should be questioned if the concept of perceived ease of use may not be replaced by the concept of perceived ease of access. Modern leisure systems (e.g. SPOTIFY, NETFLIX) are usually very intuitive and easy to use. An evaluation of the perceived ease of use seems therefore often rather trivial to respondents. Yet, our study showed that accessibility was very important for the respondents. So content providers should focus on accessibility (e.g. content free-of-charge, no regional restrictions, etc.) and transparency. With these change, we believe, one could create the initial version of a new acceptance model focusing predominantly on consumer technology.

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