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How Safe is YouNow? – An Empirical Study on Possible Law Infringements in Germany and the United States

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Abstract

One characteristic of our time, the age of the Internet, are social networking services - exponentially rising and becoming more and more inventive. It is almost impossible to keep track of all new offerings that are being developed and put online every day. Connecting people, sharing common interests, communicating with each other and building up social relations are positive aspects of social networking services. Apart from these benefits there are many dangers that come along with them, such as treatment of sensitive data or law infringement. In our study we have investigated the live streaming platform YouNow regarding violation of law, limiting it to the legal situation in Germany and in the USA and comparing them with each other. We have found out that major issues are violation of both copyright and the right in one's own picture. Based on our observation we can conclude that YouNow, as a representative of many social networking services, holds certain dangers, especially for underage youths not being aware of the risks.

Keywords: *YouNow, Streaming, Law Infringement, Social Networking Service, Youth Protection*

1. Introduction

The rapid development of online social networks brings new benefits as well as new dangers to our society. One of the benefits associated with typical Social Network Services (SNSs), like e.g. Facebook, is strengthening of social ties, however, tempered by concerns about privacy and information disclosure (Wilson, Gosling & Graham, 2012, p. 204). A certain SNS is only as appealing as the content shared by its users, therefore, in order to improve the overall user experience, it has to be designed in a way that encourages user contribution (Burke, Marlow &

Leno, 2009). Here, the conflicting nature of the users in regard to their privacy, the information disclosure-privacy dilemma (Wilson, Gosling & Graham, 2012, p. 212), comes to light. It is not a secret, that sharing of personal information on SNSs comes with potential privacy risks, including unintentional disclosure of personal information, damaged reputation, unwanted contact and harassment, vulnerability to stalkers or pedophiles, use of private data by a third parties, hacking, or identity theft (Boyd, 2008; Debatin, Lovejoy, Horn, & Hughes, 2009; Taraszow, Arsoy, Shitta, & Laoris, 2008; Wilson, Gosling & Graham, 2012). Still, research showed that despite these risks, many people allow themselves to be convinced to share their personal information. There is a disparity between reported privacy concerns and observed privacy behaviors (Acquisti & Gross, 2006; Stutzman & Kramer-Duffield, 2010; Tufekci, 2008). According to Acquisti and Gross (2006), 16% of respondents of their study on privacy issues on Facebook, who reported being “very worried” about the possibility that a stranger knew where they lived and the location of their classes, still revealed both pieces of information on their profile.

One of the mostly addressed SNS by the media as well as investigated by scientists SNS is Facebook. According to Wilson, Gosling and Graham (2012, p. 204), Facebook is of relevance to social scientists and gives new opportunities for studying human behavior. It can be seen as an “ongoing database of social activity with information being added in real time” (Wilson, Gosling & Graham, 2012, p. 204). Its popularity and brand recognition makes it worth mentioning and exploring. “As Facebook becomes more integrated into everyday life, it becomes necessary to monitor and examine the platform’s positive and negative impacts on society” (Wilson, Gosling & Graham, 2012, p. 204). Even though, Facebook is not the only popular online social network, and with all the attention from users, press, politicians, and legal institutions, it is less “dangerous” than other services not as hyped as this one.

Lately, a newcomer to the world of the online social networks made a great stir in the press—the live streaming platform YouNow¹ (see figure 1). Apparently this service met the demand of the younger Internet users, as in a relatively short period of time it became very popular, especially among teenagers. However, the news reports do not express solely appreciation and praise, but rather warnings and some concerns. This kind of online service enables an in-depth look into the private sphere (Pachner, 2015). Many express their concerns about the safety of the young streamers as well as the possible violation of the personality rights of third parties often shown in a stream without their consent (Görmann, 2015). The problem appears to be the lacking information literacy of the teenagers and children (often under 13 years old) as well as their unaware parents, rather than the platform itself (Pechner, 2015). Not only the behavior of streamers, but also the one of their viewers (or “fans”) may be subject to prosecution. A possible criminal offence may be, e.g., child abuse, when a viewer encourages the younger streamers to sexual activities (Solmecke, 2015). “As an adult in polite society, it's hard to watch. And as a parent, it might just be the most terrifying thing your child is doing while you're not looking, and everyone else is” (Schupak, 2015).

¹ www.younow.com

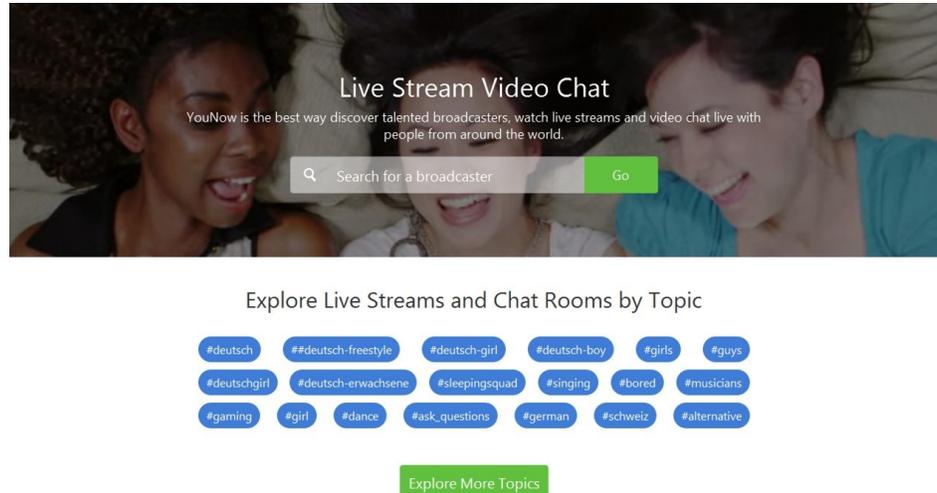


Figure 1: YouNow entry page.

YouNow is also a stage for Internet celebrities, who make money by streaming different kinds of performances (Brustein, 2015; Pachner, 2015). It created a tip-based economy without any advertising, drawing payments from their users only (Brustein, 2015). The fans can purchase points to tip their favorite streamers, who in turn split their profits with YouNow (Schupak, 2015). Consequently, this concept encourages long-form streaming (Schupak, 2015). The motivation of teenagers and younger users may be different from the economic one, however, there are no studies on YouNow regarding the psychological or sociological aspects of its usage.

In our study we investigate the platform YouNow in order to validate the solicitude regarding youth protection and possible offenses. We will limit our investigation to the legal situation in Germany (being rather strict) and in the USA (being less strict regarding the investigated aspects). The focus of the investigation lies on teenagers and children, apparently making a major part of the user community, and encompasses the streamers in Germany and the USA.

2. Social Networks and Law

In order to evaluate potential infringements on YouNow it is important to know more about what is allowed and what is prohibited during a streaming. In consideration of what we have experienced during the empirical phase of our research we chose legal issues that appeared to be most relevant. In the following paragraph we give an overview of the legal situation in Germany and the United States regarding regulations that may be important during streaming on YouNow.

2.1 German Law

One of the focal points in the debate about Internet and law is copyright. Here, most commonly the streaming and broadcasting of music and other multimedia (especially cinematographic works) are problematized. These infringements are regulated by the German Act on Copyright

and Related Rights² (Copyright Act). This act requires to compensate the author of a certain work for any reproduction, distribution, exhibition, or, in case of a non-material form, presentation, performance or broadcasting of his work. This includes not only the distribution through the World Wide Web itself but also, and more specifically, the communication of the copyrighted material to the public through (live) multimedia streams. In case such legally protected content is perceivable in the background without the copyright owner's permission, his right of communicating the work to the public (Copyright Act § 15(II)(2), § 20) may be violated. In some cases an exemption is granted for incidental works, meaning that the communication of works to the public is permissible as long as they are regarded as incidental to the actual subject-matter being reproduced, distributed or communicated (Copyright Act § 57). To some extent, this exception could apply to the live-streams on YouNow. For this purpose, however, an assessment of every individual case would be necessary. Due to lacking clear provisions and concretization of the "incidental works" within the live-streaming sector, we analyzed all potential violations of copyright (without the assessment with respect to this legal exemption). Hence, regardless of the intention to broadcast protected material, potential copyright infringements take place when the public is provided with access to any copyrighted multimedia content without the copyright owner's permission. This also includes underage broadcasters, whose parents can be held responsible (since they figure as the holder of the Internet connection). In Germany, the collective society GEMA (Gesellschaft für musikalische Aufführungs- und mechanische Vervielfältigungsrechte; Society for musical performing and mechanical reproduction rights) represents a great amount of authors and exercises their copyrights by managing the single usage rights. In case of a copyright infringement, either GEMA or other holders of the copyrights may initiate a civil or even criminal pursuit (which can lead to monetary penalty or prison sentence).

Another acute problem in the Internet law debate is the right in one's own picture and right in one's spoken word (for example, distributed in form of audio or video). The distribution of pictures taken of other persons without their permission is prohibited by the German personality rights. The basic right of personality is constitutionally guaranteed (see Arts 1 and 2 of the Basic Law) and protected under the German Civil Code (see § 823 (I) of the German Civil Code). One manifestation of the general right of personality is the right to one's own picture regulated in § 22 of the German Art Copyright Act (KUG), see e.g. the Marlene Dietrich Case³. Another manifestation of the personality right is the protection of the spoken word, hence, the distribution of recorded voice is forbidden as long as the utterances were not expressed openly (open to the public). The violation of the privacy of the spoken word is protected by the German Criminal Code (see § 201 of the German Criminal Code⁴). All in all, based on the personality

² Copyright Act of 9 September 1965 (Federal Law Gazette Part I, p. 1273), as last amended by Article 8 of the Act of 1 October 2013 (Federal Law Gazette Part I, p. 3714).

³ Marlene Dietrich Case BGH 1 ZR 49/97, translated and summarized: <https://law.utexas.edu/transnational/foreign-law-translations/german/case.php?id=726>

⁴ Criminal Code of 13 November 1998 (Federal Law Gazette Part I, p. 3322), as last amended by Article 1 of the Law of 24 September 2013 (Federal Law Gazette Part I, p. 3671) and with the text of Article 6(18) of the Law of 10 October 2013 (Federal Law Gazette Part I, p. 3799).

rights and its several manifestations, the German law does not allow sharing of neither pictures nor videos or audio files containing images or voice of third parties, without their permission. This holds also for showing such content during a live streaming session.

A further problematic aspect of the Internet in need of better legislation is the youth protection, which is also in focus of our investigation. In general, consumption of alcoholic beverages such as spirits and other high-proof alcohol is prohibited for minors under the age of 18, see the German Protection of Young Persons Act. Alcoholic beverages that are produced by means of alcoholic fermentation such as beer and wine are prohibited for minors under 16 (§9 (I)(1),(2) of the Protection of Young Persons Act⁵). Smoking is not allowed for persons under the age of 18 (§ 10 (I) of the Protection of Young Persons Act). Furthermore, the Act regulates the distribution and sale of youth-endangering multimedia material and aims to protect the youth from unsuitable content. In addition to the Protection of Young Persons Act, the Interstate Treaty on the protection of minors⁶ protects children and minors from unsuitable content that is being distributed through electronic media, such as radio, television and the Internet.

It has been observed that under the “invisibility cloak” of anonymity, one of the traits of the Internet usage, many users become more fearless to say what they really think. It may have some advantages, however, the gained courage regards mostly contemptuous thoughts. The act of insulting other people is prohibited by § 185 of the German Criminal Code. This includes not only offensive utterances or those containing value judgements towards third parties but also showing certain offensive gestures. However, each case should be assessed individually, as the act of insult depends more on the intent to offence another person rather than exclusively on the used vocabulary.

Finally, the aspect most frequently addressed in the press—data privacy. The private data is protected by the Federal Data Protection Act and the personal information may be only distributed, disclosed or published with the explicit permission of the person concerned (§ 4 of the Federal Protection Act⁷). Primarily the Federal Data Protection Act aims at public authorities and corporate entities, and not directly at private individuals. A natural person collecting and storing data for private purposes is not governed by the Federal Protection Act, as he or she underlies the exemption for personal and household activities. However, it is questionable whether the distribution of private information of third parties to the public via the Internet, e.g. during a live-stream session, can be categorized as personal activity. Hopefully, this problematic gap will be closed with the introduction of the General Data Protection Regulation

⁵ Protection of Young Persons Act of July 23, 2002 (Federal Law Gazette Part I, p. 2730, 2003 Part I, p. 476) as last amendment by Article 3 of the Act of October 31, 2008 (Gazette Part I, p. 2149).

⁶ Interstate Treaty on the Protection of Human Dignity and the Protection of Minors in Broadcasting and in Telemedia of 10 – 27 September 2002 in the version of the 11th Treaty for amending the Interstate Treaties with regard to broadcasting law (13h Interstate Broadcasting Treaty)

⁷ Federal Data Protection Act of 14 January 2003 (Federal Law Gazette Part I, p. 66), as last amended by Article 1 of the Act of 14 August 2009 (Federal Law Gazette Part I, p. 2814).

(Piltz, 2013). Regardless the lacking regulation, we will include the distribution of personal data by private persons during a live-stream as potential violation of data privacy.

2.2 American Law

The legal situation in the USA is partially different from the one in Germany. The U.S. Copyright Act generally protects the author's rights to display, perform, distribute, license or reproduce his work including sound recordings, motion pictures, graphic arts and others (17 U.S.C. § 106). Although any tangible piece of work falls within the Copyright Act protecting the author and his work, the doctrine of "fair use" (§ 107) regulates the use of protected material in cases of criticism, teaching, news reporting or commenting. In those cases using such material is not considered copyright infringement. It should be noted that German copyright law also allows the reproduction or distribution of copyrighted material for private purposes (e.g. for backup copies) or in teaching. However, broadcasting is being understood as the mean to make any protected work accessible to the public, which includes playing music in the background, for example, during a streaming session on YouNow. Since the U.S. Copyright Act also protects other multimedia content, this also applies for showing protected video material such as movies or television broadcasts.

In US American jurisdiction the protection of one's own picture is not regulated in the same way as in Germany. "A special protection of one's images does not exist in the USA" (Maaßen, 2006). It is possible to prevent one's own images from being published, however, this requires the plaintiff to prove that the publication of such an image violates his right of privacy. This is only the case if the image was taken without the permission of the pictured person and if "it is being used for commercial purposes" (Maaßen, 2006). In contrast, making audio or video recordings of oral speech without the permission of the person concerned is prohibited by the 18. U.S. Code § 2511 (interception and disclosure of wire, oral, or electronic communications is prohibited). This could also apply for disclosing sound or video recordings of other persons during a YouNow session. The legal situation concerning recordings of one's persona is not only regulated by federal law, but has different manifestations on a state-level basis, causing the state of affairs to vary from state to state.

Considering the youth protection, the minimum age for consuming alcoholic beverages in the USA is 21. When the National Minimum Drinking Age Act was passed in July 1984, all states were obliged to change the drinking age according to the law (National Institute on Alcohol Abuse and Alcoholism, 2015). The smoking age is not consistently regulated and varies from state to state between the age of 18 and 21. Furthermore, the consumption of cannabis has been legalized for medical and recreational purposes in certain states. Amongst those states that permit the latter are Washington, Colorado, Oregon and Alaska. However, the consumption of marijuana is still illegal on federal level (NORML, 2015).

In comparison to the legal situation in Germany, in the USA the act of defamation or insult is not prosecuted in the same way (Media Law Resource Center 2015). On the federal level there are no "criminal defamation or insult laws of any kind. On the state level, 17 states and two territories continue to have criminal defamation laws 'on the books'" (Organization for Security

and Co-operation in Europe, 2005). However, the US American jurisdiction does not act as strictly in favor of the plaintiff as, for example, jurisdictions in certain European countries. The free utterance of one's own opinion is not necessarily considered a defamation of another person. This also affects social interaction on the Internet, since the expression of one's opinion, even if being valuing or offensive, does not have to automatically lead to a lawsuit (Kelly/Warner Internet Law, 2015). Furthermore, Communications Decency Act protects internet providers from being held responsible for infringements committed by third parties (47 U.S.C. § 230).

Regarding the data privacy, instead of regulating the disclosure of personal data by federal or state-based law alone, the United States rather follow a concept of combining "legislation, regulation and self-regulation" (HG Legal Resources 2015). In addition to the legal basis consisting for the most part of the United States Privacy Act and the Safe Harbor law, it is intended that companies develop their own policies for data privacy and ensure their compliance. Since there is no absolute legislation that dictates the procedure of handling data protection, it is obliged that YouNow itself ensures the preservation of its users' personal privacy. In their conditions of use it is explicitly stated that the disclosure of other users' private information is not permitted.

3. Methods

In this paragraph we will introduce the live streaming platform YouNow and explain the general idea behind this SNS in detail, e.g. how to get started or important features for streamers and their viewers. Afterwards we will present our procedure of data mining and its evaluation for determining general statistics and qualitative analysis such as violations of law.

The applied methodology plays an important role in informetric research. Different approaches will lead to diverse results, thus it is necessary to give a precise depiction of the methodology that has been used for collecting the data (see Chapter 3.2).

The data acquisition is based on the observation of streamers on YouNow. Casselman and Heinrich (2011) used a similar approach as a part of their methodology while they observed YouTube videos and analyzed the participants' behavior, e.g. their actions, facial expressions and dialogues. We opted for this approach since it will, most likely, deliver the most accurate information concerning potential abuse of law. Another possible approach could be an online survey, but there are a lot of problems going along with it such as incomplete or false responses and multiple submissions (Schmidt, 1997). Furthermore, we decided against an online survey, because it is questionable whether participants would admit any contravention.

3.1 What is YouNow?

The live streaming platform YouNow allows people all over the world to broadcast themselves in real time. Everyone owning a webcam or having the YouNow app installed on their mobile phone can go live and let other people watch them doing whatever they do right then. Before starting to stream, it is necessary to log in to the site, while it is possible to watch the streams without being logged in. Users do not create a separate YouNow account, instead they have to

link their existing Facebook⁸, Twitter⁹ or Google+¹⁰ account. By signing in, you have to accept the site rules¹¹ as well as terms of use¹² of the website.

When a user starts a stream, he or she has to assign a tag to his or her channel. The most popular ones are suggested, but it is possible to create a new one. The tags are helping other viewers to find new channels to watch. For each tag, there is a ranking of the channels assigned to it and ordered by the number of current viewers.

While streaming, a chat window appears for each channel. Other users, which are logged in, can write messages to communicate with the streamer and other users that can be seen by everyone watching the channel. Furthermore, it is possible to send certain “gifts” through the chat window to the broadcaster, e.g. pictures of hearts and rings. The gifts have to be bought with YouNow’s own currency called coins. These coins are earned by various activities, like logging in, going live, watching other users, and chatting. There is also another currency for mobile app users—the bars. These have to be purchased with real money. With bars, some new activities are possible, like marriage proposal and fan mail.

Each user, whether active streamer or just a viewer, has a level assigned. This level increases by broadcasting (getting fans, receiving gifts and likes), chatting, liking and giving gifts in other users’ channels, sharing YouNow on other social networks and connecting social network accounts to your YouNow profile. With a higher level, new features on the website become available and it shows other participants, how experienced the concerned user is on YouNow.

After stopping to stream, a statistic of the stream is shown to the user, which tells how many new fans, gifts, likes and coins were received, how long the stream lasted and how many viewers were watching. Additionally, the progress to the next level is displayed.

3.2 Our approach

Our coverage of data is composed of users that were streaming during June 2015. These data have been obtained either via the streamer’s profile or by asking the streamer himself during broadcasting. Our observations were limited to streamers from Germany and the USA.

The amount of male and female as well as German and American streamers needed to be balanced in order to get a representative result regarding the comparison of potential violations of the American and German Law, hence, our coverage was divided into four parts. Each group of streamers has been observed an entire week. Furthermore, each day has been divided into four time slots (12pm-6am, 6am-12am, 12am-6pm and 6pm-12pm). In each of these time spans, four streams have been separately investigated for 15 minutes (altogether, 16 streams per day). Female and male German streamers have been investigated during the first two weeks

⁸ <https://www.facebook.com/>

⁹ <https://twitter.com/>

¹⁰ <https://plus.google.com/>

¹¹ <http://www.younow.com/siterules.php>

¹² <https://www.younow.com/terms.php>

of June, equally streams of female and male American's have been observed during the second half of June.

In the run-up to the research we had to weigh up possible correlations between several factors and furthermore generally interesting factors regarding the evaluation of data. For example: What does the gender have to do with the violation of specific laws like copyright or youth protection? What is the arithmetic mean of streamers' age on YouNow?

Each stream along with several information has been stored in a database. During research, our diversified factors narrowed down to those resulting in useful outcomes and neglecting factors that turned out to be futile, such as the level of streamers, received gifts, or fans. Figure 2 shows the basic database' structure with dummy data.

date	time (german)	time (USA)	channel	viewers	channel name	gender	age	fans	received gifts	likes	level	abuse of law
01.06.2015	00:30		#german-girl	207		w	15	22.768	~40	485	59	-
01.06.2015	00:45		#german-girl	18		w	24	463	~10	2026	26	background
01.06.2015	01:00		#german-girl	69		w	18	20320	0	1848	64	people on her
01.06.2015	01:15		#german-girl	52		w	12	5650	~5	219	50	drinks alcohol

Figure 2: Basic structure of the database with dummy data.

3.3 Statistical analysis

After collecting all relevant data according to the previously explained methodology, we could evaluate all information. First of all our database had to be revised regarding standardization of notations in order to cluster identical data.

An important aspect to clarify is how to treat streams where two or more persons have been actively interacting regarding the distribution of streamer's age. In our evaluation, these streams have been handled separately resulting in a higher number of persons than the number of investigated streams in total.

The handling of streams showing more than one person also plays an important role on gender-specific evaluation, e.g. the arithmetic mean of female streamers' age. These streams have been excluded from evaluation because the person-age-assignment was non-distinctive.

After these adjustments have been made, the data was evaluated. The evaluation is split into two parts. The first part deals with general statistics from streamers at YouNow. The second part focuses on qualitative analysis of our data regarding legal aspects and possible violation of law, a comparison of German and American streamers (regarding potential infringements) as well as the response to the streams by the audience. For this part of the evaluation we have determined frequencies of occurrence in order to compute the correlation between different factors based on our empirical data. This has been done with the IBM SPSS Software.

4. Results

In the following, the observed results of the study are presented, including: general information, potential law infringements (copyright infringements, violations of the right in one's own picture and spoken or written word, legal protection for children and young persons), comparison between YouNow streams from the USA and Germany, and the responses by the audience to the streams.

4.1 General data

All in all, 434 different streams were watched, from which 211 were German (111 with the hashtag "deutsch-girl" and 100 with the hashtag "deutsch-boy") and 223 were US-American (112 with the hashtag "girls" and 111 with the hashtag "guys"). The average age of the observed streamers is 16.90 years. Female streamers have an average age of 16.03 years whereas male ones are on average 17.80 years old.

Age distribution of observed streamers

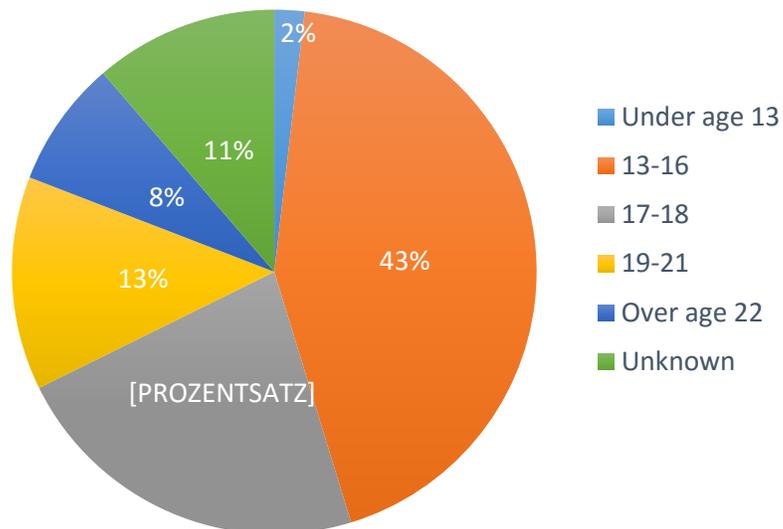


Figure 3: Age distribution among observed YouNow streamers

The majority of the observed streamers were between 13-16 years old (43 percent), followed by the 17-18 year olds (23 percent). Even though the platform is meant for users over 13 years old, 2 percent of the observed streamers stated to be under 13 years old, seven of them were female and three were male. However, the dark figure of according to YouNow's terms of use too young streamers may be higher, since 11 percent did not state their age. Figure 3 summarizes the age distribution of all observed streamers.

It was noticeable that female streamers in general seem to be younger than male streamers. If one leaves out the unknown streamers, 58 percent of the females were between 13-16 years old, whereas only 36 percent of the male streamers belonged to this age group. In contrast, 11 percent of the female streamers were at the age of 19-21, while the percentage of this age group for the male streamers is twice as high.

4.2 Potential infringement of the law

An overall of 248 potential violations of the law were observed. That makes a total 57.7 percent of observed streamers whose online behavior could be legally relevant. Regarding the gender, 143 of the observed female streamers (65.6 percent of all female streamers) and 112 of the male streamers (50 percent of all male streamers) potentially violated some legal regulation. Figure shows the distribution of the single infringed laws, which are further examined in the following paragraphs.

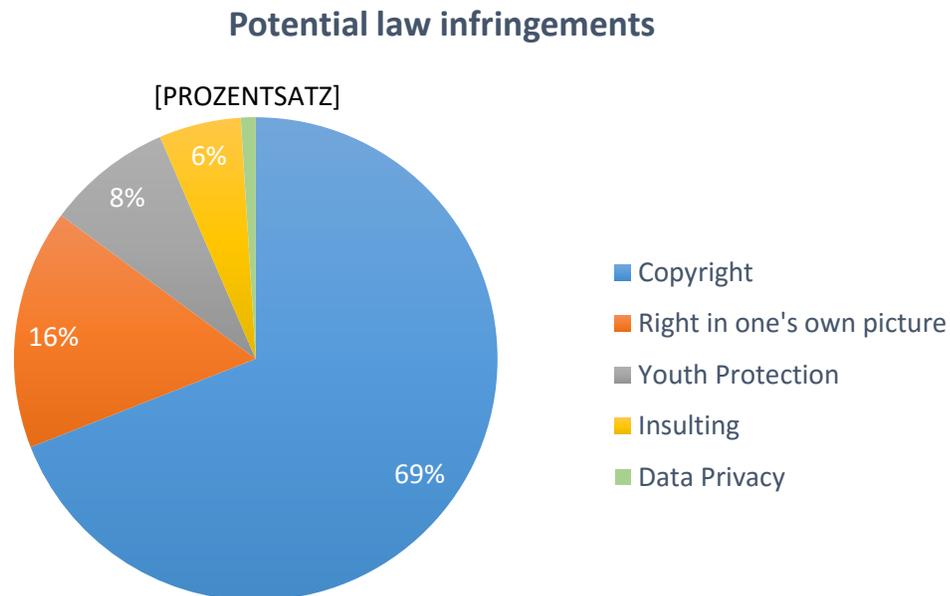


Figure 4: Distribution of infringements

Copyright infringements

Most of the legally problematic behavior concerned the copyright. Total 177 (40.7 percent) of all observed streamers had music playing in the background during their stream, of which 92 streamers (52 percent) were female and 85 (48 percent) were male. Compared to this number, only 3.3 percent of the streamers had their TV on during the streaming.

Right in one's own picture and spoken or written word

Regarding the protection of personal rights, 24 cases of filming other people without their explicit permission was observed. This also includes screening pictures of other people (which may constitute a violation of the right in one's own picture), reading from chat histories and calling third parties on speaker (protection of the spoken word as well as exposure and naming and shaming of the unaware telephoneee) during the stream. By way of example, some streamers filmed third parties outside or in school. Regarding the gender, 15 female and 11 male streamers potentially violated some kind of personal rights. The reason why the absolute numbers differ (26 vs. 24) is because in some streams both genders occurred. In six cases streamer's family members were filmed. In seven cases the streamer showed private pictures of third parties (e.g. friends), in some of the cases with partly sexual content such as bikini shots or nudity. Popular amongst the streamers and their viewers were apps on their mobile phone, which connected the user with other random people who used the app. These apps were *Flinx* (the connected users were shown the content of the other's mobile phone's front camera, which usually showed the face of the users) and *Base Chat* or *Parlor*. Both of these apps connected random users for telephone calls, but without camera.

Legal protection for children and young persons

The following paragraph refers only to actions of streamers who were, according to the law, too young for the concerned content. All in all 329 of the observed streams had under 18 year old streamers. In 23 cases (7 percent) violations against the Protection of Young Persons Act were detected. These violations included sexual content and drug use. In 11 streams several kinds of sexual content was observed, of which eight streamers were female and three were male. Nine of the eleven cases took place in the USA, only two occurred in Germany. Examples of sexual content are revealing clothes (bikini only, shirtless), provocative dancing, asking for sexual acts or showing of revealing pictures. Furthermore, in 12 cases alcohol or drugs were consumed by under aged streamers, from which six persons were female and six were male. Total 25 percent of these streamers were either drunk or consumed alcohol while streaming, 33 percent were smoking cigarettes, 25 percent were under the influence of marijuana and 8 percent were smoking shisha pipe.

Defamation

Furthermore, 15 cases of defamation (insulting) were observed. These were either the streamers insulting their viewers who wrote in the chat room or people in their close proximity, or the viewers insulting the streamer. Here, ten of the concerned streamers were female and five were male.

Data Privacy

Finally, in some cases streamers disclosed personal information of a third party (full name or telephone number) or themselves by showing the street name and house number to the viewers.

4.3 Audience Response

The majority of the observed streams (about 40 percent) had between 1,000 – 10,000 likes. Whether a stream had potential law infringements or not, it did not influence the amount of likes it would have on average. However, 63.6 percent of the streams in the range of 100-1,000 likes had some kind of sexual content. Streams with music had approximately 1,700 likes on average, whereas streams without music had an average of approximately 1,300 likes. Streamers who called third parties on speaker had an average of over 5,000 likes, which is 3 times as much as streams without calling a third party on speaker.

Streams with sexual content, as well as streams with calling a third party on speaker, had, on average, 3 times as many viewers as streams without sexual content or prank calls. Regarding streams with violations of the right in one's own picture, on average 5 times more viewers could be observed than in streams without the possible violation.

4.4 USA vs Germany

There is no major difference between the observed streamers regarding their country of origin (Germany or the USA). 120 German streamers potentially violated the law, which makes about 57 percent of all German streamers, while there were 128 possible violations in the US streams, which is a total of 58.4 percent (see figure 5). Sexual content could be found in nine US streams, which is 4.1 percent of the observed US streams and in two German streams, which is 0.9 percent of the observed German streams. All six of the German streams were moderated by streamers under 13 years old (2.8 percent of the observed German streams), whereas only three (1.4 percent) of the US streams had under 13 years old streamers. Underage drug and alcohol use was found in five (2.3 percent) of the US streams and in seven (3.3 percent) of the German streams. The US streamers played more often music in the background - namely 44.3 percent, compared to 37 percent of the German streamers. Violations against the right in one's own picture and word took place in 13 German streams (6.2 percent) and 11 US streams (5.0 percent).

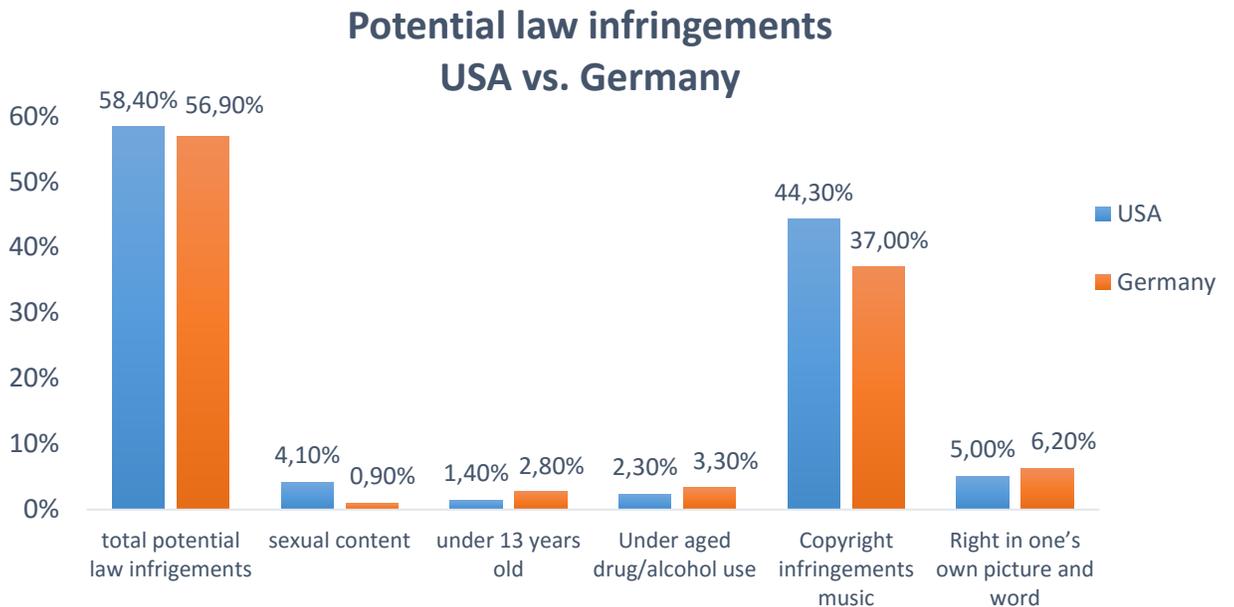


Figure 5 Potential law infringements of observed streamers – comparison between the USA and Germany.

5. Conclusion

Our observations showed that the concerns expressed in the press are to some extent justified. The biggest issue appears to be the potential violation of copyright by both, German and US-American streamers (69 percent of all observed potential infringements). However, the most troubling issues are the lacking child protection and possible violations of personality rights. Total 68 percent of observed streamers were under 18 years old, from which 2 percent openly admitted to be under the permitted age limit of 13 (the correct figure can be even higher). The differences between Germany and the USA are rather minimal, whereas the gender dependent differentiation showed that female streamers predominate regarding potential law infringements. The connection between legally questionable behavior of the streamer and the received likes or the amount of viewers is rather small, if any. A correlation between these aspects based on a bigger data set and completed by an inquiry of the viewers (for example, in form of an online survey) would be more informative (and is an interesting aspect for further research).

Regardless the regulations in Germany as well as in the USA, the users conduct legally questionable actions during their streams. The question remains, what role does the platform YouNow play in it? In our investigation YouNow is regarded as a representative of other similar

platforms, that are either not as popular or are about to rise in the near future. We point at a general problem of lacking legal obedience on the Internet, which can have dangerous consequences when, for example, children are involved. The explicit warnings and restraints in YouNow's terms and conditions do not seem to convince all users to act legally. Also, the age limit appears to be more of a suggestion rather than strict requirement for using the service. Another question is, whether these potential violation are indeed substantial enough to be prosecuted and do not fall under some legal exemptions, e.g. "fair use" or incidental works regarding the copyright, or private and household activities exemption regarding the data privacy. Here, a concretization of the existing legislature or even amendments, facilitating the legal situation to be actually compatible with our increasingly digitalized society, are long overdue. Which way should it go—free and open digital society based on unrestricted creative commons, or rather more rigid and better protected works and private data—stands open. Taking into consideration our outcomes, the streamers' sense of justice does not necessarily agree with current legal situation.

Possible solutions for the most dangerous problems—data privacy and youth protection—could be the improvement of information competency of children and their parents, better monitoring of the streams and possible violations by the platform operators, and finally, an improved registration system to the service, ensuring certain age of the user as well as his or her full understanding of and commitment to the terms and conditions. These solutions can only become reality, when the legal situation is accordingly adjusted and requires these actions. It is very likely that facing probable financial costs many platform operators would not implement any changes as long as they are not mandatory. Besides the additional expenses, another problem would be the unequal "security" level between different platform operators (accompanied by users' preference of platforms that are less concerned about their online behavior, rather than the ones limiting their online freedom).

References

- Acquisti, A., & Gross, R. (2006). Imagined communities: Awareness, information sharing and privacy on the Facebook. In *Proceedings of Privacy Enhancing Technologies Workshop* (pp. 36-58), Cambridge, UK: Springer.
- Boyd, D.M. (2008). Facebook's privacy trainwreck: Exposure, invasion, and social convergence. *International Journal of Research into New Media Technologies*, 14, 13-20.
- Brustein, J. (2015). Make Money as a Webcam Star—Without Taking Your Clothes Off. Online: <http://www.bloomberg.com/news/articles/2015-07-08/make-money-as-a-webcam-star-without-taking-your-clothes-off> [last accessed on 30.09.2015].
- Casselmann, I., & Heinrich, M. (2011). Novel use patterns of *Salvia divinorum*: Unobtrusive observation using YouTube™. *Journal of Ethnopharmacology*, 138(3), 662-667.
- Debatin, B., Lovejoy, J.P., Horn, A., & Hughes, B.N. (2009). Facebook and online privacy: Attitudes, behaviors, and unintended consequences. *Journal of Computer-Mediated Communication*, 15, 83-108.

Görmann, M. (2015). YouNow: Wo sich Teenies über Spanner freuen [YouNow: Where Teenagers enjoy the voyeurs]. Online: <http://www.rosenheim24.de/netzwelt/younow-paradies-paedophile-voyeuristen-4712771.html> [last accessed on 30.09.2015].

HG Legal Resources (2015). Data Protection. Online: <http://www.hg.org/data-protection.html> [last accessed on 27.09.2015].

Kelly / Warner Internet Law (2015). US defamation laws. Online: <http://kellywarnerlaw.com/us-defamation-laws/> [last accessed on 26.09.2015].

Maßen, W. (2015). Freiheit der Kunst vs. Recht am eigenen Bild [Freedom of the arts vs. right in one's own picture]. Online: http://www.lawmas.de/database/upload/hq/pstock_hq0c0604b6eb2ee0f1145aac38766ad803.pdf [last accessed on 27.09.2015].

Media Law Resource Center (2015). Defamation FAQs. Online: <http://www.medialaw.org/topics-page/defamation-faqs> [last accessed on 26.09.2015].

National Institute on Alcohol Abuse and Alcoholism (2015). Alcohol Policy. Online: <http://www.niaaa.nih.gov/alcohol-health/alcohol-policy> [last accessed on 16.10.2015].

NORML (2015). Laws. Online: <http://norml.org/laws> [last accessed on 26.09.2015].

Organization for Security and Co-operation in Europe (2005). Libel and Insult Laws: A Matrix on Where We Stand and What We Would Like to Achieve. Online: <http://www.osce.org/fom/41958?download=true> [last accessed on 16.10.2015].

Pachner, C. (2015). YouNow - Livestreams, Kinder und nackte Fakten [YouNow - Livestreams, kids and naked facts]. Online: <http://www.news.at/a/younow-livestream-social-media-plattform> [last accessed on 30.09.2015].

Schmidt, W.C. (1997). World-Wide Web survey research: Benefits, potential problems, and solutions. *Behavior Research Methods, Instruments, & Computers* 29 (2), 274-279.

Schupak, A. (2015). Is the YouNow live-stream app a parent's nightmare? Online: <http://www.cbsnews.com/news/is-the-younow-live-stream-app-a-parents-nightmare/> [last accessed on 30.09.2015].

Solmecke, C. (2015). Warnung vor dem beliebten Streaming Portal YouNow [Mind the popular streaming platform YouNow]. Online: <https://www.wbs-law.de/internetrecht/warnung-vor-dem-beliebten-streaming-portal-younow-58671/> [last accessed on 30.09.2015].

Stutzman, F., & Hramer-Duffield, J. (2010). Friends only: Examining a privacy-enhancing behavior in Facebook. In *CHI 2010 Proceedings* (pp. 1553-1562). New York, NY: ACM.

Tarasow, T., Arsoy, A., Shitta, G., & Laoris, Y. (2008). How much personal and sensitive information do Cypriot teenagers reveal in Facebook? In *Proceedings From 7th European Conference on E-Learning* (pp. 871-876). Reading, UK: ACI.

Tufecki, Z. (2008). Grooming, gossip, Facebook and Myspace: What can we learn about these sites from those who won't assimilate? *Information, Communication & Society*, 11, 544-564.

Weiß, F. (2015). YouNow: Exhibitionisten im Kinderzimmer [Exhibitionist in the children's room]. Online: <http://www.jurablogs.com/go/younow-exhibitionisten-im-kinderzimmer> [last accessed on 27.09.2015].

Wilson, R.E., Gosling, S.D., & Graham, L.T. (2012). A review of Facebook research in the social sciences. *Perspective on Psychological Science*, 7(2), 203-220.