



The Legal Implications and Remedies Concerning Revenge Porn and Fake Porn: A Common Law Perspective

Karolina Mania¹

Published online: 9 May 2020
© The Author(s) 2020

Abstract

Based on US and British regulations in force, this article offers an overview of legislation of two Common Law countries in the area of modern forms of law infringements focusing on the notions of revenge porn and fake porn. The first part contains definitions and descriptions of the terms ‘revenge porn’ and ‘fake porn’, pointing out to the context of the relationship between the dynamic technological development and use of artificial intelligence on the one hand and the regulatory framework failing to meet the current needs on the other. Further, examination is conducted of US and British legislation in force divided into civil and criminal law, indicating legislative gaps as well as the inefficiency of the existing legal solutions and presenting a range of proposals of legislative changes. The considerations have been supplemented with the results of the author’s assessment of sociological and statistical research available in source literature carried thus far in the field in question. The following section is dedicated to a comparative assessment of American and British legal solutions based on selected, critical issues. The final parts of the article serve to postulate systemic changes in legislation and is a proposal to introduce out-of-court dispute settlement methods in legal disputes pertaining to the matters discussed herein, and to frame future research directions.

Keywords Non-consensual pornography · Artificial intelligence · Law · Technology · Internet-based crime

Introduction

According to the authors of the book *Leadership 2030* Georg Vielmetter and Yvonne Sell, one of the six ‘megatrends’ fundamentally changing the global economic and social environment is technological convergence understood as a technological

✉ Karolina Mania
karolina.mania@uj.edu.pl

¹ Institute of Economics, Finance and Management, Faculty of Management and Social Communication, Jagiellonian University, Cracow, Poland

revolution which is transforming our lives entirely, starting from economy, through production, medicine and nutrition, all the way to the legal environment (Vielmetter and Sell 2014).

The dynamically progressing technological development enforces shorter legislative procedures that lag behind the changing reality (Marchant 2017). Cyberspace and online activity stimulate the appearance of some fields of breaches of law absent to date which cannot be effectively tackled by the existing legal solutions (Lillie 2002). Hence the need to articulate postulates for legislative change in the fields of ineffective procedural solutions as well as search for alternative systemic ways to finalize such disputes (Walker 2017).

Due to its specificity, the rapidly progressing technological development is bringing changes in the nature of law infringements (Moses 2007). Illegal human activity in the analogue world is morphing and transforming into new forms unknown before (Weckstrom 2012; Rabinovich-Einy 2003). One example of such evolutions is the area of breaches of law related to non-consensual pornography (NCP), which this article is devoted to (Stokes 2014). Its multi-faceted nature manifests itself in the fact that NCP may have consequences in both civil and criminal law, yet what is more interesting from the perspective of this analysis, it make take place in both the analogue and digital worlds, based, in the latter, on digital mystification, actually hurting the personal rights of the injured party (the victim) (Suzor et al. 2016).

This article aims at discussing two types of non-consensual pornography infringements: revenge porn and fake porn, which do have common features although their respective objective scopes are different. The selection made for the purpose of my research covers exclusively legal solutions of two countries representing the system of common law in order to highlight similarities and differences between them. Further, narrowing down my research to two countries of the same legal system is motivated by the intention to conduct a thorough analysis of the legal solutions adopted by countries of the same legal system. This facilitates a search for similarities and analogies in systemic solutions as well as consolidate the knowledge acquired by discerning differences in either of the countries. Additionally, such knowledge can form a basis for shaping future research covering countries of the continental system, to eventually pinpoint disparities stemming from systemic differences between common law and continental law (Helmholz 1990).

The essence of the subject in question relates to several aspects. Firstly, to the statistically growing trend related to the number and frequency of such infringements, correlated with the huge availability of tools for committing them (Flynn et al. 2019). Secondly, such breaches of law are of a specific nature, as they mainly target women and hurt many of their rights, including intellectual property or non-material ones, such as good name (Delfino 2019). Thirdly, the world's evolution accelerated by technological development shows us new faces of old phenomena. The infringements discussed here are a pictorial example of the changes going on before our very eyes while legal systems are seeking (with better or worse results) to meet the public's expectations in terms of effective law enforcement (Pina et al. 2017).

Research concerning revenge porn and fake porn carried out to date is mainly based on: analysis of results of quantitative and qualitative studies conducted in various contexts (e.g. sociological, forensic and psychological) (Bates 2016; Branch

et al. 2017; O'Connor et al. 2018), analysis of the technical aspects of such infringements (Huang 2015; Tariq et al. 2018), analysis of current legal solutions narrowed down to selected countries (or even their parts, such as states) (Citron and Franks 2019), or assessment focusing on criminal law measures (Citron and Franks 2014). The approach offered here is a review of current solutions in two branches of law, civil and criminal, yet exclusively in countries of a single legal system, that of common law. My selection facilitates positing new directions of future research that would offer a complete law comparison review of both common- and civil-law countries.

The reflections presented above have a bearing on the text structure division. In the following section, I describe the chosen research method, focusing on its justification given the information sought and obtained (2. Methodology). In Part 3, I identify the phenomena discussed here starting from their definition and explanation of their vital practical aspects (3. Artificial intelligence in the world of pornography). In the fourth section, I analyze available legal measures in the US and British systems, divided into civil and criminal law (4. American and British perspectives on current legal solutions against revenge and fake porn). Part 5 discusses selected key (in my view) problematic aspects of the current solutions available in the US and the UK (5. Comparative assessment of American and British legal solutions—critical issues). Part 6 includes suggestions of changes and proposals that would make the system of justice more efficient, or take the burden off it by implementing out-of-court procedures (6. Alternative approach to new forms of law violations—causes and proposed legal solutions). Further on, I systematize potential directions of future research on the subject in question, the starting point being this text (7. Discussion and future work). The final eighth section includes the conclusions (8. Conclusions).

Methodology

Given its subject matter and scope, the paper is based mainly on analyzing the relevant legislation coupled with a vital aspect of comparative legal research work which is going to be theoretical and dogmatic legal in nature, accounting for the practical aspects finding their expression in terms of law application.

The research began with collection and analysis of the existing American and British legal acts, legal reference works as well as, depending on their existence, court rulings concerning the subject matter of the field. The basic method was text analysis encompassing the principles of logic, and legal argumentation.

As regards comparative legal studies, the analysis included comparison of civil and criminal, American and British legislation thus providing for reliable analysis of the changes in law confronted with dynamic technological progress. In this article, I discuss available civil- and criminal-law measures that can be applied in case of the phenomena in question in national legislation. Additionally, Part 5 includes the law comparison method for evaluating and highlighting key problematic aspects of the solutions applied in the United States of America and Great Britain.

In order to obtain a complete picture, the author offered assessment of the actual functioning of legislation in practice on the basis of legal and sociological research conducted in a field to define advantages and disadvantages of exciting legal system.

Artificial Intelligence in the World of Pornography

Technological development and new areas where artificial intelligence can be used are beginning to make their presence felt ever more strongly in the world of ordinary citizens and their leisure activities (Wang et al. 2019). According to the report of the American non-profit organization Cyber Civil Right Initiative titled '2017 Nationwide online study of non-consensual porn: results', every eighth social media user has been a target of 'non-consensual pornography' (NCP).¹ NCP includes such phenomena as 'revenge porn' and 'fake porn', acts of publicizing any unambiguously sexual image of a person in the form of photographs or films without their prior consent and without using some aspects of artificial intelligence, or using them (Attwood 2005).

The first term has a longer history going back to the 1980s when the then print-only Hustler Magazine started publishing a section featuring a collection of nude photos of its female readers.² Over a short period of time, it turned out that some were published without their consent, which constituted a privacy infringement and led to a series of lawsuits (civil and criminal).³

The phenomenon of fake porn, however, is a true challenge of the twenty-first century as a product of modern technologies (Poole 2015). Technical requirements for making a concocted pornographic film are surprisingly simple. One needs to obtain original film footage showing the image of a person (figure) as well as some photos or films with the face of the person to be feature in the first material (Hickey 2018). A machine learning algorithm will consolidate the face into a selected image using the face mapping technique, maintaining the proportions and figure's spatial arrangement, and then replicate it for the benefit of successive video frames (Roffer 2016).

The discussed notions of revenge porn and fake porn are not synonymous yet in practice they very often intertwine, which results from the many common feature they share: they mostly concern women and their dissemination mechanism is based on sharing content without the interested party's consent and related to sexual activity (Franks and Waldman 2018; Delfino 2019). Additionally, one can conclude that the original notion of revenge porn, penalized earlier as first, is the model for legal verdicts in cases fake porn (or deepfake) is not regulated in legislation currently in

¹ A report of the American non-profit organization Civil Right Initiative titled '2017 Nationwide online study of non-consensual porn: results' is available online at <https://www.cybercivilrights.org/wp-content/uploads/2017/06/CCRI-2017-Research-Report.pdf>.

² Wood v. Hustler Magazine, Inc., 736 F.2d 1084, 1086 (5th Cir. 1984). Ashby v. Hustler Magazine, Inc., 802 F.2d 856, 857–58 (6th Cir. 1986).

³ Starting from the 1990s, a number of online portals have appeared in the US that publish NCP content, such as IsAnyoneUp.com, texxxan.com, or MyEx.com.

force. Consequently, law applying bodies (courts) – in their evaluation of the legal consequences of law infringements—very frequently use provisions explicitly referring to revenge porn, which also explains why they are considered together in this text (Citron and Franks 2014).

Pornographic websites, i.e. Reddit or RedTube, feature numerous categories such as ‘deepfakes’ where fabricated material reigns supreme.⁴ A much-medialized case of ‘fake porn’ was the 2017 use of an image of the actress Gal Gadot playing in the US super-production ‘Wonder Woman’, which triggered a public debate about the issue (the actress Emma Watson being yet another victim).⁵ The video published online was made with a machine learning algorithm, using online material and an open-source code (Franks 2017a, b).

The use of advanced computer programs to search for specific content online is no novelty, however. In 2011, Facebook announced its use of a Microsoft technology called PhotoDNA in order to detect materials published on the portal that exploited pornographic images of children.⁶ To further counteract such abuses, on 5 April 2017 Marc Zuckerberg announced that a new AI tool aimed at capturing pornographic content using a facial recognition technology had been implemented on Facebook (and its related platforms Messenger and Instagram).⁷ Through a reporting system, each portal user can report an alleged law infringement in the form of a published photo (intimate image), which can be suspected as published without consent of the interested party.⁸ A dedicated Facebook’s Community Operations team performs case-by-case assessment in compliance with the Community Standards adopted, responding by removing the incriminated material and possibly account deactivation. The system allows for appealing against the team’s decision (online), which has been described in detail in a document titled ‘Not Without My Consent. A guide to reporting and removing intimate images shared without your consent’.⁹

⁴ Before 2018, most fake porn content was published free of charge. There has been a noticeable change, however, in the form of a growing market for sale of such material over the Internet. See: https://motherboard.vice.com/en_us/article/7x799b/selling-ai-generated-fake-porn-is-probably-a-good-way-to-get-sued.

⁵ Derek Hawkins, Reddit bans ‘deepfakes’ pornography using the faces of celebrities such as Taylor Swift and Gal Gadot—https://www.washingtonpost.com/news/morning-mix/wp/2018/02/08/reddit-bans-deepfakes-pornography-using-the-faces-of-celebrities-like-taylor-swift-and-gal-gadot/?utm_term=.8016b5d1a874.

⁶ Jef Meisner, Facebook to Use Microsoft’s PhotoDNA Technology to Combat Child Exploitation—<https://blogs.microsoft.com/on-the-issues/2011/05/19/facebook-to-use-microsofts-photodna-technology-to-combat-child-exploitation/>.

⁷ Dawid Ingram, Facebook built an internal database of ‘revenge porn’ pictures to prevent repeat sharing—<https://www.businessinsider.com/facebook-using-photo-matching-software-to-fight-revenge-porn-2017-4>.

⁸ Facebook launching tools to tackle revenge porn—<https://www.theguardian.com/technology/2017/apr/05/facebook-tools-revenge-porn>.

⁹ Guide ‘Not Without My Consent. A guide to reporting and removing intimate images shared without your consent’—<https://fbnewsroom.us.files.wordpress.com/2017/03/not-without-my-consent.pdf>.

Furthermore, to prevent further content dissemination the team attempts to analyze material on Messenger and Instagram using photo-matching technologies.¹⁰

In October 2017, Pornhub announced its use of machine learning and face recognition in order to detect over 10,000 porn stars whose movies were published by the portal, a tool for a more efficient search of favorite stars or categories.¹¹ Artificial intelligence does not need to be a source of law violations, though. In theory, it could be used to detect online piracy by identifying copyright-protected content like systems such as Content ID YouTube, where copyright owners can recognize and manage the content of the service. This article, however, discusses a negative phenomenon where AI is a tool for creating content whose publication without consent of those interested constitutes a breach of law (Shinn 2015).

American and British Perspectives on Current Legal Solutions Against Revenge and Fake Porn

Artificial intelligence and digital reality make us face new fields of law infringements that did not exist just a few years back (Bates 2016). As the first cases of court disputes concerning revenge porn and fake porn were documented in the United States of America, it is worthwhile to analyze US legislation, supplementing that knowledge with British law, thus allowing us to pinpoint the current state of regulation in these two Common Law countries (Fung Chen Pen 2015).

The legal protection of victims of the illegal activity in question (non-consensual pornography) is derived from the area of pornography regulations and sexual abuse imagery. Still, when trying to enforce the rights of those injured by technologically innovative variations that is fabricated digital content, the victims face some hurdles (Lageson et al. 2019).¹²

Potential breaches of law in the area in question include both civil matters (such as tort law, copyright law) and criminal ones (such as harassing behavior), from intellectual property rights, through right of privacy, defamation, bullying or mobbing, a real threat to anyone caring about their image online and elsewhere (Dickson 2016).

This article offers a systemic review of civil and criminal measures that can be applied in the case of the areas under discussion using selected national solutions. The selection is justified by the fact that in order to maintain the entirety of rights of victims of revenge porn and fake porn it is necessary to balance the protection offered by either of both branches of law, allowing for removing incriminated

¹⁰ Niraj Chokshi, Facebook Announces New Ways to Prevent 'Revenge Porn'—<https://www.nytimes.com/2017/04/05/us/facebook-revenge-porn.html>.

¹¹ James Vincent, Pornhub is using machine learning to automatically tag its 5 million videos—<https://www.theverge.com/2017/10/11/16459646/pornhub-machine-learning-ai-video-tagging>.

¹² According to studies by the American non-profit organization Cyber Civil Rights Initiative promoting social, technological and legal innovation in order to combat abuse and discrimination in the Internet, '93% reported significant emotional distress, while 82% reported suffering significant impairment in social, occupational, or other important areas of functioning.'

content from the Internet, obtaining compensation and punishing the perpetrators as well as deterring their potential followers (LiCalzi 2017).

American Perspective on Current Legal Solutions Against Revenge and Fake Porn

American legal solutions do not give an unambiguous answer as regards counter-acting as well as responding to non-consensual pornography infringements, which leads to a high level of impunity of distributors of such content Volokh 2016).

This section includes a systemic review of civil and criminal regulations that are (or potentially can be) used in the case of the breaches in question, with straightforward references to the legislation of the State of New York. The former include liability in tort (tort law) embracing categories of inadmissible acts, i.e. intentional infliction of emotional distress, defamation and copyright infringement. The latter include regulations concerning voyeurism, harassment and hate crimes.¹³

Tort Law

American state legislation offers a diversity of definitions of similar or identical legal terms. Analyzing New York state legislation currently in force, the concept of an inadmissible act consisting in an 'intentional infliction of emotional distress (IIED), includes (jointly) the following elements: '(i) extreme and outrageous conduct; (ii) intent to cause, or disregard of a substantial probability of causing, severe emotional distress; (iii) a causal connection between the conduct and injury; and (iv) severe emotional distress,' where the presence of extreme and outrageous conduct is the most difficult part to prove in court.¹⁴ It is so partly because of the omnipresence of brazen images of half-naked women and men, particularly visible in mass media, which further blurs the already fuzzy conceptual boundaries (Guterman 2017).

Tort liability also covers 'defamation'.¹⁵ The definition of this term refers to the aspect of 'false statement' (the image disseminated), which in the case of fake porn is not false, thus excluding a lawsuit against entities publishing the incriminated photographs (Batza 2017).

Victims of fake porn face successive obstacles, for instance trying to seek compensation for the wrongdoing from Internet portal hosts (Potter and Potter 2001). In 1996, Congress introduced federal provisions of § 230 of the federal Communications Decency Act excluding the legal liability of service providers for content published by users on their portals, treating them as passive participants of the online

¹³ All of the terms may have markedly different definitions and conceptual scopes depending on the content of given state legislation. See: Vora A., Into the Shadows: Examining Judicial Language in Revenge Porn Cases, 18 *Geo. J. Gender & L.* 229 (2017). Theodore Z. Wyman, J.D., Litigation of Liability for Internet Posting of 'Revenge Porn', 147 *Am. Jur. Trials* 319 (Originally published in 2016).

¹⁴ *Howell v. New York Post Co.*, 612 N.E.2d 699, 702 (N.Y. 1993).

¹⁵ In the state law of New York, the term 'defamation' covers: 'the making of a false statement which tends to "expose the plaintiff to public contempt, ridicule, aversion or disgrace, or induce an evil opinion of him in the minds of right-thinking persons, and to deprive him of their friendly intercourse in society."' (*Foster v. Churchill*, 665 N.E.2d 153, 157 (N.Y. 1996)).

communication chain.¹⁶ Consequently, as the material published (photos) is not false and host websites enjoy legal protection under the legislation cited above, pursuance of claims based on the defamation tort is not an effective tool for the victims (Citron and Wittes 2017). Section 230 of the Communications Decency Act (CDA) ensures impunity for Internet service providers in cases of publication by users – third parties. This solution allows for excluding the legal liability of Internet service providers for illegal (without third party consent) publication of photographs or films on portals. Furthermore, they are not obliged to remove such content, or even respond to removal requests (Gerrie 2017). The scope of the said Act does not cover intellectual property breaches, so if a party holds copyright to the image, the takedown request must be executed pursuant to the Digital Millennium Copyright Act.¹⁷

As regards intellectual property rights, copyright protection covers exclusively cases of photos used for production (of fake porn, for instance) immortalizing the image of that person (e.g. a selfie) and having taken by the victim him-/herself and sent to the party making it public, pursuant to 17 U.S.C. § 102 (2012) and 17 U.S.C. § 106(3) (2012) (Stroud 2014). This legal arrangement stems from the fact that state laws are limited by the federal Copyright Act of 1976, which acknowledges that certain ‘pictorial, graphic ... [and] motion pictures and other audiovisual works[]’ may be protected by copyright by the ‘authors of the work’. The existing regulations offer the victims copyright protection if they are themselves authors of the controversial content (photographs), that is in most reported cases (Carter 2017). This lets them then send a takedown notice to web portals requiring its removal (Cohen 2015). Moreover, law enforcement bodies themselves are authorized to prosecute website operators publishing controversial content for breaching legislation pertaining to pornographic sites, i.e. 18 U.S.C. § 2257 obliging them to keep records of names and age groups showing erotic content (Levendowski 2013).¹⁸

Consequently, the aforementioned Sect. 230 is not a tool protecting Internet service providers from copyright liability (Cohen 2017). It is then worth mentioning that US legislation currently in force does not rule on breaches involving the use of photos to which the victim is not rights holder. The regulations provide, however, for seeking liability of initial distributors including their torts of public disclosure of private information, or harm understood as non-material (intentional infliction of emotion distress) (Jackson 2017).

In conclusion, civil law protection is not a sufficient tool for fighting the phenomena in question. First, it is difficult for the victims to identify the party initiating the publication of the incriminated content, and even if they have such knowledge, they lack measures to prove it. Secondly, most commonly the victims seek online removal of the contested content, which in this age of ‘sharing’ and unlimited possibilities of free copying online may be impossible to attain. Thirdly, as the cost and

¹⁶ 47 U.S.C. § 230(c)(1) (2012), the federal Communications Decency Act: ‘[n]o provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider’.

¹⁷ 17 U.S.C. § 512(c) (2012).

¹⁸ 18 U.S.C. § 2257 (2012).

duration of court proceedings discourage the victims from enforcing their rights, they often give up on seeking justice in court. Fourthly, the fact that proceedings are open to the public leads to further victimization of persons who fall prey to media interest.¹⁹ And fifthly, as argued above, for those seeking justice in court the catalogue of claims available is much limited.

Criminal Law

The two-tier legal system necessitates constant referencing of federal and state law.²⁰ The former offers no regulations specific to the subject matter discussed here, while only selected states have decided to penalize it (Griffith 2016). They include New Jersey and California (Bustamante 2016; Sorensen 2017; Cooke 2017).²¹ The status quo exposes the weakness of the legal system which provides for a markedly different treatment of the same factual circumstances, sometimes as an offense, sometimes a crime (Najdowski 2017).²²

Invoking New York state legislation yet again, protection offered by criminal law (just like in case of civil law) has a number of gaps, making it possible to avoid liability for voyeurism, harassment and hate crimes, as it is impossible to prove all the elements required for ascertaining the presence of a given offence. For instance, as regards voyeurism law, two such aspects are required: 'the act of unlawful surveillance' and 'unlawful dissemination of the images obtained from the surveillance'.²³ The former includes exclusively images or video films obtained by the perpetrator without consent of the third party who has been recorded, which does not apply to the cases discussed here as the victims have typically taken the photos (films) themselves or granted permission to have them published, thus automatically excluding the liability of the perpetrator of the act.

In the context of (second-degree) harassment, the perpetrator can be held liable when 'with [the] intent to harass, annoy or alarm another person ... [h]e or she engages in a course of conduct or repeatedly commits acts which alarm or seriously annoy such other person and which serve no legitimate purpose'.²⁴ Victims of revenge porn and fake porn find it hard to prove the perpetrator's intent or repeated conduct, often boiling down to a one-time video publication, which is independent of the technical possibility to replicate it online and making it available to other recipients (Marshak 2017).

The most recent piece of New York state legislation in cases described herein, hate crime law also fails to ensure appropriate protection of the victims (Mason and Czapski 2017). Under the legislation, the perpetrator should have purposefully

¹⁹ YouTube singer Chrissy Chambers wins revenge porn case—<https://www.bbc.com/news/technology-42720869>.

²⁰ A list of selected states with revenge porn laws: <https://www.cybercivilrights.org/revenge-porn-laws/>.

²¹ N.J. STAT. ANN. § 2C:14-9 (West 2014); CAL. PENAL CODE § 647(j)(4)(A) (West 2014).

²² E.g. Revenge porn is a Class D crime in Maine, and a third-degree crime in New Jersey.

²³ N.Y. PENAL LAW § 250.45, 250.50, 250.55, 250.60.

²⁴ N.Y. PENAL LAW § 240.26.

selected the victim or have committed an act ‘in whole or in substantial part because of a belief or perception regarding the race, color, national origin, ancestry, gender, religion, religious practice, age, disability or sexual orientation of a person’²⁵ Even if the victim were able to prove to have been the target with relation to one of the listed reasons, such circumstance is not defined in the statute via listed offenses, which excludes invoking it in court.²⁶

Concluding, the absence of consistent definitions as well as significant discrepancies in legislative content and related state jurisprudence result in a low level of protection of the rights of victims of revenge porn and fake porn. An additional factor weakening their protection under criminal law is the ongoing debate concerning the penalization of the phenomenon, possibly a valid First Amendment violation of free speech. As this has been analyzed on many occasions, also in the doctrine, this article is limited in that regard to listing several sources requiring more in-depth examination (Pollack 2017; Hamilton 2017; Keats and Franks 2014; Pollack 2017).

British Perspective on Current Legal Solutions Against Revenge and Fake Porn

On 12 April 2015, the provisions entered into force in the United Kingdom of Sect. 33 of the Criminal Justice and Courts Act 2015 covering in its scope the phenomenon of ‘revenge porn’ (Jennifer 2017). These regulations established a new criminal offense of disclosing private sexual photographs and films with intent to cause distress. The aspects necessary for classifying an offense as such are the lack of consent of the individual appearing in the photograph and film; and (b) the intent to cause that individual distress.²⁷

Apart from the legislation cited above, revenge and fake porn victims may seek criminal liability under other laws, such as for the offense of blackmail as laid out in the Theft Act 1968, stalking the victim as set out in the Theft Act 1968 and amended by the Protection of Freedoms Act 2012, sending communications with an intent to distress or cause anxiety to the recipient, as set out in the Malicious Communications Act 1988, or unauthorized computer access as per the laws laid out in the Computer Misuse Act 1990.

Just few years after the introduction of the new regulation, one must conclude that it is not perfect, letting those publishing such incriminated content avoid liability by arguing in favor of the absence of the required ‘intent to cause distress’, which may be successful for instance through proving that financial gains have been drawn from such unlawful actions.²⁸

²⁵ N.Y. PENAL LAW § 485.05.

²⁶ N.Y. PENAL LAW § 485.05(1), (3).

²⁷ Kleeman J., YouTube star wins damages in landmark UK ‘revenge porn’ case—<https://www.theguardian.com/technology/2018/jan/17/youtube-star-chrissy-chambers-wins-damages-in-landmark-uk-revenge-porn-case>.

²⁸ Criminal Justice and Courts Act 2015—<https://www.legislation.gov.uk/ukpga/2015/2/section/35/enacted>.

As regards civil liability, victims can pursue a claim with relation to the misuse of private information and a breach of confidentiality, and their case can be treated as harassment or copyright infringement.²⁹

Comparative Assessment of American and British Legal Solutions—Critical Issues

Aware of the range of legal measures available in the systems of American and British law concerning the notions examined here, I would like to share some observations resulting from my comparative law analysis of these two national systems, but also a broad perspective allowing for an in-depth understanding of the phenomena, as well as finding the most effective legal measures, while critically assessing some aspects of the current state of legal play. As this text focuses mainly on American solutions, a vast majority of my comments will target legal practitioners operating under the US jurisdiction (McGlynn et al. 2017).

Technological developments are changing the face of law infringements as we know them. The notion of revenge porn of yesterday is transforming into fake porn or deepfake (porn) today, superimposing new technological possibilities on old areas of breaches of law. This absence of a clear-cut terminological boundary requires an in-depth practical understanding of such notions as analysis of the available legal solutions shows that in cases of lack of provisions regulating the infringements in question law applying bodies, such as courts, resort to legal measures already existing in legislation (Salter and Crofts 2015). Consequently, my analysis of the subject is rooted in the notion of revenge porn, which most frequently already occurs in selected jurisdictions laying foundations for legal assessment of new forms of law infringements that do not have conceptual equivalents in regulations yet do take place in practice, and so the basis for their effective penalization must be found (Franks 2015).³⁰

Analysis of American legislation indicates clearly that despite numerous legal solutions pertaining to revenge porn (in such states as New York, California or Washington), no federal or state legislation currently penalizes the creation or distribution of pornographic deepfakes (Delfino 2019), which by virtue of their online presence exist everywhere, regardless of state borders. Thus, when assessing the consequences of such infringements, legislation penalizing the related phenomenon of revenge porn is used (Kitchen 2015).

Focusing now on the legislative limitations that can be observed in American law, as well as necessary improvements of procedures for injured parties and victims to exercise their rights, I would like to yet again refer to the division between civil- and

²⁹ In the context of the notion of fake porn, so using AI in the sphere of porn movies shared without consent of the interested party/parties, British law introduces neither special regulations nor the term itself in its legal lexicon, hence each case examined by court requires individual assessment of the status of the matter and interpretation of the legislation in force.

³⁰ The countries that have adopted legislation pertaining directly to the notion of revenge porn are, among others, most US states, like New York, but also Great Britain, Germany or Israel.

criminal-law provisions. The former are based on assessment of the degree of damage and entail civil-law liability, which has numerous limitations, however. Firstly, civil proceedings are costly, discouraging lower-income citizens from launching a court action. Consequently, the available statistics on law infringements may not reveal complete data, being merely a reflection of the number of cases submitted with or reported to relevant institutions but not the real number of infringements. Secondly, the strong protection of the internet provider market existing in American law makes the impression that the rights of entities covered by the immunity granted to third-party providers under CDA are strong enough so as not to be able to enforce the actual removal of problematic online content, and consequently weaken the injured parties' motivation to act (Henry and Powell 2015).

Due to the essence of the deterrent function of criminal law, markedly different from the remedial function of civil law, penalization of revenge porn (fake porn) really allows (would allow) for the effective discouragement of (potential) creators of illegal (illegally shared) content. Unambiguous and easy-to-interpret legislation facilitates the effective assertion of their rights for the victims and a serious weapon for enforcement authorities. My analysis of American legislation, which penalizes revenge porn at the state level, shows a number of mistakes made by the legislators. The differences that exist between states in terms of legal framing the notion of revenge porn show how important it is to specify its constituent parts precisely.³¹ One of the most criticized is the condition of an intent, present in the state legislation of California.³² Proving it is difficult, and after all the very fact of sharing (such sensitive) content without the victim's consent should be sufficient to justify the perpetrator's guilt. Likewise with the condition of the requirement to prove the damage incurred (present, for example, in the state law of California), which entails another risk of revealing intimate details of the injured party's life in the courtroom (Powell and Henry 2017).³³

The British perspective shows a different take on revenge porn, visible from the moment of its classification as a sexual offence in the Criminal Justice and Courts Act 2015. Firstly, the British solutions introduce a multitude of forms of infringements that can be covered by the objective scope of revenge porn, including: a. the non-consensual sharing of any explicit film or photograph showing people engaged in a sexual activity, and b. the non-consensual sharing of any explicit film or photograph showing an individual depicted in a sexual way or with their private parts exposed, where what is visible in the image would not be seen in public. The solution adopted requires that given material include both photos of a person in the course of a sexual activity and the state of full (or partial) nudity, which allows for a much broader use of the regulations when the content is disseminated without consent of the interested party, who (for instance) was fully dressed. These provisions ensure a much broader field of their application in the new reality of the infringements taking

³¹ The federal cyberstalking statute (18U.S.C.§2261A(2012)) and the California anti-stalking statute (CAL.PENALCODE§646.9(West2019)) include a particular requirement related to experiencing fear.

³² CAL. PENAL CODE § 647(j)(4) (West 2019).

³³ CAL. PENAL CODE § 647(j)(4) (West 2019).

place. However, just like in the case of US solutions, the fact that such regulations do not penalize fake porn (deepfake) and fail to protect one from information disclosure during court proceedings – a direct consequence of classifying revenge porn as a ‘communication crime’ and not introducing restrictions on trial participation for third parties – should be viewed critically (Hall and Hearn 2017).

Alternative Approach to New Forms of Law Violations—Causes and Proposed Legal Solutions

The first cases of revenge porn and fake porn were recorded in the USA (Lai 2016). As reasoned above, American (and British) legislation is not a perfect model for solutions that could be implemented directly by countries of other legal systems, e.g. European (Nolan-Haley 2012a, b).

As in the case of fake porn breaches occur in the digital environment, it is worth considering whether tools of counteraction should not be applied also in the online world (Gabison 2016). The development of systemic solutions would help the victims enforce their rights effectively (Drinnon 2017). It is vital to consider whether the most efficient remedy would be to implement in such cases alternative dispute resolution methods, with common use of electronic communication, the very place where breaches of law take place (Dickson 2016).³⁴ The introduction of ADR systems should be contemplated in the area of breaches related to revenge porn and fake porn primarily because of the space where they occur and their specific features (Nolan-Haley 2015).

It seems that the issue should be considered from a global perspective, blurring the boundaries of national jurisdictions and problems with selecting applicable law.³⁵ The victims should have access to a legal tool providing for a systemic, prompt and inexpensive resolution of disputes, without worrying about choice of law, excessive court fees and trial representation (Yanisky-Ravid and Mittelman 2016). Given the nature of the Internet and proliferation of illegal online activities, it would be worthwhile to initiate measures aimed at finding a remedy for the existing legal issue, that is aiding to resolve disputes in the areas in question promptly and effectively while ensuring consistent levels of the victims’ protection (Franklin 2014).

The proposed out-of-court arrangement could be based on the creation of a single agency (entity) competent to resolve grievances (requests, complaints) in the fields discussed here, accompanied by a system of agreements with national and foreign Internet or hosting service providers.³⁶ Should an alternative conflict resolution be

³⁴ Similar solutions have been adopted in New Zealand under Harmful Digital Communications Act 2015 (NZ).

³⁵ Franks, Mary Anne, Drafting an Effective ‘Revenge Porn’ Law: A Guide for Legislators (August 17, 2015). Available at SSRN: https://ssrn.com/abstract=2468823_or_https://dx.doi.org/10.2139/ssrn.2468823.

³⁶ The scope of competences of the proposed agency may be debated. An effective solution could be granting it authority to issue resolutions as regards takedown notices or impose financial penalties.

impossible, a party could always turn to a common court (Rabinovich-Einy and Katsh 2017).

Such solutions should offer a range of legal accommodations, i.e. the necessary introduction of regulations concerning the creation and cooperation of arbitration tribunals or other non-court institutions using arbitration (and mediation) and other parties to a given legal relationship (Nolan-Haley 2012a, b). It seems, however, that the application of alternative dispute settlement methods and their online equivalents as regards revenge porn and fake porn infringements would not only take the load off common courts but also facilitate more effective law enforcement, removal of content encroaching upon the rights of the victims from the Internet as well as improvement of its transparency (Sela 2017).

Discussion and Future Work

When pointing out to future trajectories of research on revenge porn and fake porn, the following issues need to be raised.

Relevant US State legislation in force certainly begs the question whether it would be necessary to develop uniform penalization for the phenomenon discussed here, which can be an interesting field of the future research.³⁷ Recording a growing number of revenge and fake porn cases, it seems justified to consider such a solution, which would allow for more consistent legislation and court jurisprudence, acting as a deterrent of further online dissemination.³⁸ Due to the existing doubts regarding valid First Amendment violations, it seems, however, that the very fact of penalization, and so changes exclusively in criminal law, does not constitute a comprehensive solution (Salter and Crofts 2017). The remedy may be found in simultaneous changes in civil law when implementing alternative (systemic) applications, which was discussed in the previous section of this article (Stipanowich 2017).

The picture emerging from the analysis of the legal solutions of the two countries of the common-law system just begs for further law comparison research including continental law countries. In-depth analysis of particular national solutions is one thing, yet finding similarities and difference existing between entire systems visible in both civil and criminal law seems all the more interesting. However, no country enjoying a full autonomy in shaping its laws and ways to enforce infringed rights is an entirely separate entity, as evidenced, for instance, by the existence of similar institutions in particular countries, closely linked to the structure of the legal system of common or civil law. The out-of-court dispute settlement solutions mentioned in

³⁷ According to a report of non-profit Cyber Civil Right Initiative titled *2017 Nationwide online study of non-consensual porn: results*, 'severe criminal penalties are the most effective deterrents. The most commonly chosen prohibitive factor among participants to deter perpetrators was harsh criminal punishment (e.g. felony laws, imprisonment) with 60% choosing this option.' The report is available at: <https://www.cybercivilrights.org/wp-content/uploads/2017/06/CCRI-2017-Research-Report.pdf>.

³⁸ A study on revenge porn from the Center for Innovative Public Health Research: Claire Landsbaum, 1 in 25 Americans Has Faced or Been Threatened with Revenge Porn, Study Finds, N.Y. MAG., <https://nymag.com/thecut/2016/12/10-million-americans-have-been-threatened-with-revenge-porn.html>.

Part 6 exemplify institutions strongly rooted and relatively often used in countries of the common-law system, and possibly useful in the field discussed here (Beyens and Lievens 2016).

Finally, it is worth mentioning the evolution of the law infringements in question. The original phenomenon of revenge porn was met with a relatively common response of legislators across the world and was soon regulated in penal codes and acts of law passed by individual countries. However, as the legislative process is much slower than technological developments, successful penalization of revenge porn does not let anyone rest on their laurels. What is more, it should spark a discussion on the conceptual capacity of the penalized phenomena whose successive variations emerge faster than legislation concerning them. The evolution mentioned above is happening before our very eyes indeed and the phenomenon of revenge porn, transformed into fake porn or deepfakes, is one of many examples of legislation not matching reality, which seems to me equally interesting, belonging to the field situated between law, sociology, psychology and cultural studies (Hall and Hearn 2019).

Conclusions

The offences of revenge porn and fake porn discussed here show just how much technology overtakes legislation (Franks 2017a, b). A replacement of a porn actor's face with an image of any person may entail a wave of breaches of law, not just in terms of intellectual property.³⁹ Services publishing contentious content have tools in the form of their internal rules providing for removal of materials raising justified objections. The Internet, however, never 'forgets' and deleting a file present on one website is no guarantee that it has not been copied and made available in some other.⁴⁰

Trying to provide uniform protection in a global world of Internet users, one should identify arising areas of legal disputes as new fields that legal systems should manage quickly and effectively, containing their further dissemination. In the face of the weakness of the existing legislative solutions, their slow pace and not matching the technologically advancing reality we need to try to comprehensively maintain the transparency of the Internet, for instance by creating out-of-court procedures that facilitate meeting the needs of social justice.

We associate 'fake porn' with using images of known persons, yet it may concern each of us. Fed with the selfie fad, the world of social media is a bank of data pertaining to the images of our faces. This, in turn, facilitates their free mapping and a technically simple replacement of one image with another by means of commonly

³⁹ Cause of Action for Internet Posting of 'Revenge Porn', 72 Causes of Action 2d 537 (Originally published in 2016).

⁴⁰ Sherisse Pham, Reddit bans fake porn that uses other people's faces—<https://money.cnn.com/2018/02/08/technology/reddit-deepfake-porn-ai/index.html>.

available applications (e.g. FakeApp).⁴¹ Computer algorithms like Face2Face make it possible to modify video recordings using face tracking in real time, proving that already tomorrow it is possible to become a star of a film one has never played in.⁴²

Compliance with Ethical Standards

Conflict of interest I (the Author) have no conflict of interest. This article does not contain any studies with human participants or animals performed by any of the authors.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Attwood, F. (2005). What do people do with porn? Qualitative research into the consumption, use, and experience of pornography and other sexually explicit media. *Sexuality and Culture*, 9, 65–86.
- Bates, S. (2016). Revenge porn and mental health: A qualitative analysis of the mental health effects of revenge porn on female survivors. *Feminist Criminology*, 12(1), 22–42.
- Batza C., (2017). Trending now: The role of defamation law in remedying harm from social media Backlash, 44 Pepp. L. Rev. 429.
- Beyens, J., & Lievens, E. (2016). A legal perspective on the non-consensual dissemination of sexual images: Identifying strengths and weaknesses of legislation in the US, UK and Belgium. *International Journal of Law, Crime and Justice*, 47, 31–43.
- Bhagwat A., (2017). When speech is not 'speech', 78 Ohio St. L.J. 839.
- Branch, K., Hilinski-Rosick, C. M., Johnson, E., & Solano, G. (2017). Revenge porn victimization of college students in the United States: An exploratory analysis. *International Journal of Cyber Criminology*, 11(1), 128–142.
- Bustamante, D. (2016). Florida joins the fight against revenge porn: Analysis of Florida's new anti-revenge porn law. *FIU L. Rev.*, 12, 357.
- Carter T. (2017). Erasing the news the media and lawyers wrestle with the question: Should some stories be forgotten? *ABA J.*, 34.
- Citron, D. K., & Franks, M. A. (2014). Criminalizing revenge porn. *Wake Forest L. Rev.*, 49, 345.
- Citron, D. K., & Franks, M. A. (2019). Evaluating New York's 'Revenge Porn' Law: A missed opportunity to protect sexual privacy.
- Cohen A. I. (2015) Nonconsensual pornography and the first amendment: A case for a new unprotected category of speech. *70 U. Miami L. Rev.* 300.
- Cohen J. E. (2017). Law for the Platform Economy. 51 U.C. Davis L. Rev. 133.

⁴¹ The application FakeApp is available at: <https://www.fakeapp.org>.

⁴² Justus Thies, Michael Zollhofer, Marc Stamminger, Christian Theobalt, Matthias Nießner, Face2Face: Real-time Face Capture and Reenactment of RGB Videos, ACM SIGGRAPH 2016 Emerging Technologies, p. 1–2, July 24–28, 2016, Anaheim, California (https://web.stanford.edu/~zollhofer/papers/CVPR2016_Face2Face/paper.pdf).

- Cooke A. (2017). The right to post: How North Carolina's revenge porn statute can escape running afoul of the first amendment post-bishop. *15 First Amend. L. Rev.* 472.
- Delfino, R. (2019). Pornographic deepfakes—revenge porn's next tragic act—the case for federal criminalization. Available at SSRN 3341593.
- Dickson, A. (2016). Revenge porn: A victim focused response. *UniSA Student Law Review*, 2, 47–56.
- Drinnon, C. (2017) When fame takes away the right to privacy in one's body: Revenge porn and tort remedies for public figures. *24 Wm. & Mary J. Women & L.*
- Flynn, A., Henry, N., Powell, A., Scott, A., McGlynn, C., Rackley, E., & Gavey, N. (2019). Shattering lives and myths: Report on image-based sexual abuse.
- Franklin, Z. (2014) Justice for revenge porn victims: Legal theories to overcome claims of civil immunity by operators of revenge porn websites. *102 Cal. L. Rev.* 1303.
- Franks, M. A., & Waldman, A. E. (2018). Sex, lies, and videotape: Deep fakes and free speech delusions. *Md. L. Rev.*, 78, 892.
- Franks, M. A. (2015). Drafting an effective 'revenge porn' law: A guide for legislators. Available at SSRN 2468823.
- Franks M. A. (2017) The desert of the unreal: inequality in virtual and augmented reality, 51 U.C. *Davis L. Rev.* 499.
- Franks M. A. (2017) Democratic surveillance. *30 Harv. J.L. & Tech.* 425.
- Fung Chen Pen, A. (2015). Striking back: A practical solution to criminalizing revenge porn. *37 T. Jefferson L. Rev.* 405.
- Gabison, G. (2016). Policy considerations for the blockchain technology public and private applications. *19 SMU Sci. & Tech. L. Rev.* 327.
- Gerrie, W. (2017). Say what you want: How unfettered freedom of speech on the internet creates no recourse for those victimized. *26 Cath. U.J.L. & Tech.* 4.
- Griffith, V. N. (2016) Smartphones, nude snaps, and legal loopholes: Why pennsylvania needs to amend its revenge porn statute. *16 U. Pitt. J. Tech. L. Pol'y* 135.
- Hall, M., & Hearn, J. (2017). *Revenge pornography: Gender, sexuality and motivations*. London: Routledge.
- Hall, M., & Hearn, J. (2019). Revenge pornography and manhood acts: a discourse analysis of perpetrators' accounts. *Journal of Gender Studies*, 28(2), 158–170.
- Hamilton L. K. (2017). Let me tell you who i am: Establishing a federal remedy for interference with online identity. 69 Fed. Comm. L.J. 173
- Helmholz, R. H. (1990). Continental law and common law: Historical strangers or companions? *Duke Law Journal*, 1990(6), 1207–1228.
- Henry, N., & Powell, A. (2015). Beyond the 'sext': Technology-facilitated sexual violence and harassment against adult women. *Australian & New Zealand Journal of Criminology*, 48(1), 104–118.
- Hickey, K. (2018). Using technology to impede privacy and consent: A survey of revenge porn laws. *55 Am. Crim. L. Rev. Online* 19.
- Huang, S. (2015). The South Korean fake banking app scam. Retrieved on 2 Feb 2015.
- Jackson, K. (2017). I Spy: Addressing the privacy implications of live streaming technology and the current inadequacies of the law. 41 *Colum. J.L. & Arts*, 125.
- Jennifer, A. (2017). Revenge porn and Section 33: the story so far. *Entertainment Law Review*, 28(2), 40–42.
- Keats Citron D., Franks M. A. (2014). Criminalizing Revenge Porn, *49 WAKE FOREST L. REV.* 345, 359–360, n.10.
- Keats Citron, D., Wittes, B. (2017). The internet will not break: Denying bad Samaritans S 230 immunity. *86 Fordham L. Rev.* 401.
- Kitchen, A. N. (2015). The need to criminalize revenge porn: How a law protecting victims can avoid running afoul of the first amendment. *Chi.-Kent L. Rev.*, 90, 247.
- Lageson, S. E., McElrath, S., & Palmer, K. E. (2019). Gendered public support for criminalizing 'Revenge Porn'. *Feminist Criminology*, 14(5), 560–583.
- Lai, A. (2016). Revenge porn as sexual harassment: Legislation, advocacies, and implications. *19 J. Gender Race & Just.* 251.
- Levendowski, A. (2013). Using copyright to combat revenge porn. *NYU J. Intell. Prop. & Ent. L.*, 3, 422.
- LiCalzi Ch. (2017) Computer crimes. *54 Am. Crim. L. Rev.* 1025.
- Lillie, J. J. M. (2002). Sexuality and cyberporn: Towards a new agenda for research. *Sexuality and Culture*, 6, 25–48.

- Marchant, G. E. (2017). Artificial intelligence and the future of legal practice. *ABA SciTech Law*. Vol 14 No. 1.
- Marshak, E. (2017) *Online Harassment: A Legislative Solution*, 54 *Harv. J. on Legis.* 503.
- Mason, G., Czapski, N. (2017). Regulating cyber-racism, 41 *Melb. U. L. Rev.* 284.
- McGlynn, C., Rackley, E., & Houghton, R. (2017). Beyond 'revenge porn': The continuum of image-based sexual abuse. *Feminist Legal Studies*, 25(1), 25–46.
- Moses, L. B. (2007). Why have a theory of law and technological change. *Minn. JL Sci. & Tech.*, 8, 589.
- Najdowski, C. J. (2017). Legal responses to nonconsensual pornography: Current policy in the United States and future directions for research. 23 *Psychol. Pub. Pol'y & L.* 154
- Nolan-Haley, J. (2012) Is Europe headed down the primrose path with mandatory mediation? 37 *N.C. J. Int'l L. & Com. Reg.* 981.
- Nolan-Haley, J. (2012). Mediation: The 'New Arbitration'. 17 *Harv. Negot. L. Rev.* 61.
- Nolan-Haley, J. (2015), Mediation: The best and worst of times, 16 *Cardozo J. Conflict Resol.* 731.
- O'Connor, K., Drouin, M., Davis, J., & Thompson, H. (2018). Cyberbullying, revenge porn and the mid-sized university: Victim characteristics, prevalence and students' knowledge of university policy and reporting procedures. *Higher Education Quarterly*, 72(4), 344–359.
- Pina, A., Holland, J., & James, M. (2017). The malevolent side of revenge porn proclivity: Dark personality traits and sexist ideology. *International Journal of Technoethics (IJT)*, 8(1), 30–43.
- Pollack, J. M. (2017). Getting Even: empowering victims of revenge porn with a civil cause of action, 80 *Alb. L. Rev.*, 353, 353.
- Poole E. (2015) Fighting Back Against Non-Consensual Pornography, 49 *U.S.F. L. Rev.* 181.
- Potter, R. H., & Potter, L. A. (2001). The internet, cyberporn, and sexual exploitation of children: Media moral panics and urban myths for middle-class parents? *Sexuality and Culture*, 5, 31–48.
- Powell, A., & Henry, N. (2017). *Sexual violence in a digital age*. Berlin: Springer.
- Rabinovich-Einy, O. (2003). Balancing the scales: The ford-firestone case, the internet, and the future dispute resolution landscape. *Yale JL & Tech.*, 6, 1.
- Rabinovich-Einy, O., Katsh, E. (2017). The New Courts. 67 *Am. U. L. Rev.* 165.
- Roffer, J. (2016). Nonconsensual pornography: An old crime updates its software. *Fordham Intell. Prop. Media & Ent. LJ*, 27, 935.
- Roy, S. (2017). Gutterman, media law. 67 *Syracuse L. Rev.* 1127.
- Salter, M., & Crofts, T. (2015). Responding to revenge porn: challenges to online legal impunity. In L. Cornella & L. Tarrant (Eds.), *New views on pornography: sexuality, politics, and the law* (pp. 233–256). Santa Barbara, CA: Praeger.
- Sela, A. (2017) The effect of online technologies on dispute resolution system design: antecedents. Current trends, and future directions. 21 *Lewis & Clark L. Rev.* 635.
- Shinn, L. D. (2015), YouTube's content id as a case study of private copyright enforcement systems. 43 *AIPLA Q.J.* 359.
- Sorensen, J. M. (2017). Forgive and regret: Analysis and proposed changes to connecticut's revenge porn statute, 35 *Quinnipiac L. Rev.* 559.
- Stipanowich, T. J. (2017) Living the dream of adr: Reflections on four decades of the quiet revolution in dispute resolution. 18 *Cardozo J. Conflict Resol.* 513.
- Stokes, J. K. (2014). The indecent internet: Resisting unwarranted Internet exceptionalism combating revenge porn. *Berkeley Tech. LJ*, 29, 929.
- Stroud, S. R. (2014). The dark side of the online self: A pragmatist critique of the growing plague of revenge porn. *Journal of Mass Media Ethics*, 29(3), 168–183.
- Suzor, N., Seignior, B., & Singleton, J. (2016). Non-consensual porn and the responsibilities of online intermediaries. *Melb. UL Rev.*, 40, 1057.
- Tariq, S., Lee, S., Kim, H., Shin, Y., & Woo, S. S. (2018). Detecting both machine and human created fake face images in the wild. In *Proceedings of the 2nd international workshop on multimedia privacy and security* (pp. 81–87).
- Theodore, Z., & Wyman, J. D. (2016). Litigation of liability for internet posting of 'revenge porn', 147 *Am. Jur. Trials* 319.
- Vielmetter, G., Sell, Y. (2014) Leadership 2030: The six megatrends you need to understand to lead your company into the future. *AMACOM Div American Mgmt Assn.*
- Volokh, E. (2016) The freedom of speech and bad purposes. 63 *UCLA L. Rev.* 1366.
- Vora, A. (2017). Into the shadows: Examining judicial language in revenge porn cases. 18 *Geo. J. Gender & L.* 229.
- Walker G. (2017) Financial technology law-a new beginning and a new future. 50 *Int'l Law.* 137.

- Wang, R., Ma, L., Juefei-Xu, F., Xie, X., Wang, J., & Liu, Y. (2019). Fakespotter: A simple baseline for spotting ai-synthesized fake faces. arXiv preprint arXiv:1909.06122.
- Weckstrom, K. (2012). Liability for trademark infringement for internet service providers. *Marq. Intell. Prop. L. Rev.*, 16, 1.
- Yanisky-Ravid S., Mittelman A. (2016). Gender biases in cyberspace: A two-stage model, the new arena of wikipedia and other websites. 26 *Fordham Intell. Prop. Media & Ent. L.J.* 381

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.