

Sexual violence as a sexual script in mainstream online pornography

Fiona Vera-Gray, Clare McGlynn, Ibad Kureshi and
Kate Butterby*

*Fiona Vera-Gray, Durham University, Sociology Department, 32 Old Elvet, Durham DH1 3HN, UK; Fiona.vera-gray@durham.ac.uk. Clare McGlynn, Durham University, Law School, Palatnie Centre, Durham DH1 3LE, UK. Ibad Kureshi, Durham University, Institute for Advanced Research Computing, South Road, Durham DH1 3LE, UK. Kate Butterby, Durham University, Sociology Department, 32 Old Elvet, Durham DH1 3HN, UK.

This article examines the ways in which mainstream pornography positions sexual violence as a normative sexual script by analysing the video titles found on the landing pages of the three most popular pornography websites in the United Kingdom. The study draws on the largest research sample of online pornographic content to date and is unique in its focus on the content immediately advertised to a new user. We found that one in eight titles shown to first-time users on the first page of mainstream porn sites describe sexual activity that constitutes sexual violence. Our findings raise serious questions about the extent of criminal material easily and freely available on mainstream pornography websites and the efficacy of current regulatory mechanisms.

Key Words: pornography, sexual violence, sexual scripts, image-based sexual abuse, voyeurism, incest

INTRODUCTION

Debates on pornography and its relationship to crime, sexual violence and social harm are well rehearsed and seemingly irreconcilable. They have tended to focus on questions of causal relationships (e.g. [Strouse et al. 1994](#); [Malamuth et al. 2012](#); [Hald et al. 2013](#)), seldom addressing either the actual practices of consumers ([Attwood 2005](#)) or the form and content of mainstream pornography ([Paasonen 2006](#)). Recently, research has begun to engage with questions of whether and how sexual norms are influenced by pornographic content, drawing on [Gagnon and Simon's \(1973\)](#) theory of sexual scripts. Studies explicitly using this approach are emerging, examining the influence of pornography on sexual scripts concerning, e.g., 'hooking up' amongst young adults ([Braithwaite et al. 2015](#)); women's agency and objectification ([Sun et al. 2016](#); [Fritz and Paul 2017](#)); physical aggression ([Shor and Seida 2019](#); [2020](#)) and the representation of Asian women ([Zhou and Paul 2016](#)).

This study contributes to the growing body of empirical research using sexual script theory to examine pornography developing the evidence base specifically in relation to *sexual violence*, inclusive of coercive and criminal acts that may not involve physical aggression. We do this by ana-

lysing the titles appearing on the landing pages of the three most popular online pornography websites in the United Kingdom across a 6-month period during 2017–18. Our innovative methodology allowed us to collect a total data set of over 150,000 titles, making this the largest study of online pornographic content to date. Our findings reveal that sexual violence in pornography is mainstream, comprising one in eight titles shown on the home pages of the United Kingdom's most popular sites. Furthermore, we have found that far from being represented as aberrant, sexual practices involving coercion, deception, non-consent and criminal activity are described in mainstream online pornography in ways that position them as permissible. Taken together, we argue that our study provides clear evidence that sexual violence is a normative sexual script in mainstream online pornography, with significant implications at a social level for understandings of the difference between sexual pleasure and sexual harm.

SEXUAL SCRIPTS AND PORNOGRAPHY

Gagnon and Simon's (1973) theory of sexual scripts originally drew from social learning theory to challenge the dominance of biological explanations in sexuality studies, foregrounding instead the socially acquired character of sexual life. Later developed to reflect the insights of social constructivism (Simon and Gagnon 2003), the theory can be broadly interpreted as conceptualizing how individuals develop their understandings of sexuality through resources in their social environment. These resources include exposure to representations and institutions that, through stigmatizing and criminalizing some sexual behaviours while instructing and encouraging others, set out where the boundaries may lie between appropriate and inappropriate sexual conduct (Wiederman 2015). The understandings of sexuality developed in this way are then used to make sense of their own and others' sexual behaviour, helping to construct 'the sexual' in the social environment itself.

This more reciprocal model of how we are influenced by, and in turn influence, the resources we encounter in our social environment supports the move by cultural criminologists and feminist media theorists away from the traditional media effects model for understanding the relationship between representations of violence and realities (Boyle 2000; Atkinson and Rodgers 2016). Instead of arguing for a causal relationship between violent and aggressive crime and its representation, cultural criminologists have outlined a nuanced model where social meanings flow into and out of the media landscape, able to 'reverberate, and bend back on themselves' (Ferrell *et al.* 2015: 154). As with sexual script theory, this model challenges belief in a linear process of information being taken in by the individual and then acted out in the social world. However, it also challenges notions of pure fantasy divorced from any real world impact; rejecting a casual relationship is not the same as rejecting any relationship. Instead, cultural criminologists encourage the consideration of media representations of violence in terms of their potential to augment, attune, and/or alter our understandings and experience of the social world (Hayward 2012; Atkinson and Rodgers 2016). This understanding allows for the role of agency in how media is taken up by the individual at the same time as recognizing the ways in which it forms part of the 'cultural scaffolding' (Gavey 2004) through which individuals' expressions of agency themselves are realized and made meaningful.

Drawing sexual script theory and insights from cultural criminology together in this way and applying them to questions about sexual violence in pornography brings forward an understanding of pornography's social function (Vera-Gray 2020). In contrast to an analysis interested in how individuals take in messages from pornography, and/or act them out, we are provided a way of talking about how sexuality and what counts as 'sexual' in our social environment mutually shapes and is shaped by pornography. Despite this, research has yet to embrace such an opportunity.

Existing studies drawing on sexual script theory tend to maintain focus on direct behavioural effects of the sexual scripts in pornography. Wright (2014), e.g. in one of the first uses of sex-

ual script theory in relation to pornography, outlines how pornography users learn new sexual scripts, prime learned scripts through repetitive exposure to homogeneous representations and utilize sexual scripts with normative, appropriate and rewarding behaviours. [Braithwaite et al. \(2015\)](#) similarly use sexual script theory to explore the connections between pornography consumption and ‘friends with benefits’, while [Sun et al. \(2016\)](#) use it to discuss the connections between men’s pornography consumption and particular forms of men’s sexual practice. This focus continues through the more recent literature with [Marshall et al. \(2018\)](#) exploring the use of sexual script theory as the conceptual foundation for a relationship between pornography use and sexually coercive behaviours. Where our current study differs is in using the opportunities provided by sexual script theory to examine pornography’s social function, not its impacts necessarily on individual users but its contribution to broader social understandings about the boundary between sex and sexual violence. This is a boundary that itself is contested particularly in the literature about pornographic content, which we now briefly review.

SEXUAL VIOLENCE AND PORNOGRAPHY

Despite heated public and scholarly debate, there is surprisingly little research on the content of mainstream online pornography. Studies exploring the associations between pornography and sexual violence typically focused on behaviours rather than content, with exploration of the connections between exposure to pornography and attitudes being more common than analyses of how pornographic content represents and/or reproduces sexual violence in itself (e.g. [McKenzie-Mohr and Zanna 1990](#); [Strouse et al. 1994](#); [Hald et al. 2010](#); [2013](#); [Malamuth et al. 2012](#)).

Where analyses do examine violence and aggression in pornographic content, [Johnson and Bridges \(2018\)](#) suggest two consistent outcomes. First, when violence is found to be present, it is almost always perpetrated by men against women (e.g. [McKee et al. 2008](#); [Bridges et al. 2010](#)). Second, a common set of violent behaviours, such as choking, gagging, slapping and spanking, are hallmarks of so-called ‘gonzo’ pornography—i.e. the type of pornography most often found on mainstream porn sites (e.g. [Salmon and Diamond 2012](#); [Vannier et al. 2014](#); [Klaassen and Peter 2014](#)). Content analyses of both online and offline materials have also shown that the focus is almost universally on the depiction of men’s sexual desires, even where women were initiating sexual activity ([Brosius et al. 1993](#); [Bridges et al. 2010](#); [Klaassen and Peter 2014](#); [DeKeseredy and Corsianos 2016](#); [Zhou and Paul 2016](#); [Fritz and Paul 2017](#)).

Though drawing the research evidence together in this way provides a useful overview, it can serve to minimize the significant impact of definitional differences. For example, though analyses of online and offline material have often focused on core elements of violence against women in heterosexual pornography, such as degradation, dominance and objectification ([Gossett and Byrne 2002](#); [McKee 2005](#); [Cusack and Waranius 2012](#); [Salmon and Diamond 2012](#); [Klaassen and Peter 2014](#)), the lack of standardization across these measures makes it difficult to generalize their findings ([Paasonen 2011](#)). This is also a problem for studies like ours that seek to analyse content in relation to depictions of physical violence and/or aggression (e.g. [Bridges et al. 2010](#); [Shor and Seida 2020](#); [Seida and Shor 2021](#)). Here, studies must grapple with what does, and does not, constitute violence, including whether intention and response should bear any definitional weight (see further [Klaassen and Peter 2014](#); [McKee 2015](#)).

Overall, this lack of standardization can go some way towards explaining the vast differences in findings on violence and aggression in mainstream pornography. Offline samples can give figures from 2 per cent ([McKee et al. 2008](#)) to over 90 per cent ([Bridges et al. 2010](#)), with variation replicated in online samples of Pornhub, which range from 12 per cent of content containing aggression ([Shor and Seida 2019](#); [Shor and Seida 2020](#)) to closer to 35 per cent ([Office of Film](#)

and Literature Classification 2019). Sampling is also implicated in the inconsistencies in the evidence base. Offline pornography, e.g., is subject to different regulatory regimes (in different countries) than online materials, meaning that the findings from one context cannot be easily translated to the other. With the internet now the common route for pornography access (Hald *et al.* 2013), studies are increasingly sampling directly from tube sites (e.g. Cusack and Waranius 2012; Klaasen and Peter 2014; Vannier *et al.* 2014; Shor and Seida 2020). However, even with this approach, sample size remains an issue, with Zhou and Paul's (2016) study getting closest to accounting for the scale of online pornography with a sample of over 3,000 videos.

This study offers a way through some of these sampling and definitional issues. It draws on the largest sample of online pornography collected for research to date, a sample that allows us to ask broad questions about the content on offer through mainstream online pornography. The use of the most widely used policy definition of sexual violence, that of the World Health Organization (Krug *et al.* 2002), helps extend the current evidence base away from a focus on physical aggression, moving us closer to the criteria used to distinguish sex from sexual violence within the United Kingdom—namely consent, coercion and the criminal law. We do not use intention or response to evaluate what counts as sexual violence, instead we centre analysis on how the material is described in recognition that this is how the audience is invited to make sense of the content, an approach we have only seen in the work of Eran Shor (e.g. Shor and Golriz 2019; Shor 2019; Shor and Seida 2019). Finally, our study is unique as it does not sample content based on the practices of individual users, e.g. the most popularly accessed or highly rated porn videos. Rather, it is based on the actions of the sites themselves, analysing the content which is advertised on the landing page to a first-time user. This, together with the frame of sexual scripts, is where our work significantly advances the existing evidence base, helping us to shift focus from individual users and effects onto the pornography platforms themselves.

METHODS

Data sampling

Within the aim of developing a new empirical basis for understanding the content advertised to a first-time viewer of pornography in the United Kingdom, the study set out to address three key research questions: 1) Is pornography that describes criminal acts of sexual violence being advertised to a first-time user of mainstream online pornography? 2) How common is the script of sexual violence in the content advertised to a first-time user of mainstream online pornography? 3) How is the boundary between consensual and criminal sexual practices communicated to a first-time user of mainstream online pornography?

To generate a sample able to answer these questions, the three most accessed pornographic websites were identified through Alexa Internet, a web traffic analysis tool. At the time of data collection, these were Pornhub.com, Xhamster.com and Xvideos.com. All sites gave written consent to access the data. Ethical approval was given by [removed for peer review] and, due to the nature of the data, a dedicated partition of one of the university servers was established to hold the data for the duration of the project.

We were interested in what content the pornography websites themselves pushed to the landing page without any user intervention, thus replicating the content advertised to the new or first-time user. We discovered the sites tracked and adapted to user actions to different degrees from an exceedingly high level of customization (Pornhub and XHamster) to operating as a relatively static site (XVideos). Accordingly, we developed a process across all three sites that enabled us to collect the data without interacting with the site, as any interaction would notify the site's algorithms of our location and that we were the same user. This enabled us to limit the capacity of the site to modify their content based on our behaviour, something we have not

seen replicated in other methods of content capture for online pornography. We developed a web-crawler and parser code, running on a provisioned virtual server, which also enabled us to limit the amount of tracking required. The code worked to take a 'snapshot' of the landing page for each site, including the gifs (broken down into their individual images) that appear to users, their associated title and a unique video identifier, which enabled us to see whether a video appearing on the front page had previously appeared during the data collection period.

To avoid temporal interferences, we set an extended period of data collection (six months) and ran the code every hour on the hour. Over this data collection period, a total of 72,326 sets (comprising images, titles and html) were collected from XHamster; 40,401 from Pornhub and 38,858 from XVideos.¹ The sets from the three sites were then combined to enable analysis across the entire corpus and allow us to ask questions about mainstream pornography in general rather than only of the specific sites.² We removed duplicate video identifiers where the same video from the same upload appeared more than once in the data (e.g. if the same video was pushed to the front page more than once over the collection period). This process resulted in a total data corpus of 151,546 unique sets. The titles from each set were then downloaded into a spreadsheet for cleaning, together with their unique video identifier and their host website.

Data cleaning

The data was cleaned to remove titles that did not contain words and thus could not be analysed through word frequency (e.g. 'F.F.B_1006'). We also removed titles solely in a language other than English due to the language abilities of the research team. We then manually cleaned the data to exclude titles that did not give any content information. This included those that were just uploader comments, with no description of content (such as 'share my vid please:'), and those with only the name of the performer or studio. Where any descriptive adjective was used for the performer (including limited adjectives such as hair colour) or for the content (even where only acronyms such as JOI 'Jerk Off Instruction' or POV 'Point of View'), titles were retained. These exclusions were made on the basis that these titles did not provide any information to users about what/where/or who was or was not sexual and thus could not be accurately described as presenting a sexual script. This means that after cleaning, while not all titles could be accurately labelled as describing a sexual act, they did describe something which by virtue of being on a porn site was situated as sexual and thus could be considered part of a sexual script. This process left us with a final analysable data sample of 131,738 titles.

Data coding and analysis

Our analysis is grounded in the most commonly accepted policy definition of sexual violence, namely that used by the World Health Organization (Krug *et al.* 2002).³ Guided by this definition, we focussed on four broad categories of sexual violence: sexual activity between family members; aggression and assault; image-based sexual abuse and coercive and exploitative sexual activity. For each category, a series of keywords was generated through a three-stage pro-

1 The different size in data set per site relates to the difference in the amount of content shown on their individual landing pages.

2 We checked subsample representation from each website against that site's overall representation to determine whether any site was overrepresented in any particular area. On the whole, we found commonalities across all sites, with further details available on request.

3 'Any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim.... Coercion can cover a whole spectrum of degrees of force. Apart from physical force, it may involve psychological intimidation, blackmail or other threats It may also occur when the person aggressed is unable to give consent – for instance, while drunk, drugged, asleep or mentally incapable of understanding the situation' (Krug *et al.* 2002: 149).

cess. We conducted a mapping exercise of associated terms for rape, coercion, incest, family members, abuse, image-based sexual abuse and physical aggression and assault, followed by an internet search for synonyms of the generated words. Finally, during data cleaning, any additional words that were routinely seen in the titles, and matched the search criteria, were added as keywords and run against the entire corpus.

The keywords were then applied to the cleaned data corpus. This initial search returned all titles containing each keyword, which were then manually coded for relevance to each category. The process of coding for relevance involved two members of the research team reviewing the titles returned by a keyword search and excluding those that, though containing the keyword, were either not relevant to the category under consideration or clearly identified the material as BDSM (bondage, domination, submission and masochism). All exclusions for relevance were validated by a second coder before removal. Keyword tables throughout this article show both the 'initial count' (IC), i.e. all titles from the cleaned data corpus that returned the keyword, and the 'final count' (FC), i.e. the titles that were manually coded as relevant. To avoid double counting the final figure, each category was calculated after duplicates were removed (i.e. where titles included more than one keyword and thus were returned more than once). The relevant, non-duplicate list of titles for each category was inputted in NVIVO for word frequency across both individual categories and the combined list.

Limitations

Due to the size of the data corpus, we cannot claim to have exhausted the possibilities for keywords that would return titles that fit our coding criteria. The frequency of misspellings and grammatical errors in the titles also means that even where keywords were included, it is likely that some relevant titles were not returned. Where possible, we attempted to account for this by searching for parts of words or common misspellings ('upskyr't for example). However, our results can speak only to the keywords we used and, despite our diligence, these figures should be taken as an undercount of relevant titles.

We are also only able to make claims about what is described, not what is actually depicted. The decision to separate the titles from the images was taken to enable analysis across the entire corpus, something that would not have been possible given its size, if we had attempted to also conduct a content analysis of the images contained in each set.⁴ Though we are unable to make claims here about the images that are shown to users, as [Shor \(2019\)](#) acknowledges, the titles of online pornography videos play a principal role in identifying the story that is marketed to them. Notably, this interpretative function of the labels/titles is also recognized by the porn sites themselves, with Pornhub stating: 'Before clicking a video, users want to know what they can expect to see... Rather than stating "what" they will see, use the title to describe "how" they will see it' ([Pornhub 2020a](#)). It is thus the titles that we believe plays a key part in shaping understandings about what is and is not sexual, not necessarily what the user actually sees but *how* they are encouraged to make sense of it.

Finally, the unresolved debate in the literature about how to appropriately code physical violence was an ongoing discussion among the research team. We struggled both in how to approach the issue of BDSM pornography (see the discussion in our findings on physical aggression) and what to do with content that suggested violence, but fell outside of the coding frame we had set.⁵ As such, we do not claim to have uncovered all descriptions of sexual violence in

⁴ In addition, even if analysing the images in each gif, we would not have been able to make claims about what was included in the video as gifs are a snapshot of the full length video, designed to entice the viewer.

⁵ For example, we did not include objectifying language that has been conceptualized as psychological violence ([Cusack and Waranius 2012](#)); nor did we include keywords to capture degrading and/or body punishing acts as these sat outside the WHO definition, thus excluding titles such as: 'Pissed on, fucked, and dripping with cum' and 'puking blood'.

the data. We are aware that our methods, combined with the often dichotomous nature of the porn debates, may lead to claims about both overcounting and undercounting the extent of violence in our sample. Further research is urgently needed to understand the continuum of rape supportive discourse in mainstream online pornography. Our results reveal the importance of directing this research not just at the available content or the content most accessed by users, but more firmly at that which is promoted to users by the pornography sites themselves.

FINDINGS

In the discussion that follows, we provide uncensored examples of the titles in our data set in order to ground our discussion in the realities of pornography. This follows the approach of feminist researchers on online harassment (Jane 2014; Vera-Gray 2017). Our aim is to ensure our discussion is rooted in the reality of the content, challenging the ‘tyranny of silence’ (Jane 2014: 533) in public and policy discourse about what actually constitutes mainstream online pornography. This means that the following sections contain language that is uncommon in academic articles and that some may find disturbing.

Overall findings

In total, we found 12 per cent ($n = 15,839$) of the total analysable sample ($n = 131,738$) of titles described sexual activity that constitutes sexual violence. This equates to one in every eight titles. The site spread was roughly equal to the representation of each site in the overall corpus. Titles from Xhamster were found in 49.6 per cent of the content coded as sexual violence (7,862 titles) and comprised 47.7 per cent of the overall corpus. Titles from Pornhub comprised 20.7 per cent (3,278) of the titles coded as sexual violence and 26.7 per cent of the data corpus, while XVideos’ titles comprised 29.7 per cent of the titles coded as sexual violence (4,699) and 25.6 per cent of the sample overall.

Word frequency showed that ‘teen’ was the most frequently occurring word in both the entire data corpus ($n = 10,149$, 7.7 per cent) and the sample coded as describing sexual violence ($n = 1,344$, 8.5 per cent). ‘Teen’ is thus a more common way to describe pornography than any description of a sex act or body part, and it appears to be slightly more common in content describing sexual violence.

Sexual activity between family members

The most frequent form of sexual violence in the data was that relating to sexual activity between family members. This echoes New Zealand research, which found that nearly half of the pornographic videos examined featured step or other family sexual activity (Office of Film and Literature Classification 2019). Unlike the other categories, as well as giving the overall initial and final counts for each keyword, the family category was also coded to differentiate between a family relationship being used as a descriptor (C1 in Table 1), e.g. ‘aunty grabs the nerdy boy’s virginity’, and titles that described sexual activity between family members (C2), such as ‘Daughter swallows Dads cum than gets fucks’. In coding for relevance titles that sought to explicitly underscore that they were representations such as ‘brother and not sister’ and ‘Amateur Bathroom Dick Sucking not Sister and Brother’, were removed.

After also removing duplicates where the same title included more than one keyword, a total of 8,421 titles contained family relationships being used as a descriptor (6.4 per cent of total data set), with a further 5,785 (4.4 per cent of total analysable data set) explicitly describing sexual activity between family members. We excluded the former (e.g. ‘Aunt Sue second anal video’) as these cannot be accurately categorized as describing forms of sexual violence. Our focus here is thus only on the latter, namely titles describing sexual activity between family members, such as ‘Brother Fucks Sister In The Ass Outdoors’ and ‘dad and daughter fucking- homemade’.

Table 1. Keywords for sexual activity between family members⁶

Keyword	IC/FC	C1/C2	Keyword	IC/FC	C1/C2
aunt –step	404/384	219/165	mother –step	1,147/1,102	458/644
aunt +step	19/19	4/15	mother +step	97/1	30/66
bro –step	1,826/925	30/895	mum –step	150/113	76/37
bro +step	653/653	116/537	mum +step	1/0	0/0
cousin –step	92/92	4/88	nephew –step	76/76	6/70
cousin +step	6/6	3/3	nephew +step	8/8	0/8
dad –step	1,470/1,407	758/649	niece –step	32/32	10/22
dad +step	584/584	137/447	niece +step	2/2	0/2
daughter –step	1,360/1,357	274/1,083	parent –step	134/87	48/39
daughter +step	644/644	140/504	parent +step	10/10	3/7
family	730/713	56/657	sibling –step	16/15	0/15
father –step	219/215	49/166	sibling +step	33/33	0/33
father +step	144/144	16/128	sis –step	2,094/1,581	422/1159
fauxcest	22/22	2/20	sis +step	1,057/1,055	410/645
gran –step	2,670/2,579	2,288/291	son –step	3,119/1,810	237/1,573
gran +step	24/21	4/17	son +step	441/441	43/398
incest	2/1	0/1	uncle –step	94/94	35/59
mom –step	4,195/4,055	2,072/1,983	uncle +step	4/4	0/4
mom +step	1,138/1,138	471/667			

Table 1 shows that representations of step relationships were *less* common than blood relationships. This was replicated in word frequency analysis which found that the majority of titles describing sexual activity between family members referred to members of the immediate family (mother, father, sister, son and daughter), such as ‘Brother fuck her sister in her sleep’, ‘When Mom’s Mad, Dad Goes To His Daughter’ and ‘Daddy keeps fucking daughter till she likes it’, rather than featuring extended relationships, such as grandparents, aunts or uncles. Word frequency analysis also found that mothers were overwhelmingly the family member most likely to be shown as engaging in sex with other family members, in particular with their sons.

Physical aggression and sexual assault

The second most common category was that of physical aggression and sexual assault. Here we use the term ‘physical aggression’ to make clear we have not included search terms directed at uncovering verbal aggression (such as ‘dumb slut gets fucked’), though some such titles were returned by the keywords used in both this and other categories (e.g. ‘stupid bitch tricked into dick riding’).

This category is perhaps the most studied in the existing literature on violence in pornography, and is where the debates on how to define violence are most apparent. When coding for relevance we excluded material that was advertised to viewers as consensual BDSM, a decision

6 Several keywords were removed after manual coding showed these to be overwhelmingly used to refer to non-family relationships (e.g. ‘milf’ and ‘mama’). ‘Daddy’ was particularly difficult to code given its colloquial use: ‘quick rough sex before work with daddy’ could be describing a family relationship, but it is more likely that the word ‘daddy’ is being used here as a descriptor for a man who is in a dominant but not a family relationship with the other performer. Given this ambiguity, all uses of the term ‘daddy’ were coded as C1 (descriptions of a role), as those describing sexual activity between family members (C2) would be found through other keywords, e.g. ‘Daddy fucks both stepdaughters’.

that means that we do not account for all descriptions of aggression and assault in the data. This exclusion was made after lengthy discussion in recognition that the sexual script in BDSM content often differs from the ‘coercion’ criteria that underpins the WHO definition of sexual violence. It means that we excluded titles that were both explicitly located within a BDSM context (e.g. ‘Adorable Teen pinish [sic] tied up and brutally fucked hard bdsm’), as well as implicitly drawing on a BDSM frame through terms such as ‘slaves’, ‘subs’, ‘sissys’ and ‘masters’. However, as is clear from these examples, there are overlaps between BDSM pornographic content and content depicting aggression and assault. We thus believe further work is needed to complicate both the conflation and the separation of BDSM content from that depicting aggression and assault.⁷

Table 2 shows that after duplicates were removed, a total of 5,389 titles with unique video identifiers were coded in this category, 4.1 per cent of the analysable data set. Our focus in this category ranged from titles that described forms of sexual assault, such as ‘force’, ‘grope’ or ‘molest’; to those that described physical forms of violence such as ‘kick’, ‘punch’, and ‘slap’; as well as those that described sexual acts using physically aggressive language such as ‘brutal’, ‘throat/skullfucked’ and ‘pound’. It was the latter category that was the most frequent, capturing titles such as: ‘Crying blonde bitch takes rough cunt drilling’; ‘Meth whore wife throat fucked and pounded by dealer’; and ‘big huge white monster cock breaking open asian maid pussy’.

Alongside the frequency of ‘teen’ in this category (found in 11.8 per cent of titles, $n = 634$, second only to ‘gets’, $n = 933$), word frequency analysis highlighted the commonality of descriptions of anal sex. When results for both the keywords ‘ass’ and ‘anal’ were combined, and duplicates removed, a total of 1,017 of the titles coded as aggressive (18.9 per cent) referred to anal sex, suggesting a connection between sexual scripts of physical aggression and assault in mainstream online pornography, and descriptions of anal sex. Also notably the word ‘black’⁸ occurred in the top twenty most frequent words for this category but not others (4.0 per cent, $n = 214$), suggesting another connection between scripts of physical aggression and sexual assault and racialised descriptions of black performers.

Image-based sexual abuse

The third category analysed was titles describing ‘image-based sexual abuse’ (McGlynn and Rackley 2017), namely all forms of the non-consensual creation and/or distribution of sexual images including material commonly known as ‘revenge porn’ and ‘upskirting’, as well as voyeurism including hidden cameras and ‘spy cams’. As with other categories, we do not claim that the titles are describing videos that were *in reality* made and/or distributed without the consent of those featured, though this is likely the case for some (McGlynn *et al.* 2019). Rather, we are interested in whether image-based sexual abuse is presented as a normative sexual script in mainstream pornographic content.

Given that abusive image-based content hinges on its non-consensual nature, our keywords focused on terms such as ‘hidden’, ‘spy’ and ‘leaked’, but excluded terms such as ‘ex’, ‘homemade’ and ‘filmed’ as these terms alone do not qualify the representation as being one of image-based sexual abuse. This means that titles such as ‘His wife filmed and exposed’ were excluded. Though there is a valid argument that the viewer is being invited to understand the content here through an image-based sexual abuse script, the non-consent of ‘his wife’ is ambiguous. Similarly, we ex-

7 Research acknowledging abusive and non-consensual practices within the BDSM community has highlighted how a simple equation of all BDSM practices with abuse, aggression and non-consent can contribute to a broader context where abuse within the community is silenced (Barker 2013). However, less attention is paid to how the overlapping nature of sexual scripts based on power inequalities, with scripts based on coercion and abuse, are also implicated in masking the extent of sexual violence within both BDSM pornography and the BDSM community.

8 ‘Black’ was used in the titles in the sample as both an adjective for a person or body part, as well as part of a verb ‘blackened’ or ‘blackened’ referring to when a white performer (most often a woman) has their first sexual experience with a black performer.

Table 2. Keywords for physical aggression and sexual assault⁹

Physical aggression and assault	IC/FC	Physical aggression and assault	IC/FC
abus (+e; +ing)	133/122	molest	12/12
ambush	17/17	pain	260/145
annihilat (+e; +ion; +ating)	6/6	plough/plow	107/102
assault	4/4	punch	15/8
attack	44/14	rail	97/73
beat	123/38	ram	264/90
break	268/58	rape	3/1
brutal	297/258	rough	996/703
cane	77/24	ruin	165/63
chain	49/17	skull (+fuck)	13/12
chok (+e; +ing)	98/84	slam	140/135
destroy	195/184	slap	90/65
destruct	28/26	smash	77/76
drill	364/342	spank	372/296
face (+fuck)	392/242	stab	12/3
flog	13/9	struggl (+e; +ing)	29/22
forc (+e; +ing)	103/98	pound	845/830
gag	383/305	punish	550/449
grop (+e; +ing)	83/79	tied	394/271
hammer	93/88	throat (+fuck)	367/177
harsh	24/16	torture	99/61
hits/hitting	23/0	violat (+e; +ing; +ion)	13/13
hurt	49/38	violen (+t; +ce)	10/5
kick	34/9	victim	11/5
kidnap	5/3	whip	167/76

cluded titles that focused on someone being recorded by a partner or third party, unless the use of qualifiers such as 'secretly' or 'spy' located such filming as non-consensual.

After coding, a total of 2,966 titles with unique video identifiers (2.2 per cent of the analysable data set) constituted descriptions of image-based sexual abuse (Table 3). The findings demonstrate a predominant focus on voyeurism, both explicitly and through more implicit terms such as hidden or 'spy' cameras and upskirting, with titles such as: 'Beach Spy Changing Room Two Girls'; 'Pharmacy Store Bathroom Hidden cam'; and 'Upskirted in the train'. This shows that the sexual script of image-based sexual abuse on these mainstream porn websites centres largely on the non-consensual *creation*, rather than distribution, of images. Word frequency analysis supports this, with 'voyeur' (21.7 per cent, $n = 644$) and 'hidden' (16.2 per cent, $n = 480$) the most common terms in the subsample.

9 Note that 'hits' and 'hitting' returned no relevant results as they involved hitting 'on' someone or 'greatest hits'. After some discussion, the term 'spank' was included despite claims that its inclusion as a form of sexual violence may be overinclusive (McKee *et al.* 2008). We decided to follow previous content analyses that included the term (e.g. Bridges *et al.* 2010 Klaasen and Peter 2014). As with other keywords, where 'spank' was explicitly located within a BDSM context, the title was excluded. 'Cane' also shows a lower relevance count due to its high rate of inclusion in titles specifically describing BDSM content.

Table 3. Keywords for image-based sexual abuse

Keywords: IBSA	IC/FC	Keywords: IBSA	IC/FC
candid	74/74	saw	92/8
caught (+cam / +tape / +film)	98/91	secret (+cam / +tape / +film / +watch / +record)	27/27
cctv	2/2	sex + tape	381/92
downblouse	33/33	spied	34/34
expose	389/345	spies	13/13
hack	35/27	spy	725/697
hidden	547/494	stolen	22/13
leak	111/96	unaware	27/22
tricked nudes	2/2	undershort	1/1
peek	25/24	unreleased	4/4
peep	74/66	unsecured	4/4
phone	165/18	unseen	9/9
privat	317/249	up + shorts	1/1
record	139/117	upskirt (upskyrty; up+ skirt; up-sk)	330/330
revenge	112/3	voy	905/902

Coercion and exploitation

The final category analysed was sexual scripts using coercion and exploitation. This included sexual activity that may be missed when focussing solely on aggression or physical assault yet meets the WHO definition of sexual violence (Krug *et al.* 2002). We also included terms that implied an inability to consent, such as being below the age of consent, using the keywords ‘very young’ and ‘schoolgirl’,¹⁰ though excluding more ambiguous terms such as just ‘young’ ($n = 4,224$) or ‘teen’ ($n = 12,378$).

Table 4 shows that a total of 2,698 titles with unique video identifiers were coded as describing coercive and exploitative sexual activity (1.7 per cent of analysable data set). As with other categories, a large list of keywords was used in order to capture the range of circumstances that may describe sexual activity in coercive or exploitative circumstances. These were then filtered for relevance. Keywords such as ‘cash’, e.g., were only included in the final count where they described sex in exploitative circumstances such as ‘Chubby Spanish Teen Needs The Cash’. Similarly, keywords such as ‘dislike’, ‘hate’, and ‘cry’ were coded as relevant only where they appeared in titles describing implicitly non-consensual sex, e.g.: ‘Dopefiend HATES CUM in her mouth LOL’.

Word frequency analysis showed the particular commonality of youth descriptors in the material coded as coercive and exploitative. Though some of this could be expected given the keywords for this category, it is nevertheless concerning that the top three most common words were all centred on highlighting the youth of performers: ‘schoolgirl’ ($n = 475$, 17.6 per cent), ‘girl’ (9.6 per cent, $n = 259$) and ‘teen’ (8.8 per cent, $n = 237$). This supports the findings of Shor (2019) who found that when compared with adult performers, ‘teens’ were about five times more likely than adults to be in videos featuring forceful anal penetration as well as more likely to be in videos where the male performer ejaculated in their mouth or on their face.

10 In relevance coding, we excluded titles where it was explicit that this was a fantasy and/or that made it clear those involved were over 18, such as: ‘Amateur Brunette Dressed Like A Naughty School Girl Fucked On Cam’ and ‘icecream truck finally 18 schoolgirl gets first big cock’.

Table 4. Keywords for coercion and exploitation

Coercion and exploitation	IC/FC	Coercion and exploitation	IC/FC
accident	49/36	hates	7/6
advantage	35/32	helpless	54/39
blackmail / blackmail	139/134	hypno (+sis; +tis/ze)	83/59
bribing / bribe	26/15	made to	38/32
captive	11/7	manipulat (+e +ed)	9/8
cash	179/153	merciless / mercy	50/22
chloroform	4/4	money	211/169
convince (+d +convincing)	59/56	oops (+oops)	47/23
cries / cry (+ing)	94/67	reluctant	18/18
cruel	29/23	scared	17/8
coerc (+ion; +d; +e)	5/5	sleep	226/117
debt	25/20	surpris (+e +ing)	278/198
desperate	163/133	school (+girl)	773/756
didn't	26/11	taken	44/27
dislike	9/5	trick	206/118
distress	19/15	unaware	27/27
don't / dont ¹¹	186/16	unexpected (+ed +ing)	27/14
doesn't / doesnt	70/13	unsupect (+ed +ing)	4/4
drug (+ged, +ing)	5/3	unwanted	18/18
drunk	72/61	woke	25/24
exchange	34/12	waking	23/14
exploit	149/148	will (+against)	4/4
fear	6/4	used	236/188
flash (+ing +er +es)	626/234	very young	26/26
harass	9/9		

DISCUSSION

Our findings provide new and substantial evidence on the prevalence and nature of descriptions of sexual violence in mainstream online pornography, available on the landing page of the most popular pornography sites in the United Kingdom. In total across the data set, one in eight titles described sexual activity that constitutes sexual violence. As our sample consists of the content advertised by sites prior to consumer interaction it is unique in the current literature. The study, therefore, provides significant new insights into the sexual scripts offered to first-time user, and our discussion centres on what these insights mean in relation to the legal and social responsibilities of mainstream pornography sites, as well as for academic debates on the relationship between representations and realities of violence.

Unlawful material and the myth of self-regulation

We have found that mainstream pornography websites are likely hosting material that is unlawful to distribute or download. It is not the case that criminal material is relegated to niche sites,

11 Though there was a particularly low relevance count for both 'don't' and 'doesn't', these terms were necessary to capture titles that described coercive acts that would have been missed, such as 'girl never learns, don't send stuff' (implying non-consensual distribution of images) or those that describe coercive or non-consensual acts such as 'She said she doesn't like anal.then gets ANAL'.

hidden from all but a determined viewer, or only available on the dark web. It thus cannot be assumed either by regulators, individual users or policy-makers, that the mainstream websites are 'safe' sites, free from unlawful material. This challenges an assumption that there is clear water between websites that share criminal pornographic material and those which do not. It is untrue that the most popular pornography websites provide acceptable pornographic content which should be freely and easily accessible to adults, and more awareness is needed for users to ensure they are aware that such sites do not protect them from potentially committing criminal offences.

Across the United Kingdom, e.g., it is a criminal offence to possess 'extreme pornography' which includes simulated images of non-consensual sexual penetration and life-threatening injury (McGlynn and Rackley 2009; Vera-Gray and McGlynn 2020).¹² However we found on the landing pages descriptions of forced sexual activity that may meet the criteria of extreme pornography, titles such as 'again and again forced' and 'Sleeping anal drunk drugged fuck toy borracha drogada teen.' This material may also be deemed obscene and therefore its distribution possibly subject to criminal sanction under the Obscene Publications Act 1959. It is also possible that some of the material analysed is evidence of real sexual assaults, as well as voyeurism and non-consensual distribution of sexual image offences.

The prevalence of the word 'teen', as well as other terms indicating much younger performers, also raises questions of criminal regulation. While many of the videos entitled 'teen' will involve adult actors, it is also possible, due to their not inconsiderable number, that some may be under the age of eighteen. This poses a challenge to the viewer as the possession of child sexual abuse images constitutes a serious criminal offence. Further, while it may be argued that the term 'teen' can be used legitimately to refer to actors over eighteen and over the age of sexual consent, much of the material still promotes a sexual script premised on underage participants or coercive circumstances, with the use of terms such as 'pigtails', 'homework' and 'braces' to suggest younger teenagers and titles such as 'Daddy, I Don't Want to Go to School!'. Indeed, recent investigations into material on Pornhub have located child sexual abuse material (Das 2019), with Pornhub removing a significant proportion of their content in response to a threatened withdrawal of financial service providers from their site (Paul 2020).

This indicates that while there is little formal regulation of the material on mainstream pornography websites, potentially the websites themselves could control the material available. However, our research shows that there is a large gulf between what the companies say they prohibit and what is actually available. In reviewing the terms of each site, what is striking is that they cover the *depiction* of acts such as incest, material *implying* acts of sexual violence and any content that *promotes* or *encourages* criminal behaviours.¹³ The material prohibited is not, therefore, limited to 'real' acts of sexual violence, but includes simulations. As a public statement regarding the legitimate content on their sites, these terms suggest an almost blanket prohibition on any material depicting criminal or abusive behaviours, including sexual violence and invasions of privacy. In light of this, it is particularly notable that we found so much material that

12 While the definition of 'extreme pornography' includes bestiality material, which we found in our sample, e.g. 'so horny she fucked a horse', we did not code it as sexual violence. The extent of unlawful material, therefore, is likely higher than reported here.

13 For example, XHamster's terms proscribe any material that is 'unlawful, threatening, abusive, harassing, tortuous, defamatory, libellous, invasive of another person's privacy, hateful, or racially, ethnically or otherwise objectionable' (XHamster 2020). Pornhub's (2020b) proscribe any content 'depicting child pornography, rape, snuff, torture, death, violence or incest, racial slurs or hate speech' or any content that is 'obscene, illegal, unlawful, defamatory, libellous, harassing, hateful, racially or ethnically offensive, or encourages conduct that would be considered a criminal offense, give rise to civil liability, or is otherwise inappropriate'. Similar provisions from XVideos (2020) proscribes material that is 'unlawful, threatening, harassing, hateful or encourages conduct that would be considered a criminal offense, give rise to civil liability, violate any law, or is otherwise inappropriate', including that this covers material 'depicting or implying rape, forced sexual acts, bestiality, death', material depicting 'violence or abuse (actual harm to another living thing)' and material that 'depicts or promotes incest'. Note that the terms and conditions discussed were in force at the time of data collection.

contravenes these terms through simple keyword searches, a task that could be easily automated if the sites wanted to proactively apply their terms.

Our study thus raises serious questions regarding the validity and veracity of these terms and conditions and the willingness of pornography websites to self-regulate. Indeed, such questions are now being raised in many countries which are reviewing the role and regulation of social media and other internet companies, including pornography websites ([Australian Government 2019](#); [Department for Digital, Media, Culture and Sport 2020](#)).

Sexual norms and accountability

The significance of our findings goes beyond recommendations for regulation and onto the need for active measures to combat mainstream pornography's positioning of material depicting sexual violence as normative and legitimate. This is where sexual script theory, together with the critique of the media effects model from cultural criminologists, enables our findings to contribute to the broader conceptual discussion about the relationships between porn, users, and society.

What sexual script theory helps to acknowledge is that while the law has both a substantive and symbolic role in establishing the sexual norms of a society, individuals also develop their understandings of sexuality through resources in their social environment ([Simon and Gagnon 2003](#)). These social resources include exposure to representations and institutions that, through stigmatizing and criminalizing some sexual behaviours, while instructing and encouraging others, set out where the boundaries may lie between appropriate and inappropriate sexual conduct ([Wiederman 2015](#)). Mainstream online pornography is a key social institution for developing this kind of sexual understanding. Drawing on the work of [Yancey Martin \(2004: 1257–8\)](#), institutions have a particular function of legitimating 'the rightness and necessity of their arrangements, practices, and social relations'. Given our findings, this directs our attention to the role of the mainstream porn sites in producing and reproducing what [Nicola Gavey \(2004\)](#) calls the 'cultural scaffolding of rape', namely the construction of cultural norms and practices that support rape or set up its preconditions. Such a conceptualization moves us away from a focus on pornography's individual function as sexual fantasy or release, towards recognizing what [Vera-Gray \(2020\)](#) sees as its social function; that is laying out a hegemonic framework of sexual norms ([Johnson and Bridges 2018](#)).

For example, it was rare for descriptions of activity that constitute sexual violence to be explicitly labelled as such. Though there were some examples, such as 'abuse in the cellar' or 'Teen who're used and abused part 2', most of the titles describing violent and abusive sexual practices were not identified in this way. The majority of the titles coded under family were describing acts that would constitute what would commonly be understood as 'incest' (and depicting unlawful activity). However, the term 'incest' only returned one relevant result, and even then only in a website address, not the video description itself: 'Daughter Getting Fucked By Her Dad-Latestincesttube.com'. 'Rape' too only returned one relevant result, and again this was in the site address rather than the title itself: 'Mother beat her pussy – www.rapedcams.com'. This does not mean that there are no such examples in the data. Rather, rape is described without the specific term being used, such as: 'Boyfriend forced gf for sex' and 'She Woke Up Being Fucked'. Similarly, we found few results labelled explicitly as a form of 'revenge porn' such as 'Cheated GF fucked on webcam in revenge porn', but much material identified as 'leaked' or similar.

Instead of these acts of sexual violence being clearly labelled as such, it was much more common for descriptions of even the most serious sexual offences to be positioned as ordinary or even humorous. It is here that the positioning of sexual violence as a normative sexual script is most apparent. Examples such as 'Police Takes Advantage of a Young Girl to Fuck her Ass', 'Surprise Anal, That was no accident!', 'unwanted painful anal', and 'Rhianna fucked while she's

asleep!!' are all describing forms of sexual activity that meet the criteria for rape. None of these, however, use words such as force or abuse that would help indicate such acts might be unlawful or socially censured. Such acts are positioned as normative; that is socially acceptable forms of sexual activity. Here, the importance of the above discussion detailing the clear disjuncture between the terms of the sites and their content comes to the fore. Not only are titles describing sexual violence not labelled as such, but the clear prohibition on this kind of material given in the sites terms, means that users are encouraged to believe that the content they encounter does not describe, promote, or endorse unlawful activity. This disconnect actively warps the boundary between what counts as sex and what counts as sexual violence.

CONCLUSION

Our study offers new and compelling evidence that the boundary between what is and is not sexual violence is distorted by mainstream online pornography platforms. Using the largest sample of online pornographic content collected to date, we have found that one in eight titles on the front page of mainstream pornography sites describe acts that would fall under the most widely used policy definition of sexual violence. The frequency of pornography titled in this way, given its prohibition in the site's terms and conditions, is notable in itself. However, our analysis moves beyond the primarily quantitative analysis that has dominated research on pornographic content thus far. Instead, we suggest that analyses of sexual violence in pornographic content must contend not only with frequency but equally with context; that is with how these representations are described and encountered in ways which position them as acceptable and accepted.

The titles we have reported on here are not found by users of their own volition beyond a decision to access pornography. They are not displayed as a result of a user's search terms or site history, nor are they only accessed through niche sites specializing in violent pornography. They are freely available on the landing pages of the most popular porn sites in the United Kingdom. We contend that users of such sites would have a realistic expectation that none of the material they access through such sites would depict criminal sexual acts, given the prohibitions set by the sites themselves. Similarly, we found that depictions of practices that meet criminal standards of sexual violence, including rape, incest and so-called 'revenge porn', are labelled in ways that not only minimize or remove their criminality but often mock or belittle the possibility of harm. The significance of our findings thus lies in this context, a combination of how sexual violence is described in mainstream pornography as well as how it is positioned and how it is found. We argue that it is this broader context that situates the depictions and descriptions of aggression, coercion and non-consent that we found, as normative heterosexual practice.

These findings are set within a conceptual framework that draws together work from critical criminology, feminist and sexual script theory to support a shift in research focus from the effect on the individual towards an understanding of pornography's social function. We suggest that the harm of positioning sexual violence as a normative sexual script is not only in whether or not this can directly affect individual sexual practices, behaviours or attitudes about sex. When pornography is understood as a key social institution legitimizing sexual norms, then this distortion between what counts as criminal, what counts as harmful and what counts as sexual constitutes *in itself* a form of 'cultural harm' (McGlynn and Rackley 2009; Vera-Gray and McGlynn 2020). Our study thus raises urgent questions about the role and extent of the criminal law, self-regulation and corporate accountability, as well as providing new conceptual and empirical backing for a shift in research towards examining the social functions of pornography.

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