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A (NUDE) PICTURE IS WORTH A THOUSAND WORDS—BUT HOW MANY DOLLARS?: USING

COPYRIGHT AS A METRIC FOR HARM IN “REVENGE PORN” CASES

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So-called “Revenge Porn”—pornography published without the subject’s permission—is a growing issue. While much discussion exists about how best to outlaw the practice, less has been said about precisely how to measure the harm done. This paper is grounded in an in-depth analysis of the particular way that the Federal Sentencing Guidelines prioritize financial harms and non-financial harms, specifically looking at how many dollars of harm it takes to buy each additional sentencing point. I graph the enforcement priorities for financial and non-financial harm using the numbers federal agencies use for the value of a statistical life.

Leveraging that analysis, I argue that the dollar sums in statutory damages under the Copyright Act provide a better mode of measuring than abstract dignitary and reputational harms more conventionally associated with “revenge porn.” I also argue that, because of the structure of the Federal Sentencing Guidelines (and likely many state analogs), using economic harm to describe harm is likely to result in those harms becoming higher on the list of agency enforcement priorities.

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Non-consensual pornography,² often called “revenge porn,”³ is a growing problem in the modern world. With the growing ease of communication, transmission of media, and the omnipresence of devices with photographic and video capabilities, an unscrupulous person could go from taking or receiving a nude photograph to distributing it worldwide in a matter of seconds. So far, at least 38 states and the District of Columbia have passed laws, with varying statutory language (and thus some states individually cover more conduct than others), prohibiting the practice and many more are considering them.⁴ As such laws pass, agencies tasked with enforcing them—and existing laws that also prohibit non-consensual pornography—should begin to seriously ask themselves how much priority to assign this kind of crime.

Law enforcement agencies like the FBI⁵ are explicitly required to conduct numerical cost-benefit analyses to determine priorities in proposing and adopting regulations, and because of

² *Revenge Porn*, MERRIAM-WEBSTER, [https://www.merriam-webster.com/dictionary/revenge porn](https://www.merriam-webster.com/dictionary/revenge%20porn) (defining revenge porn as “sexually explicit images of a person posted online without that person's consent especially as a form of revenge or harassment”).

³ Some rightfully object that the term “Revenge Porn” is underinclusive—some of the conduct discussed here might be perpetrated by, for example, an unknown hacker instead of a jilted former lover. An example, of this type of revenge porn is the “Celebgate” scandal. *See iCloud leaks of celebrity photos*, WIKIPEDIA, http://en.wikipedia.org/wiki/2014_celebrity_photo_hack (last edited March 8, 2018). This paper will use “non-consensual pornography” for that reason. Non-consensual pornography is also sometimes referred to as “cyber rape” or “involuntary porn.”

⁴ *38 STATES + DC HAVE REVENGE PORN LAWS*, CYBER CIVIL RIGHTS INITIATIVE, <https://www.cybercivilrights.org/revenge-porn-laws/> (last visited Apr. 9, 2018).

⁵ Of course, no two agencies are exactly alike and state actors may do things differently than their federal counterparts, but for the sake of simplicity, this article will use the FBI as a case study for other agencies.

its simplicity in approaching cases, likely use the same deciding what cases to pursue.⁶ Because this approach necessarily frames problems in terms of dollars and cents, however, victims of certain crimes that disproportionately impact people with less social, political, and literal capital can often find themselves lower on priority lists compared to more legally sophisticated, well-heeled victims.⁷ In cybercrime cases and particularly with non-consensual pornography, quantifying harm to the victim is difficult. In practice, this can mean that agencies often end up prioritizing large corporations who are victims of crime. It also means that in cases where the harm to the victim is dignitary or otherwise difficult to quantify, even the most sophisticated victims may have some difficulty gaining investigative traction.

As a partial solution to this problem, in this paper I propose using a novel metric—copyright law—as a better means for understanding the harm to victims in non-consensual pornography cases. My proposal and argument work in three parts. First, I will discuss how the Federal Sentencing Guidelines⁸ can serve as a proxy for FBI priorities. In this section, I explicitly map out how many dollars each point on the sentencing table is worth when crimes cause financial harm, and compare those points to the points available for crimes that cause non-financial harm. Second, I will discuss

⁶ Exec. Order No. 13,563, 3 C.F.R. § 13563 (2011) (“each agency must...propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs”).

⁷ Here, “legally sophisticated” is used to mean victims with access to counsel, robust understanding of the legal system, and thus—relevantly for the purposes of this paper—the ability to communicate effectively with legal actors like the FBI and DOJ.

⁸ At least in their use in fraud cases, the Guidelines have been “widely acknowledge as broken and dysfunctional, particularly in cases where the loss amount is high.” Robert J. Anelle and Richard F. Albert, *Rise of the ABA Task Force’s ‘Shadow Sentencing Guidelines,’* 255 NYLJ No. 64 at 1-2 (2016) (“Not surprisingly, given the fundamental dysfunction of the Sentencing Commission guidelines in high loss cases, federal judges have begun to rely on the task force’s shadow guidelines to support sentences that are more rational, more just and far shorter”). Specifically, the so-called shadow guidelines have pulled back the sentences imposed at the top of the table, with cases presenting harms totaling in the tens of millions of dollars. *Id* at 2. This approach has been applied in many cases in the white collar fraud prosecution space, but it is unclear how it might apply to non-corporate fraud cases, particularly where the reasoning of the judges who apply the shadow guidelines is that the Guideline sentences “significantly overstate[] the defendant’s culpability.” *Id* (citations omitted). Because the issues around the shadow guidelines, non-fraud cases, and culpability writ large are thorny, deep, and expansive, this paper leaves that particular rabbit hole for another day.

the copyright regime and how it provides metrics that could be used in non-consensual pornography cases, where there is often cybercrime and hacking involved. Finally, I will address how the cost-benefit analysis plays out in reality and will argue that if copyright metrics are used to measure the harm caused by non-consensual pornography, the FBI will need to address substantially more non-consensual pornography-type cases.

Before delving into the substantive analysis, it is necessary to address the underlying assumptions this paper will make and explicitly remove two significant issues from the discussion. The first assumption, without discussing exactly how, is that the publication of a nude photo without the subject's permission is illegal, under state or federal law.⁹ There are many laws that capture this conduct, more or less, and legislatures seem to recognize that this set of facts is dispositive of criminal conduct.¹⁰ Similarly, this paper takes for granted that these cases involve conduct that ought to be prohibited and does not ground the normative perspective that law enforcement doesn't take them nearly seriously enough. My goal here is simply to propose a better metric for the harms caused by non-consensual pornography, and the literature is already rich with arguments for that normative perspective.¹¹ That is, I argue that copyright is a better way to frame nonconsensual pornography harms rather than attempting to quantify emotional distress, which is inherently unquantifiable. By identifying specific property interests damaged and using statutory

⁹ It is perhaps worth noting that some state statutes prohibiting "revenge porn" only address cases where an intimate relationship existed between the parties, thus failing to capture, for example, the use of spy cameras or "Celebgate"-type hacks against individuals lacking an intimate relationship with the party capturing the non-consensual pornography. This is a rich and active area of discussion. See Mary Anne Franks, *'Revenge Porn' Reform: A View from the Front Lines*, 69 FLA. L. REV. 1251 (2017); Danielle K. Citron and Mary Anne Franks, *Criminalizing Revenge Porn*, 49 WAKE FOREST L. REV. 345 (2014).

¹⁰ See, e.g., 720 ILL. COMP. STAT. 5/11-23.5 (2015) (making "non-consensual dissemination of private sexual images" a class 4 felony).

¹¹ See, e.g., Citron & Franks, *supra* note 7.

estimates of that damage, victims and advocates may be able to reframe the questions they are asked and redirect enforcement priorities towards non-consensual pornography cases.

I. FEDERAL SENTENCING GUIDELINES.
A. Methodology.

My goal in this paper is to provide a novel legal theory for evaluating the harm caused by non-consensual pornography to provide ammunition for the argument that non-consensual pornography cases ought to be a higher priority for law enforcement. Because the exact methods the FBI and other law enforcement agencies use to calculate priorities are publicly unavailable, it is necessary to use a proxy. The Federal Sentencing Guidelines provide a useful proxy for agency priorities, since they provide a metric for success in prosecutions; the more points a crime is worth on the sentencing table, the longer the potential sentence for the suspect.¹² Thus, I will also use sentencing points as a metric of benefit to the FBI. This article will compare sentencing points assigned to various harms: for monetary harms, the guidelines for some “Basic Economic Offenses,” specifically “Theft, Embezzlement, Receipt of Stolen Property, Property Destruction and Offenses Involving Fraud or Deceit,”¹³ and crimes involving the loss of life will provide the discussion for physical and dignitary injuries, for reasons discussed below. This article will not discuss the increases the Guidelines offer for civil rights violations, as these would be applicable to both economic harms and other harms, so long as the victim was a natural person.¹⁴

The system used for measuring economic harms by the Guidelines is relatively simple: greater monetary harm equals a larger sentence. However, this is somewhat complicated by the fact

¹² Additionally, the larger the sentence, the more leverage the prosecutor has to obtain a guilty plea. *See* Richard A. Oppel Jr., *Sentencing Shift Gives New Leverage to Prosecutors*, N.Y. TIMES (Sept. 25, 2011), <http://www.nytimes.com/2011/09/26/us/tough-sentences-help-prosecutors-push-for-plea-bargains.html>.

¹³ U.S. SENTENCING GUIDELINES MANUAL § 2B1.1 (U.S. SENTENCING COMM'N 2016).

¹⁴ *See id.* at § 2B1.1 (b). Presumably, this is always true in a non-consensual pornography case.

that the Guidelines use a non-linear relationship between the dollar value of the harm and the number of sentencing points applied. *See* TABLE 1, FIGURE 1. As the monetary value of the harm increases, the value or utility of sentencing points decreases, earning a shorter prison term. So, for harms between \$120,000 and \$200,000,¹⁵ each additional sentencing point would require on average an additional \$12,000 in harm, while between \$20,000,000 and \$50,000,000, each additional point requires another \$909,091 worth of harm. *See* TABLE 1.

<u>Total Economic Harm</u> <u>(Applies to Harms Greater Than Value)</u>	<u>Total Sentencing Point Adjustment</u>	<u>Approximate Dollar Harm required for an Additional Sentencing Point</u> ¹⁶
\$6,500	2	\$3,250
\$15,000	4	\$3,750
\$40,000	6	\$6,667
\$95,000	8	\$11,875
\$150,000	10	\$15,000
\$250,000	12	\$20,833
\$550,000	14	\$39,286
\$1,500,000	16	\$93,750
\$3,500,000	18	\$194,444

¹⁵ Note that this is a way of describing and conceptualizing the Guideline regime, not a description of how Guideline calculations work; actual sentencing points only increase in intervals of 2, and only at the proscribed dollar thresholds.

¹⁶ Calculated by dividing Economic Harm by the Sentencing Point Adjustment.

\$9,500,000	20	\$475,000
\$25,000,000	22	\$1,136,364
\$65,000,000	24	\$2,708,333
\$150,000,000	26	\$5,769,231
\$250,000,000	28	\$8,928,571
\$550,000,000	30	\$18,333,333

TABLE 1: The relationship between additional sentencing points and total economic harm as provided by U.S. Sentencing Guidelines Manual § 2B1.1(b)(1) (U.S. Sentencing Comm'n 2016).

I then added the base offense level of 6 to the increases provided by § 2B1.1(b)(2), representing the base offense level under § 2B1.1(a)(1).¹⁷ See TABLE 2.

<u>Total Economic Harm</u> <u>(Applies to Harms Greater</u> <u>Than Value)</u>	<u>Total Sentencing Points</u>
\$6,500	8
\$15,000	10
\$40,000	12

¹⁷ U.S. SENTENCING GUIDELINES MANUAL § 2B1.1(b)(1) (U.S. SENTENCING COMM'N 2016). Arguments might be made in favor of using the (a)(1) value of 7 instead, which is applicable where the “offense of conviction has a statutory maximum term of imprisonment of 20 years or more.” However, it appears that most, if not all, non-consensual pornography statutes have statutory maximums under 20 years. See, e.g., Sarah Horner, *Judge cracks down on first ex-boyfriend sentenced for ‘revenge porn’ in Ramsey County*, TWINCITIES (Oct. 4, 2017, 9:47 AM), <https://www.twincities.com/2017/10/03/minnesota-revenge-porn-judge-cracks-down-on-first-ex-boyfriend-sentenced-jail/> (imposing a sentence, under Minnesota law, of 4 months of jail time and 3 years of probation).

\$95,000	14
\$150,000	16
\$250,000	18
\$550,000	20
\$1,500,000	22
\$3,500,000	24
\$9,500,000	26
\$25,000,000	28
\$65,000,000	30
\$150,000,000	32
\$250,000,000	34
\$550,000,000	36

TABLE 2: Total Sentencing Points under the Guidelines for an economic offense with specified harm and no other increases.

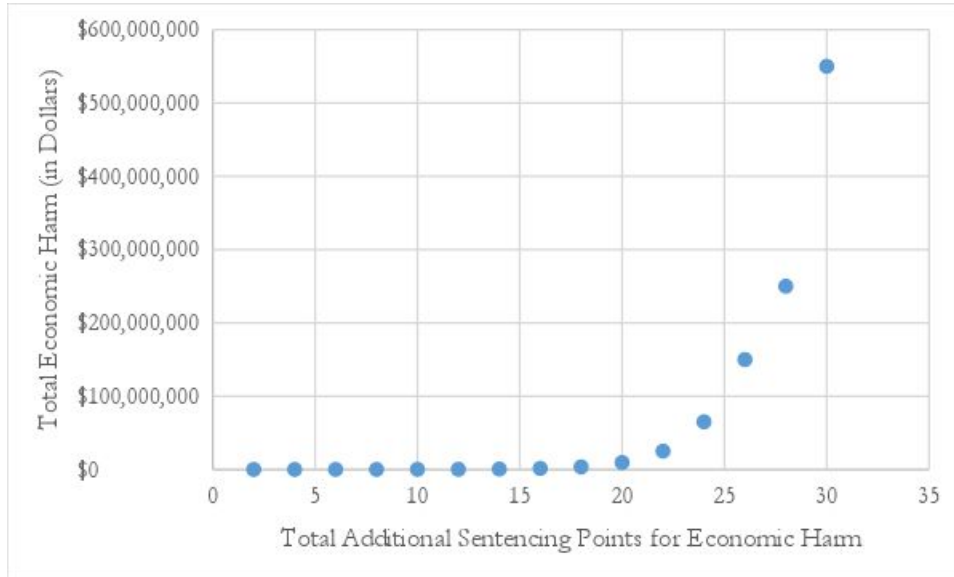


FIGURE 1: Scatterplot of economic harm-based sentencing point adjustments.¹⁸

Next, I plotted total economic harm against the total sentencing points (harm increase + base offense), to represent the relationship between the harm caused by an economic computer crime and sentencing points for that crime, and the harm. See FIG. 2. Given that the distribution appeared to be exponential ($y = a * e^{(b * x)}$), I ran a best fit curve and found the equation:

$$y = 2668.3 e^{0.4098 x}$$

I plotted that curve, then shifted the y-axis to a logarithmic scale to better show all parts of the Guidelines. See FIGS. 3 and 4.¹⁹

¹⁸ Note that “additional sentencing points” means that, for example, if the dollar harm is above \$400,000,000, a *total* of 30 sentencing points will be added to the base offense level.

¹⁹ Residuals exist on both sides of zero in no apparent pattern. R² equals 99.59%, indicating a strong fit.

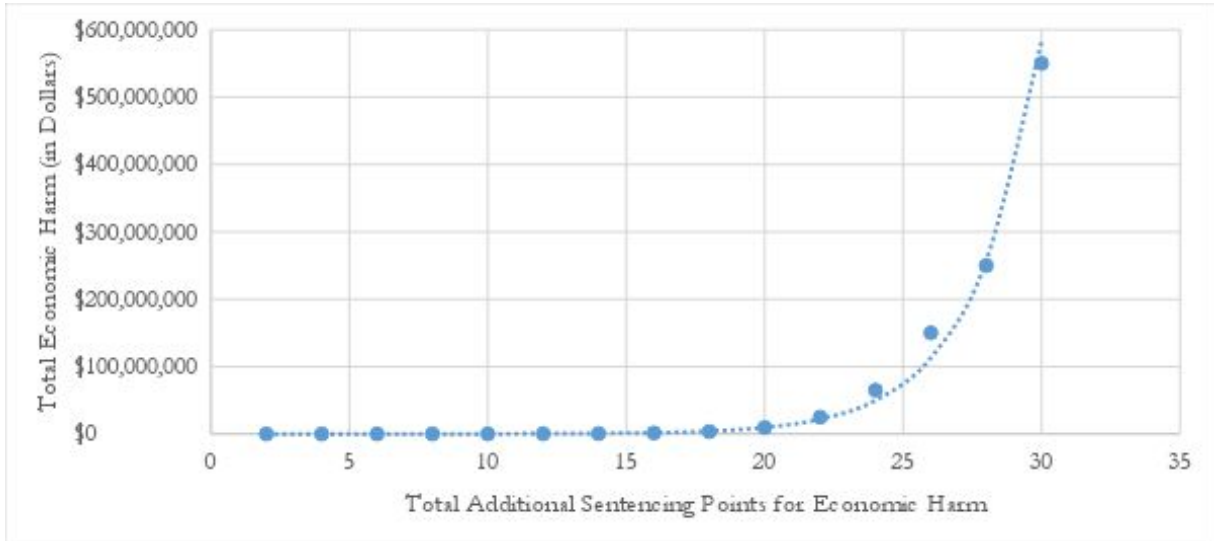


FIGURE 3: Best fit curve for the relationship between additional sentencing points and economic harm.

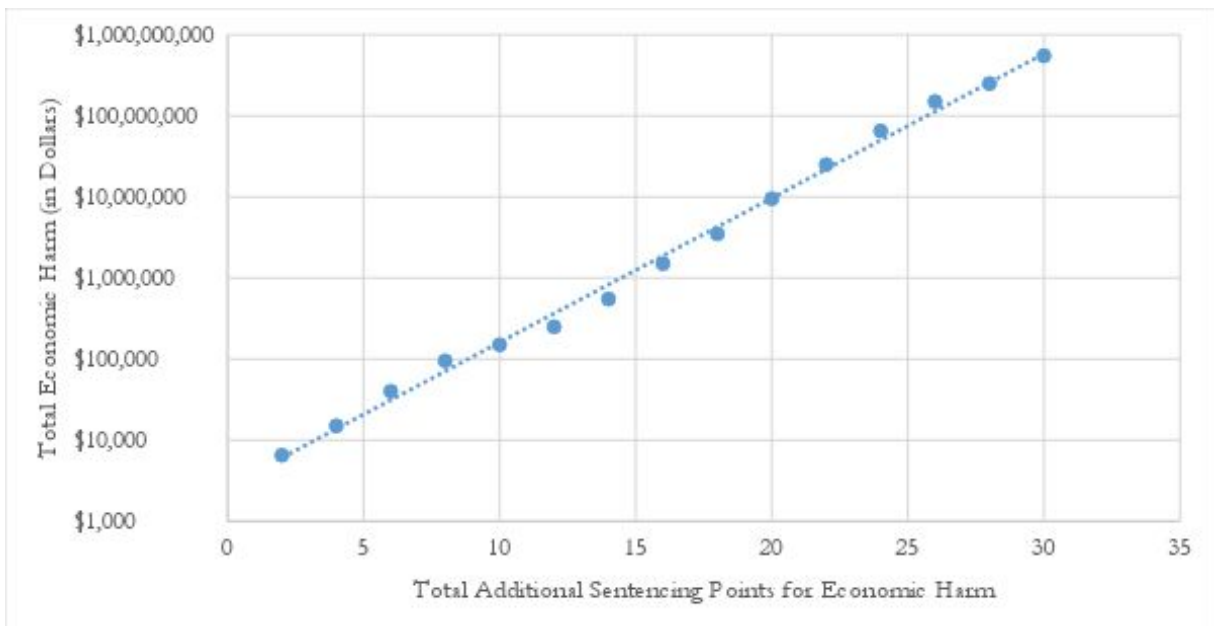


FIGURE 4: Best fit curve from FIG. 3, plotted with a logarithmic scale.

Finally, I plotted a line for the range of sentencing points that loss of life crimes can merit, against one of the common values used for human life among Federal agencies (\$9,000,000) and I labeled that line with the point values for a variety of loss of life crimes. FIGURE 5.

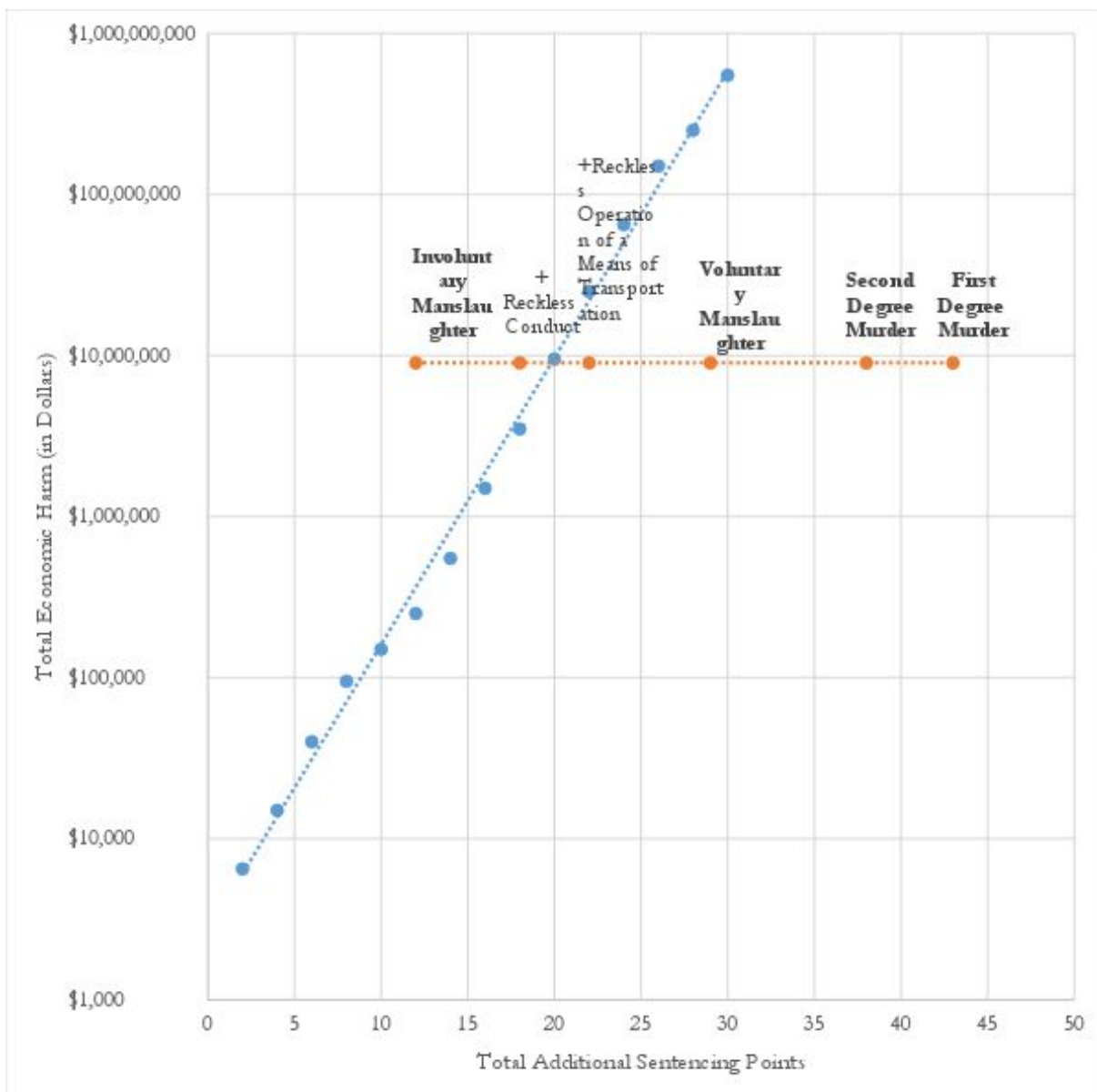


FIGURE 5: Crimes involving loss of life plotted against economic harm crime.

B. Analysis.

To begin analyzing what I've laid out, let us make a quick prediction and test it intuitively. Because each additional sentencing point requires an increasingly high scale of harm, if there were a linear relationship between the resources involved in investigating a case and the harm caused, we would anticipate that the FBI would prefer to work on many lower harm cases than a smaller

number of high harm cases. However, it seems uncontroversial to suggest that the FBI does not typically work on a large number of small harm cases, and generally goes after bigger fish, so we can posit two possibilities: First, that there is a fixed cost to begin an investigation at all. Second, that the relationship between resources needed to solve a case and harm in the case is non-linear. This first condition seems uncontroversial; fixed costs like paperwork, arrests, court appearances, and other procedural matters²⁰ would effectively place a dollar value floor on the kinds of cases the FBI investigates.²¹

Second, and more interestingly, since we do not see the FBI consistently and almost exclusively investigating cases **at** a particular floor (wherever it is), we can posit that their variable resource costs²² have a favorable ratio of cost to harm as compared to the average ratio at the fixed cost floor. Critically, as harm in the Guideline Increases goes up, each dollar of harm is buying a significant amount fewer sentencing points than it would at the previous Guideline threshold, and we would expect a similar relationship to exist in FBI priorities. *See* FIGURES 1 & 2.

More difficult is determining the relationship between physical or dignitary harms and sentencing points, however, there is a proxy we can use. Various agencies use a willingness to pay analysis to reach a theoretical “Value of a Statistical Life” (“VSL”) to conduct the required cost benefit analysis. These numbers vary from agency to agency, but currently, many of them hover around \$9 million.²³ Crimes that involve loss of life range from 43 points for first degree murder at the high end to 12 points for involuntary manslaughter at the low end.²⁴ Unlike the metrics for

²⁰ Assuming that the number of perpetrators doesn’t proportionally increase infinitely alongside the degree of harm, so the filing and litigation costs per case cannot scale up indefinitely.

²¹ That is, if the fixed minimum cost of an FBI investigation is \$X, absent some other extenuating circumstance, it would rarely if ever be cost justified for the FBI to pursue an investigation where the harm caused was below \$X.

²² That is, the costs over and above the fixed minimum cost described as \$X *supra* note 20.

²³ *See Value of life*, WIKIPEDIA https://en.wikipedia.org/wiki/Value_of_life (last edited Jan. 18, 2018).

²⁴ U.S. SENTENCING GUIDELINES MANUAL §§ 2A1.1(a) - 2A1.4(a)(1) (U.S. SENTENCING COMM’N 2014).

economic harm, where the subsequent provisions provide more points based on intent-factors,²⁵ the scale for loss of life crimes is based entirely on intent.

Thus, I would suggest that the fairest physical harm comparison to a \$9 million economic harm is unadorned, involuntary manslaughter. Since the \$9 million figure is tied to conduct that agencies are evaluating with the assumption they themselves will not behave recklessly—the first step up under involuntary manslaughter—it seems fair to tie the number to a similar mens rea for bodily harm. Similarly, the numbers for monetary harm above are also for harms without intent-based aggravation. While there might be some room for argument here, I believe this is the most apples to apples comparison that can be made.

Therefore, given an economic harm of \$9 million, with no aggravating factors, my regression curve suggests that the economic harm table would return a value of 21 points.²⁶ When compared to the 12 point value offered by the guidelines for manslaughter (a similarly unadorned \$9 million harm), it seems reasonable to conclude that the FBI would generally prioritize crimes of monetary harm over crimes of bodily harm because points provide a reasonable proxy for FBI priorities. It is important to remember that we're talking about manslaughter, and not murder. According to my model, a first-degree murder would take priority over unadorned economic harms of up to approximately \$81.5 billion.²⁷ Critically, we can expect any increase in economic harm to move us

²⁵ As examples, 2 points are added “if the offense involved . . . the conscious or reckless risk of death or serious bodily injury” and “if the offense involved misappropriation of a trade secret and the defendant knew or intended that the offense would benefit a foreign government, foreign instrumentality, or foreign agent.” U.S. SENTENCING GUIDELINES MANUAL §§ 2B1.1(b)(15)(A), 2B1.1(b)(13)(B) (U.S. SENTENCING COMM’N 2012).

²⁶ I use this instead of inputting \$9 million into the table in order to do a better apples to apples comparison. I obtained this figure by calculating my curve’s intercept with the line $X = 9,000,000$.

²⁷ \$81,477,833,980, where the best fit curve intercepts the line $X = 43$.

up the priority list quickly, since all of this discussion is about a part of the curve where each dollar buys relatively more sentencing points.²⁸

II. COPYRIGHT LAW AS A PROXY FOR HARM.

Determining the harm caused by the general public viewing a victim's most intimate moments is tricky. Moreover, in the modern world, once something is online it is notoriously difficult to remove. One solution some advocates have offered is asserting copyright ownership.²⁹ This solution allows victims to send websites hosting these images a Digital Millennium Copyright Act ("DMCA") Takedown Notice, and non-compliance with such a request has potentially catastrophic consequences for site owners.³⁰ While this theory is probably flawed as a method of enforcement, — it's not as if, for example, the record industry sings the praises of the DMCA and how it has ended online file sharing—it does provide one unexpected benefit: a method of quantifying the harm that non-consensual pornography causes. As a threshold matter, it is worth noting that copyright protection attaches the moment a work is fixed in a tangible medium.³¹ Thus, as soon as an image appears on the phone screen, the photograph is protected by US Copyright Law (though enforcement of this right would require further formalities). In this section, I will first justify using copyright metrics as a measure of harm. Then, I will discuss features of the copyright regime of statutory damages relevant to this theory of harm.

²⁸ We would also expect a dramatic shift away from economic harms in cases—or at least, loss of life cases—where proving intent is easy. This is because the 43 points for a \$9 million harm is much more than the economic harm chart offers, since the economic aggravating factors are generally additions of 2 to 3 points.

²⁹ See Erica Fink, *To fight revenge porn, I had to copyright my breasts*, CNNTECH (Apr. 27, 2015, 1:32 PM), <http://money.cnn.com/2015/04/26/technology/copyright-boobs-revenge-porn/>.

³⁰ This is again something that is outside the scope of this paper, but I am referring here to these sites losing safe harbor protections.

³¹ 17 U.S.C. § 102 (2018).

A. Justifying Using Copyright

There are two potentially powerful objections to the idea of using copyright in this space,³² so I will address them separately. First, there is the issue of authorship: while authorship is obvious for photographs taken by the subject (or more colloquially, “selfies”) the authorship analysis becomes trickier for photographs taken by others. When the subject does not take the picture, there are two possibilities. In the first, the subject is aware of the person taking the photograph and participates in its creation. In the second, the subject is unaware, and the photograph is taken non-consensually. The second is tricky, and is one reason that laws specific to non-consensual pornography appear more and more necessary to advocates.³³ The first challenge has also posed a puzzle to many, and I would like to offer a non-obvious solution to it.

Nude photographs taken by one member of a couple³⁴ as part of the couple’s sex life are best seen as joint works under the Copyright Act.³⁵ Section 101 of the Act defines a “joint work” as “a work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole.”³⁶ Courts will generally look to several factors in the absence of a contract. The Ninth Circuit in *Brod*³⁷ lays out the factors pertaining to a photograph at issue in the case:

- (1) whether the putative author controls the work and is “the inventive or master mind who creates, or gives effect to the idea”; (2) whether the “putative coauthors make

³² Obviously more might exist, but these are the objections that have repeatedly come up in discussing this idea (and moreover, they are objections I believe are compelling if they are not addressed).

³³ It is possible that current law presents answers to the second challenge. There are arguments that, for example, the Computer Fraud and Abuse Act or the Wiretap Act would bar such non-consensual photography. However, these arguments are often difficult, depend on facts outside of why we think the conduct is wrongful (for example, the kind of camera used), make liberal use of the arguably overbroad scope of various technology related statutes, and are very case and fact dependent.

³⁴ The couple here is used as an example, but the same analysis would apply to one member of a larger group of consenting sexual partners.

³⁵ See 17 U.S.C. § 101 (2018).

³⁶ *Id.*

³⁷ *Brod v. Gen. Publ’g Grp., Inc.*, 32 F. App’x 231 (9th Cir. 2002).

objective manifestations of a shared intent to be coauthors”; and (3) whether “the audience appeal of the work turns on both contributions and the share of each in its success cannot be appraised.”³⁸

The court also notes that “control in many cases will be the most important factor.”³⁹

Since there is very unlikely to be a contract in these cases, this is the appropriate test for whether the subject of the photograph was a joint author. It is easy to imagine a couple participating equally in the process of taking photographs. It is, in fact, much odder to imagine a scenario where the photographer is truly acting as a “master mind” or is really “control[ing] the work” as contemplated by Brod.⁴⁰ It is also almost undisputable that “the audience appeal of the work turns on both contributions.”⁴¹ The joint authorship model also deals well with at least some of the cases where recording takes place without the victim’s knowledge or consent. When a webcam session is recorded without the knowledge of the person being recorded, it seems clear that—though the fixing is being done by the person recording—the person exercising primary control of the work is the person being recorded. At the very least, that person should be seen as a joint author (if not a primary or sole author). Obviously, this is a case-by-case factual determination, and there will be some cases that this does not apply to, but joint authorship otherwise seems to cut this knot nicely. As a joint author, the victim of the publication of non-consensual pornography would enjoy the full panoply of rights under the Copyright Act.

The second major objection is that the victims in these cases clearly did not intend to sell their copyrighted works. This is irrelevant to the Copyright Act. Section 106(3) grants the author of a work the exclusive right to “distribute copies . . . of the work by sale or other transfer of

³⁸ *Id.* at 234-35 (quoting *Aalmuhammed v. Lee*, 202 F.3d 1227, 1234 (9th Cir. 2002)).

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.* at 235.

ownership.”⁴² This is regarded as one of the (if not *the*) most important sticks in bundle of rights offered to copyright owners. Thus, the person who publishes a photograph without the author’s permission—the exact scenario contemplated in a non-consensual pornography case—is violating that author’s copyright. It is commonly understood that it is the right of an author to choose to destroy her works, should she decide they are unfit for public consumption.⁴³

One might also object that because these are not really copyright harms, and that because the victim was very unlikely to see the numbers that a copyright theory would generate as profits for her “work,” we should not use copyright to measure harm. This would be a much stronger objection if we did not look at the ways that victims of cybercrimes other than non-consensual pornography are harmed. Many corporations have insurance with data breach coverage.⁴⁴ The corporation frequently bears the cost of the hack. Moreover, as I will discuss below, the Copyright Act’s statutory damages framework is not used to measure lost profit; it is used for deterrence and to provide a “just” penalty. Further, it is unlikely that corporate victims of hacks do anything other than what this paper does when presenting the FBI with estimates of harm; this paper only offers a method of estimating a dollar figure for the harm caused by a kind of cybercrime.

B. Statutory Damages under the Copyright Act

⁴² 17 U.S.C. § 106(3).

⁴³ See Elif Batuman, *Kafka’s Last Trial*, THE N.Y. TIMES MAGAZINE (Sep. 22, 2010), <https://www.nytimes.com/2010/09/26/magazine/26kafka-t.html> (illustrating of the limits of this right, Max Brod’s post-script to the first edition of Franz Kafka’s *THE TRIAL*, wherein Brod reproduced the following: “DEAREST MAX, my last request: Everything I leave behind me (in my bookcase, linen-cupboard, and my desk both at home and in the office, or anywhere else where anything may have got to and meets your eye), in the way of diaries, manuscripts, letters (my own and others’), sketches, and so on, to be burned unread; also all writings and sketches which you or others may possess; and ask those others for them in my name. Letters which they do not want to hand over to you, they should at least promise faithfully to burn themselves. Yours, FRANZ KAFKA”).

⁴⁴ Matt Egan, *Companies Turn to Cyber Insurance as Hacker Threats Mount*, FOX BUSINESS (Mar. 5, 2016), <https://www.foxbusiness.com/features/companies-turn-to-cyber-insurance-as-hacker-threats-mount>.

We have already discussed the core right to this theory of harm, but it bears repeating. Under section 106(3) of the Copyright Act, the author of a work has the exclusive right to publish that work, whether for sale or otherwise. If another party publishes a work without the author's permission, it is a violation of the owner's copyright. Though we are not using the Copyright Act as a method of enforcement, its remedy provisions provide dollar numbers to attach to harms. First, however, we should put aside "actual damages" under the act. These are defined as the sum of "the actual damages" suffered by the copyright owner and "any profits of the infringer that are attributable to the infringement."⁴⁵ Since profits are not likely to be involved and "the actual damages" are the exact thing we are trying to put a price tag on, this provision is unlikely to help us.

The statutory damages provision provides that damages are "not less than \$750 or more than \$30,000 as the court considers just," unless "infringement was committed willfully," in which case a court "may increase the award of statutory damages to a sum of not more than \$150,000."⁴⁶ These numbers are per work (not per infringement, however). Since many of these cases involve a picture dump of quite a few photographs—and an undoubtedly willful one, at that—the statutory damages number could easily rise into the millions.

Since we are talking about a statutory damage award that is entirely independent of the "actual damages" in a case, we need to look at how "just" is determined. In practice, willful infringement will require a defendant to argue why maximum statutory damages are *not* appropriate. As an example, in *CP Productions Inc. v. Glover*,⁴⁷ an Indiana district judge granted a default judgment

⁴⁵ 17 U.S.C. § 504(b) (2010).

⁴⁶ *Id.* § 504(c)(1), (2).

⁴⁷ *CP Productions Inc. v. Glover*, No. 1:12-cv-00808-JMS-DML, 2013 U.S. Dist. LEXIS 184573, at *1 (S.D. Ind. Mar. 26, 2013).

for willful infringement and awarded the plaintiff statutory damages of \$150,000.⁴⁸ Complaints vary in the amount they request, and the issue of how much to award is one that the Supreme Court has said includes a right to a jury trial.⁴⁹ Furthermore, both harm to the owner of the work and the deterrence of a statutory damage award are factors weighed in determining the number.⁵⁰ Critically, however, statutory damages are intended to be both punitive and compensatory; they require no proof of either actual damage or profits.⁵¹ Since that is the case—and in litigation in the area, plaintiffs regularly request the maximum statutory damages—it is reasonable for a non-consensual pornography victim to offer a number on the higher end of the statutory scale for willful infringement as an estimate of the harm she has suffered.

III. THE COSTS AND BENEFITS OF INVESTIGATING NON-CONSENSUAL PORNOGRAPHY

So all that is left now is to plug these numbers in to a cost/benefit analysis. Let us begin with the costs, as that is one vector we have not analyzed yet. Compared to the criminals in many other cybercrime cases, in these cases, the suspect is less likely to be particularly sophisticated. In the classic example of “revenge porn,” the jilted boyfriend who posts the nude photographs shared with him to a revenge porn website probably does not use TOR, does not know how to cover his tracks particularly well, and given that our victim was probably the only other person in possession

⁴⁸ CP Productions is a “porn troll;” they make money suing and settling with Doe defendants for illegally downloading porn, largely on the theory that even defending the case would be embarrassing. See Christopher Danzig, *Suing Hundreds of Anonymous People Will Not Make You Popular*, ABOVE THE LAW (Mar. 17, 2011 2:10 PM), <http://abovethelaw.com/2011/03/suing-hundreds-of-anonymous-people-will-not-make-you-popular/>.

⁴⁹ *Feltner v. Columbia Pictures Television, Inc.*, 523 U.S. 340, 355 (1998).

⁵⁰ For what a jury might actually see, See Manual of Model Civil Jury Instructions for the District Courts of the Ninth Circuit § 17.26 Copyright – Affirmative Defense – First Sale (17 U.S.C. § 109(a)) (9th Cir. Jury Instructions Committee 2017), <http://www3.ce9.uscourts.gov/jury-instructions/node/284/> (“If you find for the plaintiff on the plaintiff’s copyright infringement claim, you must determine the plaintiff’s damages. The plaintiff seeks a statutory damage award, established by Congress for [[the work infringed] [each work infringed]]. Its purpose is to penalize the infringer and deter future violations of the copyright laws. The amount you may award as statutory damages is not less than \$750, nor more than \$30,000 for each work you conclude was infringed. However, if you find the infringement was willful, you may award as much as \$150,000 for each work willfully infringed.”).

⁵¹ *Peer Int’l Corp. v. Pausa Records, Inc.*, 909 F.2d 1332, 1337 (9th Cir.1990).

of at least some of the photos posted, identifying the suspect is unlikely to pose a large problem. Since cost/benefit analysis is required, savings on cost are worth noting as well.

Of course, this is not every case. The “Celebgate” massive release of stolen celebrity nude photographs, for example, was carried out by sophisticated hackers exploiting a vulnerability in Apple’s iCloud online storage system.⁵² However, with 500-some photos leaked, copyright statutory damages place potential harm at up to \$75 million. Compare this figure with the figure the Department of Justice used in the sentencing phase of Jeremy Hammond’s⁵³ trial: “losses between \$1 million and \$2.5 million.”⁵⁴ If we assume the hacker behind Celebgate is on a Jeremy Hammond level—perhaps an overgenerous assumption⁵⁵—and that statutory damages are assessed at a tenth of what is possible, it would appear that an incredibly in depth FBI action would be cost justified under my theory. For Hammond’s \$1 million to \$2.5 million,⁵⁶ FBI agents had performed a “continuous physical [and digital] surveillance of Hammond’s . . . home” and deployed a pen register/trap and

⁵² See Abby Ohlheiser, *The Shockingly Simple Way the nude Photos of ‘Celebgate’ Were Stolen*, The Washington Post (May 24, 2016), <https://www.washingtonpost.com/news/the-intersect/wp/2016/03/16/the-shockingly-simple-way-the-nude-photos-of-celebgate-were-stol>

⁵³ See Nate Anderson, *Stakeout: How the FBI Tracked and Busted a Chicago Anon*, ARS TECHNICA (Mar. 6, 2012), <http://arstechnica.com/tech-policy/2012/03/06/stakeout-how-the-fbi-tracked-and-busted-a-chicago-anon/>.

⁵⁴ Government’s Sentencing Brief at 14, U.S. v. Hammond (No. 12-185) (S.D.N.Y. Nov. 12, 2013).

⁵⁵ There is no particular reason to believe that the hacker behind Celebgate was particularly skilled, and Hammond and others involved in similar corporate hacks have suggested their hacking skills far outstripped those of other active hackers (though, query whether they have an interest in doing so). In a chatroom conversation alluded to in the Hammond indictment, Hammond and other users were discussing the “Stratfor hack.” One user said “this stratfor shit was bigger shit than [] old shits[,] at least it deserves no critics,” to which Hammond replied “notice no one is throwing around script kiddie comments . . .” Anderson, *supra* note 48. See also *U.S. v. Ryan Ackroyd, et al.*, S1-12-cr-00185-LAP, *Indictment* (SDNY 2012). Being labeled a “script kiddie” is an insult to hackers because, per Ars Technica, “Anyone with modest computer skills can cause modest havoc using other people’s code fragments, scanners, and infiltration tools, but this is little more than knowing how to point a gun in the right direction and pull the trigger.” Anderson, *supra* note 48.

⁵⁶ It is unlikely that corporate victims of hacks do anything other than what this paper does when presenting the FBI with estimates of harm. This paper only offers a method of estimating a dollar figure for the harm caused by a kind of cybercrime (or that the DOJ does anything profoundly different when presenting their arguments on harm to a court at sentencing).

trace device to connect Hammond's actions to his online aliases.⁵⁷ With the help of informants, sixteen FBI vehicles ultimately raided Hammond's home and arrested him.⁵⁸

The theory proves its worth in the typical case where the cost is low and the benefits are very high. For example, a jilted ex-boyfriend posts intimate photographs of his now ex-girlfriend, taken during the course of their relationship.⁵⁹ The victim goes to local law enforcement agents who explain "the online posts were technically legal because she was older than eighteen," and that because she sent the pictures to her ex, "he owned them and could do what he wanted with his 'property.'"⁶⁰ She then goes to the FBI and is told that "the online abuse [she suffered] was not related to "national security" therefore, the FBI does not have jurisdiction to investigate."⁶¹ Each authority figure in this hypothetical, however, clearly misunderstood the law. Since the victim's state "criminalize[d] repeated online behavior designed to harass another person that causes that person substantial emotional distress," local law enforcement could have investigated the abuse.⁶² Furthermore, the FBI has jurisdiction over matters beyond national security.⁶³

However, another problem exists with this situation. At least during her conversation with the FBI, the victim here was not speaking the right language. If we take a sympathetic reading of the answer she received from the FBI,⁶⁴ the agents likely wanted to say something nicer like, "Your case is not important enough to us." While the words they chose to may have been legally incorrect, we

⁵⁷ Anderson, *supra* note 48.

⁵⁸ Anderson, *supra* note 48.

⁵⁹ See DANIELLE KEATS CITRON, HATE CRIMES IN CYBERSPACE 45-50 (2014).

⁶⁰ *Id.* at 47.

⁶¹ *Id.*

⁶² *Id.*

⁶³ 28 U.S.C. § 533 (2012).

⁶⁴ I think a charitable reading of either of the conversations discussed is a stretch. Normatively, I think that the government actors in this situation are more concerned with getting the aggrieved person out of their office, but such a critique is well beyond the scope of this paper. Instead, I approach the issue as if the agents believed in good faith that their superiors would say that the victim's case "isn't cost justified."

can probably safely assume that the agents did believe that her case would not have been cost justified. My proposal offers the victim a better way to frame her problem and to thus, avoid such an answer. Rather than beginning with the unquantifiable “emotional distress” criminalized in the relevant jurisdiction, she could say that her property interests were being damaged by a course of repeated conduct, and that statutory estimates of the harm place it at as high as several million dollars. By quantifying the harm the agents who believe the case can be quickly resolved⁶⁵ are provided a strong incentive to take notice of the case and potential feather in their caps. Agents simply sitting up and taking notice of such harms would be a huge step forward in the prosecution of non-consensual pornography.

⁶⁵ A case is quickly resolved if there is an identifiable perpetrator, he is not technologically sophisticated, and is the only person other than the victim with access to the photographs.