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Predicting Moral Disengagement from the Harms associated with Digital Music Piracy: An Exploratory, Integrative Test of Digital Drift and the Criminal Interaction Order

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Abstract

This exploratory paper estimates a predictive model for moral disengagement from harms associated with digital music piracy. Our approach is founded upon Goldsmith and Brewer's (2015) proposed digital criminal interaction order. This framework suggests that electronic resources (e.g. social media; message boards; digital texts; etc.) may act as proxy for conventional social interaction in learning deviant ideologies and developing neutralizing strategies. To the best of our knowledge, this theory has not yet been empirically tested. To this end we developed an integrated research tool and administered it to a non-random sample of 625 people. The test includes measures for technological competency; capacity to mask personal identity online; affinity modeling deviant behaviors encountered online; positive affect for engaging in digital deviance; and moral disengagement. A multiple linear regression of the standardized variables indicated that digital capacity for identity protection, affinity for modeling, and positive affect for digital deviance significantly predicted moral disengagement from the harms associated with digital music piracy ($F = 94.011$, $p < .05$, adj. $R^2 = .319$). Further implications from these findings are discussed in relation to music piracy specifically, and digital deviance generally.

Keywords: Digital drift, music piracy, self-efficacy, moral disengagement, regression.

Introduction

The purpose of the study outlined in this paper is to test a series of hypothesized components related to the criminal interaction order, proposed by Goldsmith and Brewer (2015), as they relate to digital music piracy. The primary argument of this theory is that the internet allows individuals to engage in asynchronous communications that act as a proxy for face-to-face or otherwise direct interactions, and thus autonomously develop

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skills and neutralizations supportive of engaging in cyber criminality. This concept provides a modern reframing of the interaction order outlined by Goffman (1982) – rather than relying wholly on face-to-face interactions as the source of deviant identity development, Goldsmith and Brewer (2015) argue that the malleable form of the internet affords the user a sense of interactivity, and that this pseudo-reciprocal environment catalyzes drift into deviancy (e.g. Matza, 1964). These observations provide a feasible means for renewed investigation of the constructivist processes informing individualized engagement in music piracy. While this phenomenon has been thoroughly studied by the criminological academe, the impact of digital-only peer interactions is often overlooked (Higgins & Marcum, 2011) and moreover, those which test these interactions are subject to the temporal limitations of the internet and its rapid pace of change (Wall & Williams, 2014). Therefore, the research outlined herein employs a modernized series of validated scales to empirically explore how these pragmatic resources inform a digitized criminal interaction order and ultimately support moral disengagement from the harms associated with music piracy.

Through the mid 1990's and into the first two decades of the 21st century, the unauthorized sharing of digitally compressed music files via web-based services has been the target of numerous educational and litigious campaigns at the behest of recording industry stakeholders (David, 2010). Music piracy has obstinately persisted despite an established discourse of deviance (Panas & Ninni, 2011) and global efforts to frame it as criminal circumvention of copyright (Sinclair & Green, 2015; Lowry, Zhang, & Wu, 2017; etc.). Indeed, these micro-transactional approaches to pirating music have flourished since the founding of Napster and similar sharing resources in the late 1990s, despite industry claims of detrimental effect (Siwek, 2007; Elton, 2013; Pakman, 2014). This rift between discourse and social practice is symptomatic of how the modern internet empowers individuals to form new ideas and engage in fringe activities with minimal recourse. Users can access unprecedented level of access to alternative perspectives, stemming from the internet's unregulated and customizable form, ultimately aggravating the blurry divide between acceptable and deviant online activities (Kolko, 2010).

While structural observations provide insights into the mitigating nature of the internet as it relates to piracy, they are less effective at exploring the decision-making that facilitates engagement. Namely, what empowers individuals to suspend traditional moral obligations and engage in an activity tantamount to theft? To wit, research has indicated that music piracy is only moderately predicted by individual characteristics, and occurs across a broad spectrum of the population (Gopal et al, 2004; Sinha & Mandel, 2008; Lowry et al., 2017), suggesting that certain externalities are informing the decision to engage in piracy. Although digital music piracy is one of the most well-documented phenomena in the spectrum of cybercrime (Higgins & Marcum, 2011), the breadth of these materials focus on preventative approaches (Sinclair & Green, 2015), and primarily emphasizes the roles of peer association and relative deprivation. Moreover, this field of research tends to underemphasize individualistic pathways such as self-driven pedagogy or imitation of observable actions to explain digital deviancy (Holt & Bossler, 2014).

This stands at odds with nature of the hyper-individualized online environment: users are no longer tethered to social networks composed of intimately close relations; rather, they can virtually connect with others across social and political boundaries to form new identities independent of physical proximity (e.g. Castells, 1999). While these relationships

may be foundational to new and digital social networks, they are frequently built around the anonymous nature of the internet, thus minimizing consequence for non-conforming actions or ideals (Leavitt, 2015). Additionally, these interactions often consist of asynchronous and thus pragmatic communications, such as the consumption of written resources or ‘lurking’ online communities (Benkler, 2000; Gernsbacher, 2014; Sun, Rau, & Ma, 2014). Hence, the new ‘digital social practice’ (Marres, 2017) of the 21st century must include the notion that digital deviants may have learned their trade through indirect or unilateral communications; may be self-taught; and may view their online activities as completely detached from their otherwise ‘normal’ lives (Siemens 2005; van Dijck, 2013).

Goldsmith and Brewer (2015) develop a theory of digital drift and the criminal interaction order that incorporates these ideas. Their framework of analysis for internet-mediated deviance moves away from what they term as ‘over-socialized’ (p.114) criminological perspectives and more closely situates cyber criminality as an outcome of technologically mediated agency. Their argument is premised on the notion that the new realities of the information society have fundamentally changed the ‘interaction order,’ (Goffman, 1982) empowering anonymous forms of social participation that overcome physical-spatial barriers and espouse an ethos of ‘cyber-libertarianism’ (Dahlberg, 2010). Goffman (1982) first introduced the interaction order as a means for developing microanalysis of the bearing that face-to-face interactions have on individual dispositions. Immediate presence, he argued, plays a significant role in enabling and replicating the ordered conventions of society due to any number of dogmatic practices. By this logic, Goffman (1982) suggests that even those who violate these conventions do so at the behest of the interaction order: knowledge of expected behavior and its implications simultaneously defines opportunity for deviance.

In consideration of the internet’s malleable form, Goldsmith and Brewer (2015) propose a re-exploration of the interaction order framed by pragmatic, information-based relations to better understand the catalysts for individuals’ perceptions of, and engagement in, deviance online. Generally speaking, they suggest that the easily accessible and exhaustive amount of information available online empowers individuals to associate with deviant perspectives and behaviors in the absence of supportive peer networks; and, that the lessons learned from these pragmatic resources facilitate moral disengagement. In their words, “the Internet, as a place or set of places, can therefore be seen as a key technology facilitating limited forms of engagement in criminal behavior under the cover of, or as an extension of, mainstream leisure pursuits” (Goldsmith & Brewer, 2015, p.117). By reframing Goffman’s ideas as the criminal interaction order, and limiting its scope to that of self-taught cyber criminality, Goldsmith and Brewer (2015) propose that the interactive design of new media in the internet age acts as proxy for the immediate presence of others, and that its content can confirm deviant activities as normative convention.

Digital music piracy provides an excellent illustrative case, as this longstanding behavior, wholly dependent on distanced and anonymous user networks as well autodidactic processes, persists despite clear articulation of its harm and direct actions intended to disrupt its processes. These normalized micro-deviations are confirmatory of a criminal interaction order stemming from discontinuity between expectations for digital behaviors versus those of the physical, social world (Giddens, 1990; Wall, 1999; Popham, 2017). This gap is exacerbated by the contrasting paces of technological and legislative change where the delayed and reactionary approaches to legislating online deviance creates a gap

between behavior and regulation, resulting in confusion about the legitimacy of these activities (Wadhwa, 2008). These discontinuities confirm lesser chances of punishment amongst those who might be motivated to engage in cyber criminality, thus establishing the order of the internet as an avenue to drift from conventional identities into deviant ones.

Accordingly, Goldsmith and Brewer (2015) roughly outline a series of conditions requisite of a new criminal interaction order: Access to knowledge supportive of deviantised activities and their processes ('the encounter'); a sense of security in accessing this knowledge ('shielding'); replication of the processes outlined in this knowledge ('replication'); and, affect for the deviant interaction ('affect'). A general framework for testing the digitized criminal interaction order specifically has not yet been empirically tested as of the composition of this manuscript (summer, 2017). However, the components outlined by Goldsmith and Brewer (2015) closely align with several validated criminological and sociological constructs. Therefore, this paper utilizes an exploratory and integrated framework that combines the relevant elements from social learning, moral disengagement, self-efficacy, and the theory of planned behavior to form a better understanding of the digitized criminal interaction order as a proxy for social processes. Each of these tenets are briefly explored below, along with proposed means of testing them, with an additional discussion of measuring drift using moral disengagement.

Theory and Measures

1. The encounter

The informational organization of connected societies is one that, by nature, necessitates the production of, and access to, vast amounts of digital information presented in a multitude of formats. Moreover, recent progress in communications platforms provides for an increased level of agency in the accumulation of information and provides the tools for shaping its flows both individually and across larger networks (Castells, 2009). However, the volume of these information flows also problematizes the notion of gaining access to deviantised information and processes by chance; specifically, what actions might be taken by motivated individuals to find such information in a populist internet that is now largely geared toward manipulating traditional means of exchange (e.g. Demetrious 2008; Harrison and Barthel, 2009; Popham, 2017; etc.)? Thus the first tenet of the criminal interaction order proposes the idea of the 'encounter,' or the processes by which motivated individuals seek out and gain access to non-conformist knowledge. Per Goldsmith and Brewer (2015), this communicative action is largely controlled by the individual and entails undertaking specific information gathering characteristics, and can be further refined to be understood as a result of skillful exploration. In other words, the digital criminal interaction order is subject to access barriers formed by the unwieldy nature of effectively navigating the internet; this is particularly relevant when considering the skills requisite for accessing the internet's darker corners (e.g. Sui, Caverlee, & Rudesill, 2015).

The 'encounter' is subject to one's knowledge acquisition experiences online, exemplified by risky information-seeking or participation in deeper parts of the Internet. There is no easy pathway to this level of engagement; instead, it takes a certain level of competence with digital technologies to fully harness the volume of information available

online (Diaz, 2013; Hargittai & Hsieh 2012). Like any other skill, one's capacity with net-enabled technologies often dictates the type and breadth of their experiences. Measures of self-efficacy, or one's "conviction that [they] can successfully execute the behavior required to produce ... outcomes" in a given task (Bandura, 1977, p. 193), have long been viewed as effective tools for assessing the relationship between computing abilities and information seeking behavior (McKinley & Ruppel, 2014). Further, a well-developed field of research has applied the principles of self-efficacy to a range of behaviors with internet and computing technologies (e.g. Eynon & Malmberg, 2011; Hargittai & Hsieh, 2012; etc.). Generally speaking, the thrust of the research has explored the relationship between digital competence and one's exposure to more risky information-seeking and participation in deeper parts of the Internet, ultimately shaping their online experiences (Whitty & McLaughlin, 2007; Staksrud, Ólafsson, & Livingstone, 2011)..

For this study's purposes, an adapted version of the Computer Self Efficacy (CSE) Scale (Torkzadeh & Kouftero, 1994) was used. This scale was inclusive of adaptations presented by Durdell & Haag (2002), which eliminated several dated concepts from the CSE and incorporated modern ideas. As suggested by Hargittai (2009) and Hargittai & Hsieh (2012) to modernize instruments measuring Internet capacity, some adaptations were made to the CSE to include modern social network-related terms, and to eliminate obscure concepts (e.g. 'handling a floppy disc correctly'). In total, twenty measures were used that asked users to rate their comfort with a given task using a five point Likert scale. This updated scale has been empirically tested to demonstrate three distinct, stepwise-oriented components of user self-efficacy (Popham, forthcoming). In the present study, the third, or most competent grouping consisting of eight measures was retained for testing self-efficacy in computing; principal component analysis using varimax rotation and kaiser normalization indicated that this grouping presents a single-component and reliable construct ($\lambda = 4.76$, $\alpha = .902$).

2. *Shielding*

A second component of the criminal interaction order raised by Goldsmith and Brewer (2015) is the role of the internet and electronic means of communication as an involvement shield. Such shields were initially described by Goffman (1963) as physical or occupational structures designed to mask individual's' negative behaviors in the interest of maintaining an observable level of involvement, such as hiding smoking areas at public hospitals. Goldsmith and Brewer (2015) argue that the abstract and far-reaching nature of the internet similarly provides an involvement shield for cyber criminality through electronic means, allowing individuals to engage in the selective filtration of social obligation and commitment (Stalans & Finn, 2016; Goldsmith and Brewer, 2015). Connected individuals are now intrinsically leveraging the abstract nature of the internet for identity maintenance, including taking active steps to disguise their online deviant activities. Individuals are empowered to interact with one-another virtually through disconnected proxies, thereby limiting, or altogether replacing, the traditional social antecedents to drift (Matza, 1964; Goldsmith and Brewer, 2015).

To this end, Goldsmith and Brewer call on investigations into the 'sources of reassurance that no one will be caught' (p. 120). This relationship has been explored by Lwin and Williams (2003), who confirmed that attitudes reflecting trust in one's abilities online positively correlate with producing fake identity information and internalizing

strategies to mitigate online risks. Our scale for measures of trust was derived from a questionnaire that was designed and validated by Lwin and Williams (2003). Participants were asked to rate their response to various statements about protecting their online identity using a seven-point Likert system. The results from this study were used by Lwin and Williams (2003) to champion the concept of a “privacy calculus” (p. 269). For the purposes of this study, Lwin and Williams’ (2003) questionnaire was adapted to address a) changes to Internet usage with a focus on the rapid integration of social media into personal lives; and b) recent revelations of wide scale personal information from state and corporate interests. Seven additional statements were added to the matrix for a total of twenty measures formatted in five point Likert-style format. This ensured continuity with the CSE explored above; this adapted scale will hereby be referred to as the Adapted Privacy Calculus Scale (APCS). A reduced version of the APCS, focusing on six concepts related to shielding, was retained for the current study; principal component analysis of the scale using varimax rotation and Kaiser Normalization indicated a single-component structure ($\lambda = 3.37$, $\alpha = .842$).

3. Imitation

The multi-faceted form of the internet allows for the creation of customized knowledge networks that provide venues for digital congregation centered on counter-hegemonic exchange (Castells, 2009). These networks occur across multiple platforms and may incorporate unilateral, bilateral, and multilateral forms of communication. For example, the popular social media resource ‘reddit’ allows individuals to view, or ‘lurk’ the website without any additional interaction; they can comment or contribute to the site in a one-to-many nature; and they can engage in both public and private forms of direct communication with specific users on the website (i.e. public commenting, private messaging). This, and many other social media platforms, also allows individuals to customize their information networks by subscribing, following, joining, or otherwise selecting the information that will appear on their personal landing pages and feeds. ‘Reprogramming’ (Castells, 2000) the internet to match personal tastes may amplify exposure to complementary perspectives and instigate a tautological ‘echo chamber’ effect that confirms nascent or developing perspectives (Klayman, 1995).

To this end, Goldsmith and Brewer (2015) claim that the internet ‘operates as a readily accessible archive of information and ideas that can both motivate and guide action’ (p. 120). At its core, this concept suggests that individuals ‘interact’ with digitally available information, absent of direct and/or personal encounters, enabling structural slippage (Sheller, 2004). This raises the question of indirect associations and their influence on the replication of deviant behaviors. For example, a number of studies have investigated the seemingly organic formation of the hacktivist group ‘anonymous’ through participation on social media platforms like 4chan or reddit (e.g. Knutilla, 2011; Stryker, 2011; Wiedemann, 2014; etc.). The salience of this issue arises when considering music piracy: a great deal of user-generated, anonymous, and asynchronous resources are available online for those motivated to learn about piracy, lending to the development of loosely organized and anonymous communities such as those observed on ‘the pirate bay’. Elements of the social learning theory provide some insight into these processes, particularly through application of the modeling/imitation components of social learning (e.g. Akers, 2009). In general, this concept holds that individuals are likely to replicate the deviant behaviors of

individuals whom they hold in esteem, particularly at the outset of delinquency. Furthermore, Akers (2009) suggests that new forms of media, particularly those of an individualistic nature like the internet, may act as proxy for peers with regard to imitation.

To date, tests of digital association and imitation have largely produced mixed results (Holt, Burruss, & Bossler, 2010); however, recent studies by Hinduja and Ingram (2009), as well as Miller and Morris (2016) have demonstrated that online peer associations at the very least have equally predictive strength for piracy as do traditional face-to-face relationships. One of the most notable tests of social learning theory in the context of music piracy was conducted by Hinduja (2006). Notably, both of these studies relied on older data sets (2003 and 2010, respectively), which, by necessity, omitted several significant changes in modes of social media consumption, such as reversion to anonymized and de-centralized formats mediated by smartphone technologies. A more up-to-date dataset may provide contrasting outcomes. This study tested the etiology of computer crime by adapting a survey of computer deviants developed by Skinner and Fream (1997). Drawing from Hinduja's model, a series of six questions relating online music piracy and imitation were operationalized for the present study. Principal component analysis of the scale using varimax rotation and Kaiser Normalization indicated a single-component structure ($\lambda = 2.45$, $\alpha = .725$).

4. *Affect*

The fourth tenet present in Goldsmith and Brewer's (2015) discussion of the criminal interaction order is that of *affect*, or "a person's favorable or unfavorable assessment regarding the behavior in question" (Ajzen, 1991, p. 188). In relation to the nominal 'voracious collector' described above (Bossewitch & Sinnreich, 2013), Goldsmith and Brewer explain that a certain level of curiosity is required to catalyze engagement with the pragmatics of digital media prior to shaping knowledge networks. This is evidenced by the illustrative examples of lone wolf terrorism and cyber paedophilia set out in their paper. In both cases, the content matter serving as familiarized social proxies is not readily available with simple searches of the internet but rather must be actively pursued, suggesting that one must first have an affinity for the subject or issue. Wiemann's (2010) analysis of terrorism resources made available through predominant social media platforms identifies the importance of key search terms, ideas, or phrases that serve as barriers to the uninformed, or unmotivated, individual. These challenges are further aggravated by the modern scope of an internet that is dominated by corporate interests vested in maintaining market (and therefore advertiser) shares, resulting in an ever-increasing level of stewardship over 'open' platforms like Twitter or Facebook (Jackson, 2014). Even in cases where the subject matter is relatively easy to find, such as music piracy, there must first be a motivation to locate deviantised and controlled information resources.

As discussed above, this observation lends itself to the conceptual inclusion of affect, which is often included in applications of the theory of planned behavior. This theory posits that personal dispositions are heavily influential on resulting behaviors and pivots along three planes including attitudes, subjective norms, and perceived behavioral controls (Ajzen, 1991). While the latter two issues are beyond the scope of this study, the notion of attitude (affect) sheds light onto the question of why an individual might first seek out deviantised knowledge by framing it as a product of pre-existing beliefs about the issue inclusive of subjective moralities. A number of studies have effectively applied this

concept to music piracy (e.g. Yoon, 2011; Panas & Ninni, 2013; Phau et al, 2014; etc.), posing questions about the individual's moral standing toward deviant online activities, as well as their valuation of possible outcomes. For example, Phau et al. (2014) identified the predictive significance of affect and moral judgment on shaping an individual's intention to pirate music. Similarly, Panas & Ninni (2013) demonstrated that one's social norms, and particularly their ethical standpoint on pirating activities, play a significant role in determining the amplitude of individual downloading behaviors. Interestingly, the concept of affect parallels that of 'definitions' outlined by Akers (2009) and most recently tested, with similar results, in Morris & Miller (2016). For the purposes of the current study, a singular measure of affect was employed, reflecting the procedures employed by Panas & Ninni (2013).

5. Moral disengagement

Finally, Goldsmith & Brewer (2015) point to what they term 'digital drift' as the outcome of the criminal interaction order, wherein individuals granularly neutralize the deviance of their actions by framing them as extraordinary instances of excusable amorality. In the current study we employ Bandura's (1978) extension of neutralization, termed 'moral disengagement,' as a metric for drift. The theory of moral disengagement holds that 'in the exercise of moral agency people refrain from behaving in ways that violate their moral standards because such conduct will bring self-condemnation' (Osofsky, Bandura, & Zimbardo, 2005, p. 371). Bandura's (1986) approach differs from previous neutralization studies in that he understands neutralizations to have a cumulative effect on the actor, facilitating greater levels of engagement in the minimized deviant act over time. He explains that the change from a 'considerate person' to an 'unprincipled, callous one' (p.385) occurs gradually and often begins with a level of discomfort on the individual's part. However, as their participation in the action continues, their level of discomfort diminishes, and the level of participation in the deviant act increases. This process is further mediated by distancing from those subject to the deviance (Bandura, Underwood, & Fromson, 1975); this is particularly suitable for music piracy, which lies at the crux of a dehumanized recording industry and the anonymous nature of the internet.

Several articles indicate the applicability of digital drift to music piracy. For instance, Morris & Higgins (2009) found that college students who download music are more likely to have developed neutralizations about their behavior, and that these neutralizations are impacted by peer reinforcements. These findings have further been supported by Hinduja (2006) and Ingram and Hinduja (2008). For testing purposes, this study employed a series of eight Likert-style statements relating to the four meta-categories of moral disengagement defined by Bandura (1986) - *moral justification*; *displacement/diffusion of responsibility*; *minimizing/ignoring/misconstruing consequence*; and *dehumanization/attribution of blame*. These statements were adapted from Bandura et al's (1996) survey to include elements of the language used by Rogers' (2001). In line with the methods discussed in Bandura et al (1996), a cumulative and singular measure of moral disengagement was created and used as the primary dependent variable for the current study. Principal component analysis of the scale using varimax rotation and Kaiser Normalization indicated a single-component structure ($\lambda = 3.04$, $\alpha = .836$)

Method

Sample and data

Data were collected from 615 participants via an electronic survey using a non-random convenience sampling procedure. Participant recruitment consisted of three overlapping social media campaigns using email, Facebook, and reddit marketing approaches beginning in April 2015 and concluding the following September. Participation was restricted to individuals residing in Canada; moreover, the vast majority of responses were collected via postings in the ‘subreddits’ (stub forums) for Canadian post-secondary institutions on the popular website reddit. This sample is therefore disproportionately young and educated, and provides a decidedly Canadian-centric context; however, the scope of participants reflects those identified in previous convenience sample-based research on music piracy (e.g. Hinduja, 2006; Bateman, Valentine, & Rittenburg, 2012; Burruss, Bossler, & Holt, 2012; Miller & Morris, 2016), which have been demonstrated to be congruent with broader populations in specific applications (Popham, 2011). General sample characteristics are presented in Table 1.

Table 1. General sample characteristics

Variable	N	%	X	SD
Gender	614	99.6		
Male	373	60.6		
Female	227	36.9		
Trans/Other	14	2.3		
Age	614	99.6	25.7	8.1
35 and younger	557	90.8	23.7	4.7
36 and older	57	9.2	45.0	9.4
Education	604	99.6		
Undergrad	310	50.5		
Graduate	61	9.9		
Studies				
Graduated	163			
Not completed	27			
Use digital music	599	97.2		
Purchase digital music	392	63.6		
Pirate digital music	526	85.4		

Results

a. Bivariate Analysis

In keeping with similar linear regression studies of piracy (e.g. Malin & Fowers, 2009; Panas & Ninni, 2011; Batemean, Valentine, & Rittenburg, 2012), the initial stage of testing for the current study employed a bivariate cross-tabulation of each primary predictor variable outlined above. This process is a first step toward better defining measures for further hypothesis testing. Each of the constructs were standardized as continuous variables with a maximum score of 5 and a Pearson’s product-moment correlation was employed to identify any statistically significant relationships. As is presented below, all test variables are significantly and linearly correlated with the moral disengagement measures representing *drift* as detailed in Table 2. Moderate-strong relationships were noted between the test variable and *imitation* ($r = .465$; $p < .05$) as well as *affect* ($r = .471$; $p < .05$) whereas *encounter* ($r = .195$; $p < .05$) and *shielding* ($r = .218$; $p < .05$) were somewhat weak. Despite differences in strength, all primary predictor variables were retained for further hypothesis testing due to their universally significant impact on the test variable.

Table 2. Bivariate analysis matrix for test variables

Variable	M	SD	N	V1	V2	V3	V4	V5
V1. Encounter	2.73	1.14	615	--				
V2. Shielding	2.96	.79	615	.535**	--			
V3. Imitation	2.91	1.03	615	.289**	.235**	--		
V4. Affect	3.20	1.15	601	.108**	.107**	.380**	--	
V5. Drift	3.28	.74	610	.195**	.218**	.465**	.471**	--

** $p < .01$ (1-tailed)

b. Linear Regression

A multiple regression was run to predict *drift* (indicated by moral disengagement) based on the standardized variables developed above; *encounter*, *shielding*, *imitation*, and *affect*. All assumptions for this method were met (Field, 2013), and the multiple regression model statistically significantly predicted *drift* $F(4, 593) = 70.515$, $p < .05$, adj. $R^2 = .318$. Notably, only three of the four variables significantly contributed to the model - specifically *shielding*, *imitation*, and *affect*. *Encounter* only marginally affected the model ($B = .015$; $t = 0.583$; $p = .560$), reflecting the weak correlation identified above. A second multiple linear regression - this time excluding the *encounter* variable - was performed. This revised model is marginally better at predicting the test variable, $F(4, 593) = 94.011$, $p < .05$, adj. $R^2 = .319$, $p < .05$. After excluding *encounter*, all three variables significantly contribute to the model. Table 3, summarizes both models.

Table 3. Regression model summaries for moral disengagement

Variable	Model 1			Model 2		
	B	SE(B)	β	B	SE(B)	B
Constant	13.40	.941		13.414	.940	
Encounter	.015	.026	.024	–	–	–
Shielding	.105	.050	.084**	.120	.044	.095**
Imitation	.288	.037	.300**	.293	.036	.304**
Affect	1.758	1.87	.345**	1.756	.187	.344**
Adj. R2		.318**			.319**	
F (4, 593)		70.515*			94.011*	
		*			*	

** p < .05

Discussion and Conclusion

i. Interpretation

Generally speaking, this study demonstrates a relationship between several of the conceptual components of the digital criminal interaction order (Goldsmith and Brewer, 2015) and moral disengagement - or drift - from harms associated with music piracy. While the relationship between moral disengagement (or similar concepts) and cyber deviance, including digital piracy, has been effectively explored in previous research (e.g. Rogers, 2001; Higgins, Wolfe, & Marcum, 2008; Vida et al., 2012; Kos Koklic et al., 2016; Lowry et al., 2017, etc.), the current study adds to this field by developing an integrative approach that reflects the post-web 2.0 realities of the internet (Zimmer & Hoffman, 2016). Specifically, this paper illustrates that drift from conventional norms about music piracy can be predicted amongst individuals who 1) consider themselves competent at protecting their identity online; 2) indicate that they are likely to learn about deviant actions through online sources or peers; and 3) and indicate a supportive predisposition for online deviance. Notably, one's self-efficacy with computing-related tasks did not significantly influence this model, contrasting earlier research findings (e.g. Cronan & Al-Rafee, 2008; Gerlich, Lewer, & Lucas, 2010; Shemroske & Silva, 2015). This model is further explored below.

ii. Shielding

As discussed above, a self-efficacy measure of one's competency to protect their personal identity online was employed to test for the *involvement shields* described by Goldsmith & Brewer (2015). The results presented above indicate a trajectory similar to this component of their criminal interaction order: an aggregated measure of respondents' sense of efficacy in engaging in behaviors aimed at protecting their personal identity online is linearly related with moral disengagement. While the strength of this relationship was somewhat weak in both the bivariate and regression analyses, it was nonetheless consistently pronounced and statistically significant. This finding aligns with previous

studies that demonstrated the mediating effect of anonymity, or a sense thereof, on one's adherence to or eschewal of socialized moral conventions (e.g. Peukert 2010; Baggili & Rogers, 2009) as they relate to online micro-deviation. In the case of music piracy and the criminal interaction order, this finding suggests that the anonymity inherent to the process of downloading copyrighted music empowers individuals with a sense of amorality about their activities. This may come as a result of the longstanding prevalence of the activity itself, a perceived absence of regulatory enforcement, the frequency with which it is encountered, or perhaps as a symbol of cultural resistance (Burkart & Schwarz, 2015; Bateman et al., 2013; Popham & Daschuk, 2012).

iii. Imitation

The second substantive finding present in this study is the relationship between imitation of deviant behaviors and moral disengagement. In this case, a moderate-strong linear relationship was identified in the bivariate analyses provided above, and the aggregated variable for imitation significantly contributed toward a predictive model of moral disengagement. This finding generally aligns with well-established tests of social learning theory in relation to music piracy (e.g. Skinner & Fream, 1997; Hinduja, 2001; Higgins & Makin, 2004; Higgins, Wolfe, & Ricketts, 2009; Hinduja & Ingram, 2010; etc.), and strengthens knowledge about the relationship between digital peers with engagement in music piracy, which have been moderately established in past studies (Hinduja & Ingram, 2009; Miller & Morris, 2016). This study demonstrates that individuals who express association with digital resources and peers have greater levels of moral disengagement.

iv. Affect

The final component of the criminal interaction order tested in this paper was affect, or one's predisposition toward a deviant activity. The inclusion of this variable was a logical outcome from Goldsmith & Brewer's (2015) application of their theory, which indicates the importance of a pre-existing sympathy, or affect, for the deviant behavior. For the current study, a singular and validated measure drawn from the theory of planned behavior was employed (Panas & Ninni, 2011). As with *imitation*, a moderate-strong linear relationship between affect and moral disengagement was noted, as well as a significant contribution to the predictive model. Past research in this realm have produced similar results (e.g. Yoon, 2011; Al-Rafee & Dasht, 2012; Phau et al., 2014; etc.); this study adds to this knowledge by confirming a relationship between predisposition and moral disengagement from the harms associated with music piracy

Limitations

The methodology employed in this study is not without limitation, and several considerations must be communicated. First, the sample used for this study was derived from a non-random survey. While it produced a considerable number of responses, one must be cautious of the self-selection and instrumental biases that may be present in samples of this nature. Second, the sample was primarily young, educated, and Canadian. Although music piracy is certainly predominant amongst young post-secondary students (Malin & Fowers, 2009), readers should be cautious about the exclusion of broader demographic groups - nor would the authors wish to say that Canadians are representative

of global trends. Finally, the survey mechanisms themselves were designed as part of a larger study that relied on self-reporting to collect information. In the post-Snowden era of the internet, certain segments of the digital community may have been more reticent to provide accurate details than others. Moreover, some measurement error may have occurred in this survey. This is most clearly demonstrated by the insignificant contribution of technological ability (*encounter*) on the overall model for predicting moral disengagement, a finding that is contrary to other studies relating technological capacity with neutralizations.

Implications and Future Research

This paper makes two significant contributions toward studies of cyber criminality. First, it provides a validated set of measures that can be employed to demonstrate the presence of the criminal interaction order described by Goldsmith & Brewer (2015). While this theory has begun to gain traction in the academe, it has not yet been fully tested; these findings therefore provide some inroads toward more fully realizing its potential. The integrative approach employed above provides a novel solution founded upon established research to develop a concrete set of test variables.

Second, this study demonstrates an application of Goldsmith & Brewer's (2015) theory to interpret a significant deviant online phenomenon: music piracy. Specifically, it identifies a series of antecedents to moral disengagement, or digital drift, from traditional socio-legal norms about intellectual property rights. These results are consistent with findings from other research, particularly those described in Lowry et al.'s (2017) recent meta-analysis which highlighted the roles of social learning, self-efficacy, outcome expectancies, and moral disengagement in predicting music piracy amongst more than two hundred articles. As explored above, music piracy has persisted despite multi-pronged approaches to curb its occurrence (Popham v Daschuk, 2013). Our study therefore casts light on the obstinance of this phenomenon by demonstrating how the discontinuous nature of the internet itself may drive individuals to drift from traditional socio-legal norms about intellectual property.

Moreover, the emphasis on digital interactions in these measures provides for a framework that can be applied to the 'modern' internet. The past decade of hyper-informatization has culminated with the development of a rich, decentralized, and often anonymized internet that carries a number of new and interactive forms of communication. Simultaneously, these developments have catalyzed new social practice that includes a growing presence of purely digital relationships. As the field of cyber criminology expands, and the means of online delinquency adapt to evolutions of the internet, new adaptations of traditional theories will be needed. This study presents one step in that direction; however, future studies might consider developing a more concise set of metrics for measuring digital-only communication and influences that reflect the social media-driven post web 2.0 internet. Additionally, more specific qualitative studies that relate each of the components described above with individual perspectives on engagement in and regulation of music piracy will add to the field. Future researchers might consider how ubiquitous and seemingly unrestricted access to deviant communities may strengthen these implications.

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