Attitudes towards music piracy:

The impact of positive anti-piracy messages and contribution of personality

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ABSTRACT

Conventional anti-piracy strategies have been largely ineffective, with pirates adapting successfully to legal and technological changes. The present research aims to address the two principal areas of research – predictive factors and deterrents – in a novel way with personality being considered as a potential predictive factor and positive anti-piracy messages proposed as a potentially effective deterrent. 261 participants (45.6% male) with a mean age of 26.3 participated in an online questionnaire, outlining their music consumption preferences and completing the 60-item version of the Hexaco PI-R (Lee and Ashton, 2004) before being allocated to one of four conditions: legal sales of music encourage future live performances, legal sales of music allow fans greater access to exclusive content, legal sales of music will incorporate charitable donations and a control. Participants' attitudes towards music piracy were then measured using an original construct (AMP-12). Condition had no effect on piracy attitudes where personality was a significant predictor with participants scoring higher on the AMP-12 scoring lower on honesty-humility and conscientiousness and higher on openness. Openness emerged as a key individual difference, with participants scoring higher on this trait demonstrating a greater likelihood to favour vinyl, re-mastered versions of albums and listening to live recordings. Crucially, preference for digital music was a significant predictor of pro-piracy attitudes. Several demographic differences were also observed which point towards a gender-segmented approach in appeasing individuals engaging in music piracy as well as accommodating the increasing trend for digital music. Implications for future anti-piracy strategies are discussed.

I.   INTRODUCTION

A large volume of the literature to date on music piracy concerns two key factors: deterrents and predictive factors. Both will be briefly considered.

Deterrents.

Anti-piracy campaigns have largely failed to address the phenomenon of widespread engagement in music piracy, with Wikstrom (2011) suggesting that: 'Perhaps the single most enduring effect of these initiatives has been a negative impact on the reputation of the music industry" (p.155). Traditional anti-piracy campaigns focus on the punitive measures which could be taken if caught downloading copyrighted media illegally, with the majority of deterrent research focusing on legislative and technological changes; such as a consideration of technical copy protections (Djekic and Loebbecke, 2007) and fear of computer viruses (Wolfe, Higgins and Marcum, 2008). Ongoing findings suggest that individuals engaging in piracy adapt well to such changes, where for example, while P2P usage in USA dropped after file-sharing giant Limewire

was closed, usage on other P2P services increased (Forde, 2011).

More interestingly however, are the findings from three studies by Sinha and Mandel (2008), who observed that negative incentives are only a strong deterrent for certain consumers but can actually increase the propensity to pirate for others. Conversely, positive incentives, such as improved functionality, were observed to significantly reduce the tendency to pirate among all the consumer segments studied; with 56% of Swedish file-sharers citing Spotify as the reason they had curbed their habit (Jones, 2011). Given the shortcomings of conventional deterrent approaches, an exploration of positive incentives is justified as a platform for building suitable alternatives in dealing with music piracy.

Predictive factors.

Research on predictive factors has spawned a wealth of individual differences, including gender and age (Mishra, Akman and Yazici, 2006; Malin and Flowers, 2009). Attitudes toward the act of digital piracy, the frequency of past digital piracy behaviours and the motivations and intentions underlying digital piracy (Taylor, Ishida and Wallace, 2009) have been established as predictive factors. Elsewhere, and crucially, the intention to swap music on-line has been demonstrated as depending on one's attitude toward music piracy, one's perception that important others want that this behaviour be performed, and one's perceived competency in doing so (d'Astous et al, 2005). This finding is consistent with the theory of planned behaviour, suggesting engagement in piracy to be a largely considered activity, where impulsivity is typically over-represented amongst criminal populations.

As such, and given that it has been largely neglected in piracy research, personality is of interest as a potential predictive factor. Related research has discovered personality as a mediator of individuals' choice and motives for listening to music (Chamorro-Premuzic, Swami, Furnham and Maakip, 2009; Chamorro-Premuzic & Furnham, 2007; McCown, Keiser, Mulhearn and Williamson, 1997 and Rentfrow and Gosling, 2003) where lower willingness to buy counterfeit goods has been shown to be moderated by conscientiousness (Swami, Chamorro-Premuzic and Furnham, 2009).

Research Questions.

The present research aims to draw together the two conventional lines of research in music piracy – deterrents and predictive factors – in a novel way, by exploring: the impact of positive incentives on attitudes towards music piracy and whether or not personality is a predictive factor in attitudes towards music piracy. Additionally, continued research into the role of demographic differences will be considered.

II. METHODOLOGY

Design.

The study employed an experimental design with participants allocated to one of four conditions (between-subjects) before responding to questionnaire items (within-subjects), which included an original measure, the AMP-12 and the 60-item version of the Hexaco Personality Inventory (Lee and Ashton, 2004). In three of the conditions, participants were exposed to brief paragraphs outlining positive incentives in purchasing music legally. A fourth condition served as a control with no exposure to any text.

Participants.

Opportunity sampling was adopted with participants recruited using several professional mailing lists and online research websites. A final sample of 261 participants was used in data analysis, representing 73.9% of the initial sample brought forward. This final sample consisted of 119 males (45.6%) and 142 females, with a mean age of 26.3 and an age range of 54 (15-69). Participants were evenly distributed amongst conditions, allocated to different conditions using a quota sampling method.

Materials.

A questionnaire was designed using a variety of scale, closed and open ended questions. The questionnaire was designed in such a way as to minimize potential bias by avoiding using the word piracy and presenting the questionnaire as an attitudes survey exploring the impact of technology on how we consume music.

Independent variable: Positive incentives/conditions.

To test the impact of positive Anti-Piracy messages or positive incentives to purchase music legally, a series of vignettes were devised. These were: legal sales of music encourage future live performances, legal sales of music will allow fans greater access to exclusive content and legal sales of music will incorporate charitable donations. In each of the experimental conditions, particular incentives were presented as a likely result of future engagement in legal purchasing of music.

An excerpt from the 'Legal sales of music encourage future live performances' condition can be found below.

If fans purchase more recorded music, including digital and hard copies, artists can find the means to continue writing music and performing live, giving fans a greater opportunity to see their favourite acts in the flesh.

Dependent variable: Personality.

Personality was measured by means of the 60-item version of the Hexaco PI-R (Lee and Ashton, 2004) which explores 6 major dimensions of human personality: Honesty-Humility, Emotionality, Extraversion, Agreeableness (versus Anger), Conscientiousness and Openness to Experience. Participants are required to indicate their level of agreement with items on a 5- point scale from strongly agree to strongly disagree.

deVries, deVries and Feij (2009) explain that the addition of Honesty-Humility in the model better explains sensation-seeking and risk-taking than rival trait models, especially through its relationship with disinhibition. Additionally, Weller and Tikir, (2011) demonstrate that the honesty/humility dimension showed the strongest associations with behaviours that offer rewards which are generally considered to run counter to moral and legal conventions. The Hexaco PI-R (Lee and Ashton, 2004) is therefore argued as an appropriate measure of personality to be considered in the context of music piracy.

Dependent variable: Attitudes towards music piracy (AMP-12).

An original scale (presented as *Attitudes towards the impact of new technologies on how we access music*) was created to fill a specific research purpose, namely measuring attitudes towards music piracy in an unobtrusive way. A 12-item scale measuring participants' propensity to agree with Pro-Piracy statements was generated and demonstrated as reliable (.755). It is further deemed to display suitable content validity and predictive validity with the notable advantage of not asking participants to self-report actual piracy engagement. Given attitudes towards piracy have been established as predictor of engagement in piracy (Taylor et al, 2009), the instrument is regarded as optimal for the aims of the research.

Dependent variable: Music consumption preferences.

In addition to demographic questions, a series of music consumption questions were also constructed. These included questions measuring consumption preferences for both recorded music and live music, such as *Do you purchase re-mastered versions of albums you already own?*

Procedure.

Participants were asked to complete an online questionnaire where a brief background to the study itself was first provided on a page outlining the nature of participants' involvement. This was followed by a number of demographic questions and a section concerning music consumption preferences where participants were presented with a variety of questions in both closed and open-ended formats. Participants were then presented with an explanation of the scale used in scoring personality, followed by the personality items of the 60-item version of the Hexaco PI-R (Lee and Ashton, 2004). At this point, participants were allocated to one of the four conditions, where a background text was presented.

Participants were then asked to rate their levels of agreement to a series of 12 statements measuring attitudes towards piracy (AMP-12) using the same 5-point scale used in the Hexaco PI-R. This marked the end of the questionnaire, where participants were thanked for their involvement.

III. RESULTS

Can positive Anti-Piracy messages manipulate attitudes towards music piracy?

In order to test the hypothesis that attitudes towards piracy would differ as a result of which positive Anti-Piracy argument participants were presented to, a between-subjects ANOVA

was conducted with condition computed as a fixed factor and scores on the AMP-12 computed as the dependent variable. There was a non-significant effect of condition ($F(3, 275) = .273$, $p = .845$, partial n2 = .00). As no observable differences were found between scores as a result of condition, no follow-up tests were conducted.

Is personality a significant predictor of attitudes towards music piracy?

In order to test the hypothesis that participants' personality would be a predictive factor of attitudes towards music piracy, a repeated-measures ANOVA was conducted with condition computed as a between-subjects variable. There was a significant main effect of personality ($F(5, 1280) = 4.97$, $p = .000$, partial n2 = .02), and a significant interaction between personality and AMP-12 scores ($F(5, 1280) = 5.41$, $p = .000$, partial n2 = .02). In all instances the Greenhouse-Geisser correction was applied as Mauchly's test of sphericity was significant, with no observed changes

Exploring personality further using ANOVA, there was a significant effect of the Honesty-humility facet ($F(1, 251) = 5.424$, $p = .021$, partial n = .02), a significant effect of the Conscientiousness facet ($F(1, 251) = 10.123$, $p = .002$, partial n2 = .04) and a significant effect of the Openness facet ($F(1,251) = 17.561$, $p = .000$, partial n2 = .07). Correlation tests revealed the direction of these relationships (see figure 1, below).

Figure 1. Correlation between AMP-12 scores and Hexaco Personality facets

AMP-12	H	E	X	A	C	O
Pearson correlation	-.163*	-.060	.050	-.020	-.167*	.210*
P-value	.008	.331	.418	.753	.007	.001

*   *Correlation significant at the 0.05 level (2-tailed)*

The figure above illustrates the direction of the relationship between personality facets and scores on the AMP-12, with participants favouring Pro-Piracy statements scoring statistically lower mean scores on honesty-humility, conscientiousness and higher on openness. Openness emerged as a key predictive factor, further to additional analysis.

There was a significant effect of openness ($F(2, 260) = 11.549$, $p = .000$) on format preference where planned comparisons using the Bonferroni correction revealed that participants who preferred vinyl reported significantly higher (4.24) mean scores on the personality factor of openness than those who preferred digital (3.90) or CD (3.80). There was also a significant effect of openness ($F(2, 260) = 5.501$, $p = .005$) on whether or not participants reported buying re-mastered versions of albums they already own, where planned comparisons using the Bonferroni correction revealed that participants who reported that they did buy re-mastered versions scored a higher mean on openness (4.07) than those who did not (3.86). Finally, there was a significant effect of openness ($F(2, 260) = 4.842$, $p = .009$) on whether or not participants reported listening to live recordings. Planned

comparisons using the Bonferroni adjustment revealed that those who reported that they did reported a significantly higher mean (4.00) than those who did not (3.80).

Given the significant results of the three facets outlined above, the Honesty-humility factors of sincerity, fairness, greed-avoidance and modesty were computed along with the Conscientiousness factors of organisation, diligence, perfectionism and prudence and the Openness factors of aesthetic appreciation, inquisitiveness, creativity and unconventionality. Significant correlations were observed between AMP-12 scores and the following personality factors: fairness ($r = -.336$, N = 261, $p = .000$, 2-tailed), creativity ($r = .156$, N = 261, $p = .011$, 2-tailed), diligence ($r = -.147$, N = 261, $p = .018$, 2-tailed), organisation ($r = -.162$, N = 261, $p = .009$, 2-tailed), inquisitiveness ($r = .156$, N = 261, $p = .011$, 2-tailed) unconventionality ($r = .160$, N = 261, $p = .010$, 2-tailed). While these factors were significantly correlated, only the factor of fairness from the Honesty-humility facet was observed to be significant using ANOVA ($F(1, 256) = 41.836$, $p = .000$, partial n2 = .14).

Are demographic differences significant predictors of attitudes towards music piracy?

No significant difference was observed between gender and scores on the AMP-12 where an independent-groups t-test was conducted (t = .219, df = 259, $p = .827$, 2-tailed). The results do not support the findings from previous research that males are more likely to favour piracy than females.

More albums were reported to be bought by males (14.94) than by females (6.29), where an independent t-test showed the difference between the two groups to be significant (t = 3.93, df = 254, $p = .000$, 2-tailed). Equal variances were not assumed further to Levene's test being significant. More concerts were reported to be attended by males (9.28) and females (6.56) with an independent groups t-test showed the difference between the two groups to be non-significant (t = 1.34, df = 258, $p = .183$, 2-tailed). Furthermore, observations from a Chi-Square indicated that there was also a relationship between gender and whether or not participants buy re-mastered versions of albums already owned: χ^2 (2, N = 261) = 6.407, $p = .041$ where a greater number of males reporting purchasing re-mastered versions of albums already owned (45.5%) than females (29.6%).

A significant negative correlation was found between age and AMP-12 scores ($r = -.186$, N = 261, $p = 0.03$, 2-tailed). This finding is consistent with previous literature in suggesting individuals engaging in music piracy to be typically younger.

Music consumption testing

A relationship between participants' preferred music format and whether or not they had a music subscription service: χ^2 (4, N = 261) = 12.580, $p = .014$ was noted, with a trend for those who use subscription services to favour digital music. This is an intuitive finding, given that subscription services such as Spotify are digital.

Under the assumption of a preference for digital music to allow for greater opportunity to illegally procure music, a one-way ANOVA was conducted between format preference and scores on the AMP-12. There was a significant result ($F(2,$

260) = 14.793, p = .000, with post-hoc tests using the Bonferroni correction revealing the pattern of results where the highest mean score on the AMP-12 found to be amongst participants favouring digital music, confirming the hypothesis.

A relationship between participants' preferred format of music and whether or not they reported purchasing re-mastered versions of albums already owned: χ^2 (4, N = 261) = 32.271, p = .000 was also observed. Participants who reported a preference for CD's were more likely to buy re-mastered versions of already owned albums than participants who preferred digital music. This is also an intuitive finding given that re-mastered versions of albums come in CD format.

A relationship was also found between participants' preferred format of music and whether or not they reported listening to live recordings: χ^2 = (4, N = 261) = 10.935, p = 0.27, with participants favouring vinyl reporting a greater likelihood of listening to live recordings. It is likely that this finding stems from the observation of participants favouring vinyl to score higher on openness, where such individuals were found to be typically more open to music in all its various forms.

A significant positive correlation was also observed (r = .380, N = 261, p = .000, 2-tailed) between the mean amount of albums bought in the last 12 months and the mean amount of gigs attended in the last 12 months. This suggests that the same music fans who attend live music also purchase recorded music.

IV. DISCUSSION

This study aimed to draw together the two conventional lines of research on music piracy – deterrents and predictive factors. The research also aimed to introduce potential new individual differences, using an original construct (the AMP-12) to unobtrusively measure attitudes toward music piracy.

The results do not support the hypothesis that positive Anti-Piracy messages can be used effectively to manipulate attitudes towards music piracy. The result is consistent with d'Astous et al (2005) who observed that Anti-Piracy arguments had no significant impact on the behavioural dynamics underlying on-line music piracy. In the present study, there was no effect of condition on scores on the AMP-12, suggesting that Anti-Piracy messages, even framed in a positive way, are unlikely to be a successful approach in tackling music piracy.

Findings on the Hexaco PI-R (Lee and Ashton, 2004) propose a personality profile of individuals favouring music piracy as scoring low on Honesty-Humility, low on Conscientiousness and high on Openness. A lower score on honesty-humility amongst participants scoring higher on the AMP-12 is intuitive, given the inherent unfairness of robbing the creative industries of profiting from their endeavours. Unfairness emerged as the key factor contributing to the significant finding of lower scores on the Honesty-Humility facet, where de Vries et al (2009) have established that unfairness (using the Hexaco PI-R) was strongly related to disinhibition; as measured using the 52-item Sensation Seeking Scale (Van den Berg and Feij, 2002), where disinhibition is one of four sub-scales. As such, the negative relationship between fairness and Pro-Piracy attitudes observed in present study could be mediated by the disinhibition effect of the internet, where future Anti-Piracy strategies would do well to be more salient at the point of illegal downloading

A lower score on conscientiousness amongst participants scoring higher on the AMP-12 is consistent with Swami et al's (2009) finding that lower willingness to buy counterfeit goods as being moderated by conscientiousness. Individuals scoring low on this facet would be expected to be more careless, making decisions impulsively. As has been stated previously, findings from literature point towards engagement in piracy as a largely considered activity (see Holt and Copes, 2010) with findings by d'Astous et al (2005) supporting the applicability of the theory of planned behaviour.

Higher scores on openness amongst participants scoring higher on the AMP-12 emerges only as a predictable outcome when considering results from further ANOVA tests in which openness was found to be a key individual difference. Participants scoring higher on this personality facet demonstrated a statistically greater likelihood to favour vinyl, re-mastered versions of albums and listen to live recordings. It is therefore assumed such participants are therefore more open to experiencing music in its many forms where music piracy merely facilitates this.

Format preference emerged as a crucial individual difference in accounting for music preferences, with participants favouring digital music also being more likely to use subscription services; those favouring vinyl to prefer listening to live recordings and those favouring CD being more likely to purchase re-mastered versions of albums. Crucially, preference for digital music was a significant predictor of Pro-Piracy attitudes.

While no significant differences were observed between gender and scores on the AMP-12, males were observed to be generally greater consumers of music overall. Perhaps the most novel result is that males are more likely to purchase re-mastered versions of albums already owned. This may be a result of males generally increased consumption of music or perhaps that audio quality may be a greater pre-purchase consideration for males than for females. Individuals favouring music piracy were noted as more likely to be younger, consistent with previous literature.

The wealth of individual differences which have been established from over a decade of research, including new ones identified in this study (notably format preference) point towards a new approach for future Anti-Piracy strategies: targeting individuals favouring music piracy as sub-groups. Considering the universal shortcomings of Anti-Piracy strategies, a move is argued as not only justified, but within the realms of possibility. Given consistent gender differences observed in relation to piracy, future Anti-Piracy messages could target males and females differently in much the same way as successful health campaigns have done. Findings such as females possessing higher risk perceptions and a readiness to pay for legal alternatives along with responding to enforcement actions and economic incentives with greater consistency (Chiang et al, 2008), could help inform a sensible framework with which to undertake such a bold move.

A deep-rooted antipathy (as defined by Nuttall, Arnold, Carless, Crockford, Finnamore, Frazier and Hill, 2011) towards the music industry may be impossible to address, where given the relative success of the likes of Nine Inch Nails (see Ogden, Ogden and Long, 2011) distributing music direct to fans perhaps indicates an altogether new approach to how artists and fans may interact in the future; successfully tackling present piracy trends. Future research exploring the unique relationships between fan and artist will shed light on the underlying dynamics of how such a move may function, where crucially Regner, Barria, Pitt and Neville (2009) have demonstrated that different distribution models will serve newcomers, established and retired artists differently and at different times over their respective life cycles.

Concluding remarks and suggestions for future research

Future business models and Anti-Piracy appeals must accommodate the increased desire for digital music (the most favoured medium amongst the sample), with Chesbrough (2009) commenting that: "Business model innovation is vital, yet very difficult.. the barriers to change are real. [Model] experiments will fail, but [if] they inform new approaches and understanding, this is to be expected – even encouraged" (p.362). The results of the present study reiterate the role digital music, having observed preference for digital music as a predictive factor of Pro-Piracy engagement. While this result could be interpreted as merely stemming from the fact that the majority of pirated music is obtained digitally, the finding nonetheless position digital music in the centre of the debate on how best to approach tackling music piracy.

No difference in piracy attitudes was found as a result of three unique positive anti-piracy messages, which emphasised the potential reward of engaging in the legal purchase of recorded music. This approach followed on logically from the findings of other deterrent-based research, where the opposite approach was the convention. The non-significant effect of condition adds to the literature on deterrents, suggesting similar Anti-Piracy messages would fail if practically implemented. Significant findings on personality add to the literature on predictive factors, where a personality profile of individuals noted as favouring music piracy is defined and notably marked by unfairness.

A segmented-approach to addressing music piracy is proposed, potentially focusing on gender, where future research is argued as best serving the literature by aiming to reduce the volume of individual differences and predictive factors by exploring new lines of research such as how the relationship between fan and artist may influence piracy engagement. Qualitative research would be appropriate for such a task, where more qualitative research in the area would be beneficial overall.

Curien and Moreau's (2009) remark that: "Record companies should accommodate piracy by taking advantage of its main positive feature – the ability to ensure large-scale access to music at a very low cost" (p.112). Given the increased preference for digital music, and in light of the non-significant findings of the deterrent approach in this study, it is recommended that future strategies to tackle music piracy should centre on meeting the demands of consumers rather than attempt to isolate them.

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