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Digital Piracy Through the Lens of Moral Intensity and Risk Perception: A Cross-Cultural Perspective

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Abstract

This study examines the psychological mechanisms underlying digital piracy and proposes a framework that considers the perception of potential negative consequences for the individual (personal risk) and for society (moral intensity) as key factors associated with piracy behavior and rationalization. The conceptual model is tested using online survey data from two online panel samples of adults in the US (n = 625, age range = [18, 92], M = 42.44, SD = 16.43) and Slovenia (n = 514, age range = [18, 65], M = 43.51, SD = 13.14). The multi-group analysis indicates that perceived moral intensity is related to both lower participation in digital piracy and lower rationalization of this behavior in both countries. Furthermore, perceived personal risk is linked with lower likelihood of having ever engaged in piracy, but it is not significantly associated with either frequency of piracy behavior or rationalization for those who have engaged in digital piracy at least once in either country. This suggests that concern for individual consequences is not a deciding factor in determining frequency of piracy. The results also show that engaging in digital piracy is associated with cognitive rationalization strategies and with greater normalization of such behavior. These findings highlight the interplay between perceptions of potential negative consequences, digital piracy behavior, and rationalization and provide a basis for practical implications, particularly for marketers in the online entertainment industry.

Keywords: digital piracy; personal risk; moral intensity; rationalization; USA; Slovenia

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Introduction

Digital piracy sits at the intersection of technology and human behavior, illustrating the complex dynamics of computer-human interaction in online environments. Various information goods industries have experienced unprecedented levels of uncertainty driven by the widespread impact of digital piracy. Broadly defined as a practice of illegal or unauthorized obtainment of files, such as movies, music, and software, from the internet (Kos Koklic et al., 2016), digital piracy has become a prevalent phenomenon permeating every country in the world and poses a growing concern about unethical use of the internet (Serenko, 2022; Tomczyk, 2021). Consequently, companies, industry-specific associations, and governments continue to invest substantive efforts in attenuating

this widespread problem, but with limited success. They either use external methods, such as law enforcement, or internal methods, where they design and price products to attract customers (Song et al., 2024).

Digital piracy is of interest not only to different industries and legal bodies but also to the academic community, where an ever-growing body of research encompassing various disciplines is evident. Within this context, individuals are some of the most important stakeholders to both industry and academics (Song et al., 2024). Despite the global nature of digital piracy, academic attention devoted to cross-cultural issues of piracy has been growing slowly (Udo et al., 2016). Indeed, there are few studies that have directly explored the effects of culture on digital piracy behavior (e.g., Ulman et al., 2021), and only a few cross-cultural digital piracy studies exist that compare two or more countries at a time (e.g., Eisend, 2019). If the motivating factors for digital piracy are consistent across cultures, companies could take standardized international measures instead of having to arrange country-specific approaches (Molina-Castillo et al., 2021). To that end, this study endeavors to increase understanding of digital piracy across two distinct countries: the United States and Slovenia.

While extant research has scrutinized various drivers of digital piracy demand, few works provide deep insights into the psychological deterrents of such behaviors. This gap is notable, as previous research has shown that human beings tend to react more strongly to negative entities (e.g., objects, traits, events) across a broad and diverse set of phenomena (Rozin & Royzman, 2001), highlighting the strong influence of negativity in the formation of attitudes and behaviors. Based on this perspective, it is important to examine how negatively framed drivers, such as perception of potential negative consequences for an individual and for society, act as particularly salient deterrents in the context of digital piracy. Another psychological factor of digital piracy pertains to individuals seemingly overcoming a possible moral dilemma by employing justification techniques (Hashim et al., 2018). Sykes and Matza's (1957) neutralization theory offers a perspective with which to analyze the increasing prevalence of deviant behavior in society. In line with this theory, individuals avoid feeling guilty or ashamed by verbalizing justifications, which ultimately leads to the continuation of misbehavior.

Against this backdrop, this study's research objective is to develop and empirically test a model of digital piracy that explains how negatively valenced antecedents (perceived individual and societal negative consequences) are associated with individuals' piracy behavior and their use of rationalization, and to determine whether these effects vary between the US and Slovenia. To address this objective, two key questions are posed: (1) What role do individual and societal negatively valenced antecedents play in shaping digital piracy behavior and use of rationalization techniques?; and (2) Do these relationships differ cross-culturally?

The resulting findings provide three key contributions. First, they help to develop and test a theoretically grounded psychological model linking the following key variables: perceived negative consequences of digital piracy, digital piracy behavior, and rationalization. This extends the cyberpsychology literature by demonstrating how negatively valenced antecedents of digital piracy are linked to both individuals' engagement in piracy and their use of rationalization strategies. Gaining this insight will contribute to the field of cyberpsychology (Agarwal et al., 2024). Additionally, the validation of the conceptual model on a realistic dataset drawn from a sample of adults overcomes the often-stated limitation of many previous studies conducted using student samples (Udo et al., 2016). Second, given that piracy has been framed within the realm of ethical decision-making (Molina-Castillo et al., 2021), this study provides a more nuanced explanation of the role of rationalization techniques regarding digital piracy. Third, following Eisend's (2019) suggestion to adapt existing theoretical explanations to specific cultural contexts, this research sheds light on the applicability of the proposed conceptual model by testing it in two distinct countries. This study thus advances cross-cultural research on individuals' online behavior.

The two countries were thoughtfully selected to ensure testing of the model in relevant yet substantially different socioeconomic markets in the context of piracy behaviors. In doing so, the work of Husted (2000) proved key, having pointed out three factors as crucial drivers of demand for pirated software: GNP (Gross National Product) per capita, income distribution, and individualism. GNP as an indicator of economic development suggests that less-developed countries have less-stringent intellectual property protection regulations and therefore have higher levels of piracy. In terms of income distribution, the lower the income distribution, the higher the piracy rate, as the middle class is larger. In addition, more individualistic societies have lower levels of piracy, while collectivist norms of sharing within the group and low tolerance for deviation from norms encourage unauthorized copying (Husted, 2000). In this study, corresponding indicators are used, as operationalized by Molina-Castillo et al. (2021). The selected countries (the US and Slovenia) share similarities regarding the availability of and access to digital products but differ in their cultural and economic backgrounds. As displayed in Table 1, gross national income (GNI) and mean disposable income in the US are significantly higher than in Slovenia: 83,660 USD and

62,722 USD in the US compared to 31,640 USD and 29,699 USD in Slovenia, respectively (World Bank, n.d.; World Population Review, 2025). Another contrasting dimension is individualism (measured on Hofstede's 0–100 cultural dimensions scale), where the US scores highly at 91, indicating that members of this society have loose ties that often only relate individuals to their immediate family. Conversely, Slovenia's low score of 27 is consistent with a collectivistic orientation marked by a high level of social interdependence (Hoffman, 2021). As digital piracy is seen as a global problem that occurs almost everywhere, the need for additional studies on countries that are particularly vulnerable to this problem has been emphasized (Casidy et al., 2016). Examining Slovenia alongside the US responds to this need.

Table 1. *Comparison of the US and Slovenia Based on GNP, Mean Disposable Income and Individualism.*

	US	Slovenia
GNI per capita in 2024*	83,660 USD	31,640 USD
Mean disposable income in 2025**	62,722 USD	29,699 USD
Individualism***	91	27

Note. *World Bank (n.d.). **World Population Review (2025). ***Hoffman (2021).

Literature Review and Theoretical Underpinning

In recent years, there has been notable progress in the literature on the determinants and outcomes of illicit and unethical conduct within the marketing domain (e.g., Chang & Yang, 2022). Studies have shown that digital piracy is driven by both demand- and supply-side factors in institutional and cultural environments. Given the need to design effective interventions, it is particularly important to provide insights into the antecedents of this phenomenon.

Extant literature in the field of digital piracy has led to numerous theoretical frameworks that are used to explain this phenomenon, particularly in the areas of information ethics and information systems. Scholars have employed ethical theories, such as the Hunt-Vitell model (Hunt & Vitell, 1986) or deterrence theory (Gibbs, 1986; Jervis, 1979), while others have relied on models of attitude-behavior relationships, including the Theory of Planned Behavior (Ajzen, 1991) and the Theory of Reasoned Action (Fishbein & Ajzen, 1975). When comparing different models to explain digital piracy based on ethics theory, deterrence theory, the Theory of Planned Behavior, and religiosity theory, the model based on the Theory of Planned Behavior appears to have the highest explanatory and predictive power (Koay et al., 2020). Specifically, Koay et al. (2020) assessed each model according to how well it explained the dependent variable and how well it was able to predict new data, rather than just the existing pattern. However, given the limitations of these models in bridging the gap between attitudes and intention or behavior, some researchers have relied on neutralization theory (Sykes & Matza, 1957).

According to neutralization theory, individuals occasionally commit various deviant acts because of neutralizations or rationalizations, depending on the sequencing of the neutralization process. Both have been shown to play a significant role in explaining unethical behaviors (McCormack & Chowdhury, 2024; Nocera et al., 2022). As pointed out by several researchers (e.g., Cromwell & Thurman, 2003; Maruna & Copes, 2005), sequencing remains one of the greatest theoretical challenges in the field. Neutralizations typically refer to justifications prior to or during a deviant act that allow individuals to temporarily suspend their internal moral norms and continue with questionable behavior (Kaptein & van Helvoort, 2019). They are often viewed as a pre-action mechanism that facilitates the decision to engage in deviant behavior. In contrast, rationalizations are described as an after-the-fact process in which individuals justify or explain their actions after they occur to reduce feelings of guilt or maintain their self-image (Cromwell & Thurman, 2003; Kaptein & van Helvoort, 2019). Some scholars have argued that the distinction between neutralization and rationalization is blurred because both processes involve justification of deviant behavior and can occur before or after the act (Cromwell & Thurman, 2003; Kaptein & van Helvoort, 2019; McGregor, 2008). The terms are sometimes used interchangeably as well (Kaptein & van Helvoort, 2019). Consistent with this ambiguity, while neutralization is often conceptualized as preceding deviant acts (Sykes & Matza, 1957; Topalli, 2005), empirical evidence often shows its post hoc use (Harris & Daunt, 2011). Furthermore, several authors have argued that neutralization techniques not only precede unethical actions but can also be used after the fact in ways that reinforce and consolidate future misconduct. What begins as an after-the-fact rationalization for one transgression can serve as a justification for the next transgression, perpetuating a cycle of unethical behavior (Cromwell & Thurman, 2003; Hirschi, 1969; Kaptein & van Helvoort, 2019).

Since post hoc meaning-making is a well-documented response to psychological tension created by norm-violating acts, this study models past piracy behavior as a variable associated with subsequent rationalization. Post hoc rationalizations may serve to assuage feelings of guilt or shame and self-threat due to past actions (Kaptein & van Helvoort, 2019; Mulder & van Dijk, 2020). This dynamic implies a directional path from behavior to rationalization: The act comes first, and the justificatory narrative follows as a form of self-protective repair (Jarcho et al., 2011; Tsang, 2002). Moreover, cognizance of post hoc rather than a priori justifications of digital piracy acts is vital, as rationalizations present a key causal mechanism in persistence and intensification of the past immoral behavior (Mulder & van Dijk, 2020). In digital piracy, a digital file is reproduced to allow another user to benefit from its existence without directly affecting others. This particular characteristic is considered one of the main strategies to rationalize one's deviation from the social norm (Krawczyk et al., 2020).

Another relevant issue is what determines the use of rationalization techniques, following the act of digital piracy. Some have argued that a behavior chosen by an individual is determined by the probability that an action will lead to a certain consequence (Feather, 2021). Furthermore, several authors have demonstrated that negativity bias strongly shapes individuals' behavior. Studies have indeed found a tendency toward negativity bias in human behavior, suggesting that individuals often give greater weight to negative information than positive information (Rozin & Royzman, 2001). Hence, it is expected that digital piracy behavior and the subsequent use of justifications are, to a large extent, associated with potential negative outcomes. These can take the form of potential negative consequences for the individual and for society.

The next section presents the conceptual model for this study. In light of the stated research objectives, the model is theoretically grounded by combining several theoretical lenses: neutralization theory (Sykes & Matza, 1957), the issue-contingent model (Jones, 1991), and risk theory (Bauer, 1960). Neutralization theory suggests that individuals employ neutralization techniques to justify their deviant behaviors (Sykes & Matza, 1957). A key psychological process that aligns closely with the core ideas of this theory is rationalization, particularly in the context of justifying or excusing behavior that might otherwise be seen as deviant or unacceptable (Harris & Dumas, 2009; McGregor, 2008). In this sense, post hoc rationalizations may evolve over time into anticipatory neutralizations that increase the likelihood of repeated deviance (Cromwell & Thurman, 2003; Hirschi, 1969; Kaptein & van Helvoort, 2019). This iterative and dynamic process provides a compelling lens through which to interpret the persistence of digital piracy behavior. The issue-contingent model (Jones, 1991) complements this perspective by emphasizing the role of moral intensity in shaping decision-making processes. Specifically, it posits that moral intensity affects all components of moral decision-making, including moral recognition, judgment, intention, and subsequent behavior. Moral intensity, as applied to digital piracy, can strongly affect whether individuals perceive digital piracy as morally wrong and whether they choose to engage in it (Hofmann & Penz, 2016). Risk theory (Bauer, 1960) extends this conceptual framework by postulating that risk perception is a key cognitive step in individuals' decision-making. In the context of digital piracy, this framework has been widely adopted and extended to explain why individuals choose to engage in or refrain from piracy. Although this theory alone has limited predictive power compared to other models, it remains a fundamental element in understanding the cognitive processes underlying digital piracy (Koay et al., 2024; Yoon, 2011).

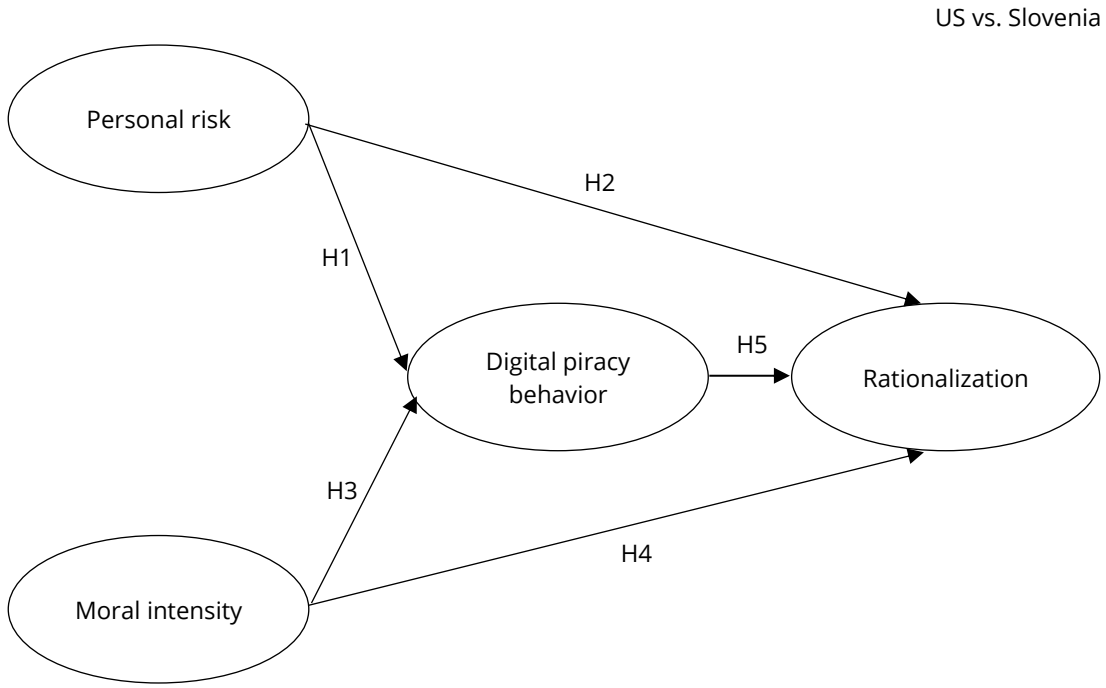
Conceptual Model and Hypotheses

In developing a theoretically grounded research model of salient factors associated with digital piracy behavior and rationalization, this study proposes that perceived negative consequences at the individual and societal level are linked to both the individual's piracy behavior and rationalization. More specifically, the perception of personal risk reflects the mechanism on an individual level and represents the direct impact of participating in digital piracy for the individual. Conversely, the mechanism at the societal level is reflected in the concept of moral intensity, which captures the direct impact of piracy behavior on society.

In this study, potential negative consequences for the individual are captured by perceptions of personal risk. Personal risk in the context of digital piracy refers to the extent to which the user perceives that illegally downloading online content might lead to technical difficulties for downloaders (e.g., damage to their computer, tablet, phone, etc.). In this research, personal risk is defined primarily as technical risk rather than legal prosecution risk. This approach aligns with previous studies that distinguish between technical and legal costs in the context of consuming illegal copies of motion pictures (Hennig-Thurau et al., 2007). Hennig-Thurau et al. (2007) found that technical risk was negatively associated with watching illegal movies, while legal risk was not a significant factor. Given the research contexts examined here – the United States and Slovenia – where copyright

enforcement is relatively weak (Iskra & Florjančič, 2018; Jindal, 2024; Santiago, 2017), this study focuses on the technical aspect of personal risk. Further, potential negative consequences for society are captured by the construct of moral intensity, defined as the level to which the user perceives that engaging in digital piracy exerts a negative effect on society at large. Digital piracy behavior is conceptualized as users' recent engagement in illegally downloading files, whereas rationalization refers to users' employment of techniques to alleviate feelings of guilt they experience after the actual digital piracy behavior. The proposed conceptual model linking these constructs is discussed next and is illustrated in Figure 1.

Figure 1. *Conceptual Model of Factors Associated With Digital Piracy Behaviour and Rationalisation.*



Numerous studies have established perceived personal risk as an antecedent of piracy intention, the latter serving a proxy for actual digital piracy behavior. The majority of studies have found a negative relationship between perceived risk and behavior (intention; e.g., Borja & Dieringer, 2022; Liao et al., 2010; Yoon, 2011), and a meta-analysis by Lowry et al. (2017) has come to the same conclusion. This stands in contrast to the relatively rare findings of positive associations observed under certain conditions (e.g., Sinha & Mandel, 2008) or the non-significant relationship in the Spanish context by Gigirey et al. (2024). This calls for further investigation of the relationship between perceived risk and digital piracy behavior. Following the meta-analytical evidence for an overall negative relationship between risk and piracy (Lowry et al., 2017) and in line with risk theory (Bauer, 1960), this study's first hypothesis posits:

H1: Individuals' perceptions of personal risk will be associated with lower levels of their digital piracy behavior.

The second hypothesized consequence of personal risk is rationalization, or justification for piracy behavior. Interestingly, the relationship between risk and rationalization has seldom been examined in the literature on digital piracy. The reasoning for this effect rests on the framing effect literature first introduced by Kahneman and Tversky (1979). According to this literature, negatively framed information describes negative consequences of behavior, with some studies indicating its greater efficacy compared to positively framed information (e.g., Wen et al., 2021). In this study, it is expected that personal risk as a type of negatively charged perception will lead individuals to review their norms more extensively and thus be linked to lower extent of applying rationalization techniques (Block & Keller, 1995). Hence:

H2: Individuals' perceptions of personal risk will be associated with lower extent of individuals' rationalization of their digital piracy behavior.

Another determinant of digital piracy behavior demonstrated in the literature is moral intensity. Jones (1991) posited that moral intensity likely varies from issue to issue and affects each stage of ethical decision-making and behavior. Moral intensity consists of several components such as magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect. It has been established that

among these six components, the magnitude of consequences and social consensus have a negative influence on individuals' moral decision-making (e.g., Wang et al., 2021). Interestingly, in the context of fraudulent return activities, probability of effect has also been significant (Chang & Yang, 2022). Here, the magnitude of consequences is defined as the total amount of harm (benefit) caused by engaging in digital piracy, while social consensus describes the extent to which society agrees on the ethicality of digital piracy. In line with the stated relationship between risk and behavior, Serenko (2022) pointed out that people with a strong sense of moral intensity tend to refrain from actions that may cause harm to others. This should include digital piracy behavior, as it can harm various stakeholders such as copyright owners. This research is extended here by investigating reported digital piracy behavior as a proxy for actual digital piracy behavior. Specifically:

H3: Individuals' perceptions of moral intensity (i.e., magnitude of consequences and social consensus) will be associated with lower levels of their digital piracy behavior.

In the existing literature, calls have been voiced for research aimed at understanding the relationship between moral intensity and rationalization (Yıldırım, 2024). Shah and Amjad (2017) demonstrated that moral intensity acts as a positive predictor of neutralization techniques. Interestingly, Kos Koklic et al. (2016) empirically validated an opposite relationship. These authors conducted a survey in four countries and measured moral intensity and rationalization with established scales. They found cross-national metric invariance and tested the model using multi-group structural equation modeling. The results showed a negative path from moral intensity to rationalization in all countries. An important distinction between this and previous studies is the sequence of neutralization and rationalization: Previous studies considered the use of neutralization techniques as an antecedent of behavior, while Kos Koklic et al. (2016) investigated rationalization as a consequence of piracy behavior. When moral intensity is high, anticipated guilt and other aversive feelings increase, so individuals considering piracy are more likely to use neutralizations before licensing the behavior. At the same time, higher moral intensity is linked to lower overall likelihood of piracy, which means that at the population level, post-piracy rationalization is less likely to be observed, simply because fewer people become delinquent. Thus:

H4: Individuals' perceptions of moral intensity (i.e., magnitude of consequences and social consensus) will be associated with lower extent of individuals' rationalization of their digital piracy behavior.

As presented in this study's theoretical section, neutralization theory offers an insightful perspective for analyzing how individuals justify their actions or reduce guilt, as it supports research that indicates that many offenders do not perceive piracy as negative (Wilhelm, 2020). Neutralization is interpreted as a use of techniques to counter feelings of guilt prior to the act itself, while rationalization employs similar mechanisms after the act (Mulder & van Dijk, 2020). Interestingly, the majority of existing empirical studies on the topic have investigated neutralization rather than rationalization and mostly found a positive association between the use of neutralization techniques and subsequent piracy behavior (Eisend, 2019; Lowry et al., 2017) or no effect at all (Wilhelm, 2020). Unlike previous studies, this study examines after-the-act rationalizations, as these represent a key causal mechanism in continuation and escalation of the past immoral behavior. Considering that after-the-act rationalization has rarely been scrutinized in the existing piracy literature, the testing of the hypothesis with rationalization following a behavior provides an opportunity to illuminate this issue. This study proposes that when people engage in digital piracy, they render that behavior psychologically acceptable through the process of post-behavioral rationalization to reduce potential feelings of guilt. Therefore:

H5: Individuals' digital piracy behavior will be associated with greater extent of their rationalization of such behavior.

Methods

To test the proposed conceptual model, two studies were conducted, one in the United States and one in Slovenia, a European Union member country. The goal of Study 1 (the US) was to examine the proposed relationships between negatively valenced factors, digital piracy behavior and rationalization using a large-scale online survey of US individuals. Employing a comparable research design, Study 2 (Slovenia) addressed the second research question in this study by investigating the extent to which the hypothesized relationships in the proposed model vary in distinct cultural settings, thus advancing the literature on the context sensitivity and generalizability of theories.

Study 1: US Sample

Study 1 (US sample) examined digital piracy behavior and related variables among US adults. An online survey was developed using existing scales of the constructs of interest that assess various aspects of digital piracy behavior and related attitudes. The survey respondents were recruited via the reputable marketing research agency Centiment using an online consumer panel of US adults aged 18 years or older. The data collection took place in April 2023. Because recruitment relied on a non-probability online panel, the sample should not be considered a random probability sample of the US adult population. Gender quotas ensured that the sample matched gender distribution in the US. With respect to age, the sample had a somewhat larger percentage of 24–64 years old respondents than there were in the general US adult population in 2023 according to the US Census Bureau (76% vs. 66%), and a somewhat lower percentage of 65+ years old respondents than in the general US adult population (15% vs. 23%). Since older people are less technologically/digitally savvy, they seem to have been less likely to participate to the same degree in taking the online survey. There were 625 US respondents who completed the survey. Of those, 154 (24.6%) reported having illegally downloaded files in the past. In the US sample, 48.3% of participants were male, 50.7% were female, and 1% were another gender. The median age of the respondents was 43 years (M = 42.44, range 18–92, SD = 16.43). Regarding education, 31.7% reported their highest education level as having completed high school or lower, 57.8% had completed some college or had a college degree, and the remaining 10.4% had a graduate or professional degree.

When examining only the respondents who reported having engaged in digital piracy in the past, 59.7% were male (10 percentage points higher than the overall sample). Digital pirates had a median age of 34 years (M = 36.34 years, SD = 11.50; about 9 years younger than the overall sample), with 28.1% of these respondents having achieved a high school degree or lower, 58.2% having had some college or received a college degree, and 13.7% with a graduate or professional degree.

Study 2: Slovenian Sample

Consistent with the US data collection, an online survey containing digital piracy and related measures was conducted in Slovenia. Participants for the web-based questionnaire were recruited through Valicon, a well-known Slovenian marketing research agency, using its online panel. The data collection took place in May 2023. The eligibility criterion was being 18 years of age or older. Sample matching targets were applied for age and gender so that the achieved sample mirrored population distributions on these two characteristics. In total, 514 individuals responded to the survey. In the sample, 51.7% were male and 48.3% were female. The median age of the respondents was 42 years (M = 43.51, range 18–65, SD = 13.14). Regarding education, 50.6% reported their highest education level as having completed high school or lower, 44.9% had completed some college or had a college degree, and the remaining 4.6% had a graduate or professional degree or did not respond to the education question. Compared with official Slovenian population data for 2023, the sample was slightly more male (51.7% vs. 50.3% male in the total population) and marginally younger in mean age (43.51 vs. 44.1 years). Because directly accessible official summary figures for the 18+ population were limited, this comparison should be interpreted as approximate; relative to the adult population specifically, the sample is likely somewhat more male-heavy and younger (Statistical Office of the Republic of Slovenia, 2026).

Of the respondents, 326 (63.4%) reported having illegally downloaded files in the past and had responded to the justification questions. The obtained incidence of digital piracy was higher than 43%, the value reported for software digital piracy for Slovenia in 2016 (BSA – The Software Alliance, 2016). This is not surprising given that the previously reported number was limited to digital piracy of business software.

When examining only the Slovenian respondents who reported having engaged in digital piracy in the past, 59.2% were male (7.5 percentage points higher than the overall sample). The digital pirates had a median age of 37 years (M = 39.37, SD = 12.22; about 4 years younger than the overall sample). Forty-five percent of the pirating respondents had a high school degree or lower, 50% had completed some college or had a college degree, and 3.8% had a post-graduate/professional degree; 1.2% did not respond to the question (Table 2).

Table 2. *Sample Characteristics for Study 1 (US) and Study 2 (Slovenia).*

	Study 1 (US)	Study 2 (Slovenia)
Overall sample		
Sample size	*N* = 625	*N* = 514
Gender	48.3% male, 50.7% female, 1% other	51.7% male, 48.3% female
Age	*Me* = 43 years *M* = 42.44 years *SD* =14.43 years Range: 18–92	*Me* = 42 years *M* = 43.51 years *SD* = 13.14 years Range: 18–65
Education (% of respondents)	High school or lower: 31.7% Some college/college degree: 57.8% Graduate/professional degree: 10.4%	High school or lower: 50.6% Some college/college degree: 44.9% Graduate/professional degree: 4.5%
Household income	Median gross annual income: $37,500	Median net monthly income: 2,700 €[a]
Digital pirates		
Sample size	*n* = 154 (24.6% of overall sample)	*n* = 326 (63.4% of overall sample)
Gender	59.7% male, 40.3% female, 0% other	59.2% male, 40.8% female
Age	*Me* = 34 years *M* = 36.34 years *SD* = 11.50 years	*Me* = 37 years *M* = 39.37 years *SD* = 12.22 years
Education (% of respondents)	High school or lower: 28.1% Some college/college degree: 58.2% Graduate/professional degree: 13.7%	High school or lower: 44.9% Some college/college degree: 50.2% Graduate/professional degree: 4.9%
Household income	Median gross annual income: $62,500	Median net monthly income: 2,900 €[b]

Note. [a]2,700 euros is approximately 3,164 US dollars. [b] 2,900 euros is approximately 3,398 US dollars.

Measurement

For both studies, digital piracy and related construct measures were based on existing construct measures.

Personal Risk

Personal risk was measured with five items based on Hennig-Thurau et al. (2007), adapted to the context of illegal downloading. Consistent with the conceptualization adopted in this study, the items reflected technical risks associated with pirated digital content, such as malfunctioning files and possible damage to the user's computer. Responses were captured on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). An example item is: *You might have your Internet access terminated.*

Moral Intensity

Moral intensity was adapted from McMahon and Harvey (2006) and Singhapakdi et al. (1996) by contextualizing the dimensions of magnitude of consequences and social consensus to illegal downloading. Specifically, two items were reformulated to refer to downloading files without permission, capturing the perceived societal impact of the behavior and the extent to which it is considered socially acceptable. A sample item is: *If you illegally download files from the Internet: What would be the size of the impact on the society?* (*very small – very large*).

Digital Piracy Behavior

To assess digital piracy behavior, the respondents were first asked if they had ever illegally downloaded digital files from the internet. Those who answered *yes* were classified as digital pirates and were asked further questions about the number of files they had illegally downloaded across various entertainment categories (movies, music, e-books, and games) in the most recent month. The numbers of files across all product categories were summed to create a new variable with five categories, each with approximately equal frequency (i.e., quintiles) to align with the five-point scale measures of other variables, following Kos Koklic et al. (2016).

Rationalization

Lastly, rationalization was measured with five items corresponding to various rationalization techniques, as advised by Sykes and Matza (1957), on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The items reflect common justifications for the behavior, such as lack of control, absence of harm, blaming the industry, conformity to others' behavior, and the belief that no legal purchase would have been made (e.g., *I couldn't help myself; I had to illegally download the files.*). Only the respondents who had reported illegal downloading in the past were asked about rationalizing their piracy behavior.

All constructs, their reliabilities (Cronbach's alpha), and inter-construct correlations for both countries are displayed in Table 3. Construct correlations were low to moderate (absolute value < .50), and all squared correlations were smaller than the average variance extracted (AVE), confirming discriminant validity (Fornell & Larcker, 1981). All construct reliabilities (Cronbach's alpha) for constructs measured with multiple items reached or exceeded the suggested cut-off value of .60 (Churchill, 1979). All measurement items are listed in Appendix A, and all individual item correlations for both countries are provided in Appendix B.

Table 3. *Correlations Among Personal Risk, Moral Intensity, Piracy Behavior, and Rationalization, and Their Reliabilities in the US and Slovenia.*

	Personal risk	Moral intensity	Piracy behavior	Rationalization	Reliability in the US [Slovenia]
Personal risk	1	.42 (< .001)	−.14 (.014)	−.16 (.009)	.83 [.82]
Moral intensity	.37 (< .001)	1	−.20 (<.001)	−.40 (< .001)	.76 [.68]
Piracy behavior	−.03 (.682)	−.29 (< .001)	1	.26 (< .001)	N/A
Rationalization	−.16 (.095)	−.47 (< .001)	.37 (<.001)	1	.72 [.66]

Note. Study 1 (US) correlations (*p*-values) are reported below the diagonal, and Study 2 (Slovenia) correlations are reported above the diagonal. Reliability was measured with Cronbach's alpha.

Control Variables

This study also assessed relevant control variables, including gender, age, highest completed education, and household income. In addition, due to digital piracy being an illegal behavior, a possibility of social desirability response bias exists. As such, the study also measured social desirability bias using 13 items based on the social desirability scale by Crowne and Marlowe (1960). Items included statements such as *I do not gossip about other people.* Measuring social desirability bias is even more justified given that recent research has shown that self-report surveys have a high level of social desirability bias (Gergley & Rao, 2022).

Assessing Measurement Equivalence

For a meaningful comparison of the conceptual model across the two countries (the US and Slovenia), the analysis first entailed evaluating cross-country measurement equivalence using the process by Steenkamp and Baumgartner (1998). Configural invariance of measures, which requires the same pattern of zero and non-zero factor loadings cross-nationally, was evaluated first (Horn et al., 1983). Confirmatory factor analysis (CFA) confirmed that the specified model with zero loadings on the non-target constructs fit the data well in both the US and Slovenia (χ^2 = 346.19, *df* = 120, χ^2/df = 2.89; IFI = .94, TLI = .91, CFI = .94, RMSEA = .041, 90% CI = [.036, .046]). All the target factor loadings were significantly different from zero, while the factor inter-correlations were below one, confirming the configural invariance of the measures (see Appendix C for factor loadings).

Next, metric invariance, which requires equal factor loadings across different countries, was assessed. Metric invariance allows different scores to be meaningfully comparable across countries (Steenkamp & Baumgartner, 1998). To test for metric invariance, all factor loadings were constrained to be equal for the US and Slovenia. The metric invariance model fit the data as well as the configural model (χ^2 = 358.57, *df* = 129, *p* < .001, χ^2/df = 2.78, IFI = .94, TLI = .92, CFI = .94, RMSEA = .040, 90% CI = [.035, .044]). In fact, there were even slight improvements in χ^2/df, TLI, and RMSEA. These results offer support for cross-national metric equivalence of the construct measures.

To test for scalar invariance, which allows for meaningful comparisons of means across countries, intercepts of all items were restricted to be equal cross-nationally. The fit of the model drastically worsened (χ^2 = 760.10, *df* = 141, χ^2/df = 5.39, IFI = .84, TLI = .79, CFI = .84, RMSEA = .062, 90% CI = [.058, .067]). Releasing the intercept restrictions

one by one led to slight improvements in the model fit; however, even after over half of the intercept restrictions were released, the model fit remained substantially worse than the model fit without any intercept restrictions. Therefore, the measures did not achieve either full or partial scalar invariance. Since the research objective was to test for the existence and direction of the proposed relationships (rather than comparisons of means) across the two counties, only configural and metric invariance were required (Steenkamp & Baumgartner, 1998). As such, for further analysis, only factor loadings were restricted to be equal across the two countries.

Analysis and Results

Prior to testing the full conceptual model that examines the extent of digital piracy behavior and its rationalization by individuals, it was important to determine whether respondents who had committed digital piracy in the past versus those who had not done so differed in their perceptions of personal risk and moral intensity associated with digital piracy. Therefore, the first step was to examine the relationship between personal risk perceptions and perceived moral intensity and whether a respondent reported having illegally downloaded digital files in the past. An independent samples *t*-test confirmed a significant difference in the perceptions of personal risk and moral intensity of digital pirates (those who responded *yes* to the digital piracy question) and non-pirates (those who responded *no*) both in the US and Slovenia. Specifically, in comparison with non-pirates, those who had committed digital piracy in the past expressed significantly lower perceptions of personal risk, as well as lower perceptions of moral intensity (see Table 4). These findings are consistent with Hypotheses 1 and 3, which proposed a negative relationship between personal risk (Hypothesis 1) and moral intensity (Hypothesis 3) on the one hand and piracy behavior on the other.

Table 4. *Mean Differences Between Pirates and Non-Pirates by Country.*

Country	Construct	Pirates *n*	Pirates *M*	Pirates *SD*	Non pirates *n*	Non pirates *M*	Non pirates *SD*	*t*-statistic	*p*-value	Cohen's *d*
US	Personal risk	154	3.83	0.86	471	4.18	0.70	−4.56	< .001	.74
US	Moral intensity	154	3.01	1.09	471	3.93	0.83	−9.67	< .001	.90
Slovenia	Personal risk	318	3.69	0.69	167	4.01	0.62	−5.20	< .001	.67
Slovenia	Moral intensity	318	2.90	0.67	167	3.69	0.80	−11.41	< .001	.73

Note. Higher values indicate higher perceived personal risk and moral intensity. Effect sizes are reported as Cohen's *d*.

Next, multi-group analysis in structural equation modelling using AMOS was employed to empirically test the complete conceptual model. The two groups were the US and Slovenia. Factor loadings for all measurement items were restricted to be equal across the two countries.

Since individuals could only rationalize their piracy behavior that they had actually performed in the past, the measure of rationalization and the extent of digital piracy in the past month were only collected from digital pirates (representing 24.6% of the US sample and 63.9% of the Slovenian sample). Thus, personal risk and moral intensity could only be tested in relation to these dependent variables for digital pirates. Age, gender, income, education, and social desirability bias were evaluated as covariates. In the model, the control variables were linked by structural paths with the dependent measures and were correlated with the two predictor variables (personal risk and moral intensity). The initial structural model allowed the structural path parameters to vary freely across the two countries. This model showed a good fit with the data (χ^2 = 459.89, *df* = 186, *p* < .001; χ^2/df = 2.47; IFI = .93, TLI = .89, CFI = .93; RMSEA = .036, 90% CI = [.032, .040]).

We next restricted the structural paths (weights) to be the same across the US and Slovenia. The resulting model fit the data well (χ^2 = 474.53, *df* = 201, *p* < .001; χ^2/df = 2.36; IFI = .93, TLI = .90, CFI = .93; RMSEA = .035, 90% CI = [.031, .039]), showing even a slight improvement with regards to χ^2/df, TLI, and RMSEA in comparison with the model in which only measurement weights were constrained to be equal. The change in chi-square (14.64) per change in degrees of freedom (15) indicated a *p*-value of .478, confirming that the constrained structural weights model fit at least as well as the constrained measurement weights model. In addition, when each path constraint was released one at a time, the resulting improvement in the model fit as judged by the change in the chi-square statistic was not significant at *p* < .050.

To test the proposed hypotheses, structural path coefficients and their significance and direction were examined. Table 5 provides a detailed summary of the results for both structural weights constrained and unconstrained models, which are also discussed below. The study hypothesized that perceived personal risk will be negatively associated with individuals' illegal downloading of digital files (Hypothesis 1), as well as with the use of their rationalization of such behavior (Hypothesis 2). Contrary to these expectations, personal risk perceptions were not significantly negatively associated with the reported extent of digital piracy behavior either in the US or Slovenia, as the magnitude of the standardized path coefficients was negligible and not significantly different from zero. In addition, perceptions of personal risk were also not significantly negatively associated with individuals' rationalization of their digital piracy behavior in either country. Hypotheses 1 and 2 are thus rejected.

Hypothesis 3 predicted that perceptions of greater moral intensity, including magnitude of consequences and social consensus, will be linked to a reduction in digital piracy behavior. The results confirmed that, as perceived moral intensity increased, the extent of digital piracy behavior marginally decreased in the US and strongly in Slovenia, supporting Hypothesis 3. Further, according to Hypothesis 4, a negative relationship between perceptions of moral intensity and individuals' rationalization for their digital piracy behavior was expected. The findings indicated that as moral intensity perceptions increased, the extent of individuals' rationalization for their digital piracy behavior moderately decreased in the US and strongly in Slovenia, consistent with Hypothesis 4.

Lastly, Hypothesis 5 predicted that digital piracy behavior will be positively associated with rationalization, with those respondents who reported a greater extent of digital piracy also more likely to attempt to justify their behavior. The results supported this hypothesis, as the relationship between digital piracy behavior and rationalization was significant and positive in both countries. Examining the magnitude of the two individual structural path coefficients showed low magnitude of these effects. Based on the sample values, this is also indicated as follows: Among the participants in the US sample, 69% of those who reported high (above the median) rationalization scored in the top half of frequency of digital piracy, as compared with 34% of those who scored below the median on rationalization. Similarly, among the participants in the Slovenian sample, 62% of those who reported high (above the median) rationalization scored in the top half of frequency of digital piracy, as compared with 42% of those who scored below the median on rationalization.

The significant effects of covariates were as follows: Female respondents reported a significantly lower extent of digital piracy behavior than male respondents in both the US and Slovenia. In addition, social desirability bias significantly affected rationalization for piracy behavior, with higher social desirability bias leading to moderately lower use of rationalization in the US; however, this effect was not significantly different from zero in Slovenia. Lastly, income was marginally positively associated with digital piracy behavior in the US but had no significant relationship with reported piracy behavior in Slovenia.

Thus, based on the multi-group structural equation modeling analysis of the conceptual model, the same results pattern emerged across the US and Slovenia, with Hypotheses 1 and 2 being rejected, while Hypotheses 3–5 were supported.

Examination of the results of the constrained structural weights model indicates that the existence, direction, and magnitude of all proposed structural relationships were consistent across the two investigated countries. The constrained structural path model was able to explain 15% of variance in digital piracy behavior in the US and 11% in Slovenia, as well as 38% variance in participants' rationalization of such behavior in the US and 43% in Slovenia, as indicated by R-squared values. In the constrained structural weights model, the only significant control variable was gender, which was significantly negatively associated with piracy behavior, with females reporting lower frequency of digital piracy than males. The effects of all other control variables were non-significant.

The second and third columns in Table 5 detail the results of the model with unconstrained structural path coefficients in the US and Slovenia, while the fourth column displays the results of the model with constrained structural path coefficients.

Table 5. *Conceptual Model Results.*

Structural path coefficients	Study 1: US Unconstrained			Study 2: Slovenia Unconstrained			US and Slovenia Constrained to be equal		
Hypothesis (proposed direction):	b[a] (*SE*)	*t*-stat	*p*	b[a] (*SE*)	*t*-stat	*p*	b[a] (*SE*)	*t*-stat	*p*
H1-: Personal risk → Piracy behavior	.13 (.27)	−0.05	.962	−.14 (.21)	−0.66	.512	−.01 (.16)	−0.05	.596
H2-: Personal risk → Rationalization	−.08 (.13)	−0.61	.545	.14 (.08)	1.82	.070	.09 (.06)	1.40	.161
H3-: Moral intensity → Piracy behavior	−.47 (.28)	−1.70	.089	−.72 (.24)	−2.97	.003	−.62 (.18)	−3.47	<.001
H4-: Moral intensity → Rationalization	−.34 (.14)	−2.53	.012	−.62 (.11)	−5.47	<.001	−.56 (.09)	−5.93	<.001
H5+: Piracy behavior → Rationalization	.13 (.04)	3.24	.001	.05 (.02)	2.33	.020	.07 (.02)	3.40	<.001
Covariates									
SD bias → Piracy behavior	−.03 (.21)	−0.16	.871	−.08 (.18)	−0.46	.647	−.08 (.14)	−0.60	.548
Education → Piracy behavior	−.12 (.12)	−1.00	.319	−.01 (.01)	−1.12	.261	−.01 (.01)	−1.09	.275
Income → Piracy behavior	.15 (.09)	1.76	.079	−.00 (.00)	−0.53	.593	.00 (.00)	−0.63	.532
Gender → Piracy behavior	−.52 (.23)	−2.28	.023	−.50 (.17)	−2.91	.004	−.54 (.14)	−3.94	<.001
Age → Piracy behavior	−.00 (.00)	−0.29	.773	−.01 (.01)	−0.74	.458	−.01 (.01)	−0.96	.338
SD bias → Rationalization	−.26 (.10)	−2.57	.010	−.04 (.07)	−0.62	.534	−.09 (.06)	−1.53	.127
Education → Rationalization	06 (.06)	1.03	.305	−.00 (.00)	−0.76	.445	−.00 (.00)	−0.66	.511
Income → Rationalization	.02 (.04)	0.36	.716	.00 (.00)	−0.92	.359	.00 (.00)	−0.88	.380
Gender → Rationalization	.00 (.11)	0.04	.969	.09(.06)	1.44	.151	.08 (.06)	1.51	.132
Age → Rationalization	.00 (.00)	0.38	.705	.00 (.00)	1.37	.171	.00 (.00)	1.49	.135

Notes. [a]Since unstandardized structural coefficients are constrained to be equal across the two countries, the estimates of the unstandardized coefficients are reported. Gender: 1 = *Male*; 2 = *Female*. Two-tailed *p*-values are reported.

In summary, the results of the independent samples t-test comparing digital pirates versus non-pirates suggest that both personal risk and moral intensity perceptions were associated with a lower likelihood of individuals committing digital piracy for the first time (i.e., having committed digital piracy in the past) in both countries. However, from the results of the multi-group analysis of the complete conceptual model, once a respondent had committed digital piracy at least once, personal risk perceptions were no longer associated with the extent of their piracy behavior. Thus, when considering the frequency or extent of digital piracy behavior of users who have illegally downloaded online content at least once in the past, only moral intensity in the form of perceived magnitude of consequences and social consensus was shown to be linked to the extent of this behavior. Further, higher perceived moral intensity was associated with lower levels of user justification for such behavior. In addition, piracy behavior was shown to precede justification efforts. The more extensive individuals' piracy behavior was, the greater their need to justify or excuse their piracy actions. In sum, based on the results, perceptions of personal risk and moral intensity appear to be key antecedents to digital piracy that could be influenced to minimize this dark-side behavior, whether it is its first-time occurrence (both factors) or on subsequent occasions (moral intensity only). These results were consistent across the samples collected in the US and Slovenia, suggesting a similar course of action can be undertaken in both countries.

Discussion

Despite the rise in anti-piracy legislation, digital piracy continues to be widespread and represents a major obstacle to the growth of creative industries worldwide. In light of inconclusive findings in previous research, the present study delves into individual and societal factors and outcome of digital piracy behavior through a cross-cultural lens, focusing on the US and Slovenia. These two countries provide different socioeconomic contexts and piracy behaviors based on previous research (BSA – The Software Alliance, 2016; Molina-Castillo et al., 2021). Hence, this study's findings add to the rapidly expanding body of knowledge on consumer ethics, cyberpsychology, and digital piracy and offer new insights into theoretical models of digital piracy in a cross-cultural context.

To this end, the conclusions for all five proposed hypotheses tested in Slovenia were consistent with the results obtained in the US, with three of the five hypotheses receiving strong support across the two countries. Findings obtained in the US and Slovenia suggested that both personal risk and moral intensity perceptions are moderately

related to an individual's decision to digitally pirate for the first time. However, once the individual has pirated at least once, the extent of digital piracy tends to be associated only with perceptions of moral intensity. The overall expectation was that personal risk would have a negative effect on digital piracy behavior and rationalization (hypotheses 1 and 2). However, this was not the case either in the US or Slovenia. Another hypothesis (hypothesis 3) outlined that moral intensity would be negatively linked to digital piracy behavior. The results confirm this expectation in both countries, as greater perceived moral intensity is associated with a lower extent of engagement in digital piracy, consistent with prior studies (e.g., Serenko, 2022). Based on these findings, piracy behavior appears to be associated more strongly with perceived moral intensity than perceived risk.

Furthermore, moral intensity was expected to be negatively associated with the use of rationalization (hypothesis 4). Perceptions of moral intensity indeed were negatively associated with rationalization of digital piracy behavior in both countries. Although Gruber and Schlegelmilch (2014) posited that situations with high moral intensity are likely to prompt individuals to employ neutralizing strategies, this study raises an opposite relationship between moral intensity and rationalization techniques. These findings suggest that expecting negative societal consequences (i.e., higher moral intensity) is associated with a lower tendency to rationalize digital piracy.

To shed more light on the relationship between reported digital piracy behavior and the use of rationalization techniques, this study also examined the path coefficients between these two variables (hypothesis 5). In both countries, piracy behavior was positively associated with rationalization. As expected, higher levels of engagement in digital piracy led to a greater need to rationalize such behavior.

In comparing the findings from the US and Slovenia, the proposed conceptual model performed well and resulted in consistent findings in both cultural settings. Thus, the results demonstrate the commonality of moral intensity (an indicator of negative consequences for society) as a factor associated with both digital piracy and one's justification for this behavior across the two studied countries.

Theoretical Contributions

The proposed model was grounded in three relevant theoretical perspectives: neutralization theory, the issue-contingent model, and risk theory. This approach allowed the expansion of existing knowledge of digital piracy behavior while avoiding a single-minded focus of this phenomenon (Okhuysen & Bonardi, 2011).

Specifically, this study unravels two sets of piracy behavior factors that reflect perceived consequences of digital piracy for an individual (i.e., personal risk) and for society (i.e., moral intensity) and disentangles the rarely scrutinized role of after-the-act rationalization of piracy behavior. The research goes a step further by examining the direct relationships of the two piracy factors with post hoc rationalization techniques and testing the conceptual model in two countries (the US and Slovenia). These robust empirical findings across the two countries provide important insights for scholars.

First, the study empirically shows that individuals' beliefs that pirating exerts a negative impact on society (i.e., moral intensity) is a powerful factor associated not only with digital piracy engagement but also with post hoc rationalization techniques. These effects support Jones's (1991) contention that moral intensity affects all stages of the ethical decision-making and behavioral process. In addition, this finding is particularly significant given that the role of rationalization has been rarely addressed in empirical studies on digital piracy (e.g., Mulder & van Dijk, 2020).

Second, the current analyses establish that higher perceptions of personal risk are not associated with lower piracy engagement or post hoc rationalization if an individual has pirated at least once in the past. It is likely that once individuals have pirated at least once, they overcome their concerns about piracy risks; hence, risk perceptions cease to be a factor that may lessen their piracy behavior, as well as their attempts to justify such behavior. These findings represent an unambiguous departure from previous work on the role of personal risk (e.g., Lowry et al., 2017) and suggest that an individual's personal risk perceptions regarding digital piracy may have changed in recent years. Gigirey et al. (2024) also recently found that perceived personal (punitive) risk does not deter e-book piracy in the Spanish context. Their conclusions align with the current results in that moral framing—rather than threats to personal or punitive risk—represents a robust predictor of piracy intentions and behaviors across different cultural and product contexts.

Third, by demonstrating a strong positive relationship between the frequency of engagement in piracy behavior and after-the-act rationalizations, this study provides fresh insights into the importance of rationalization

techniques, as opposed to the neutralization techniques heavily explored in prior research. These results are consistent across the two research settings and suggest that post hoc rationalizations may lead to the escalation of past immoral behavior in view of posteriori piracy rationalization (Mulder & van Dijk, 2020).

Finally, against the backdrop of digital piracy research being rather silent on the cultural commonality of digital piracy antecedents and consequence (Eisend, 2019), this research shows that the proposed conceptual model performed consistently not only in the direction and significance of the proposed relationships but also in the magnitude or strength of these relationships across the two culturally diverse research settings (the US vs. Slovenia).

Practical Implications

The analysis of cultural consumption behavior serves as a cornerstone for management decisions in the context of competition in the digital environment (Dilmperi et al., 2011). The current study's results offer several implications for various stakeholders, particularly marketers in online entertainment–related industries (e.g., music, movies, games, e-books) and public policy makers. The findings underline two areas prominent in shaping digital piracy behavior and the use of rationalization techniques in the two countries researched: people's perception of consequences for an individual (personal risk) and society (moral intensity). Given that both types of perception are linked to lower digital piracy behavior, it is advisable to integrate them into a strategy to combat digital piracy. It should be noted that influencing personal risk perceptions may only be worthwhile when targeting individuals who have never pirated in the past; this method is ineffective when targeting existing digital pirates. Because companies may not have sufficient resources to enforce copyrights against all individuals, it may be more effective to design and implement public campaigns that seek to educate individuals about the negative societal effects of piracy than to enforce copyrights through legal sanctions. Indeed, despite the intensive efforts of the institutions dealing with copyrights, piracy persists (Tomczyk, 2021). Hence, alternative approaches are necessary to combat piracy.

The most effective proposed tactic based on these research findings is communication focused on the adverse consequences of digital piracy for society, that is, either the acceptability of illegal downloading to society (i.e., social consensus) or the valence of the impact of illegally downloading files (i.e., the magnitude of consequences). Such communication should be effective in reducing both first-time and subsequent occurrences of digital piracy acts. If resources allow, additional communication should target the reduction of initial acts of piracy by also portraying the adverse technical consequences of illegal downloading as a personal risk. Given that both study samples produced consistent results with respect to the two sets of negative consequences of piracy behavior, international managers and public policy officials should consider employing a high level of standardization in their marketing communication customization strategy (Kitchen & Tourky, 2022) across countries.

Limitations and Future Research

This study is subject to several limitations that offer potential directions for future research. First, the relationships proposed in the research model were tested using cross-sectional correlational empirical data. Hence, a correlation-based interpretation of the model results is warranted. Future research should attempt to replicate the study results using a causal (experimental) design looking at a sequential path from neutralization to behavior and then to rationalization. A longitudinal research design could also be utilized to investigate changes in digital piracy behavior and the associated neutralization/rationalization processes over time. As noted by Agnew (1994) and reiterated by Siponen and Vance (2010), without time-dependent data, it is impossible to determine whether neutralizations are anticipatory or merely retrospective. Such an approach would also shed light on the dynamic nature of the phenomenon, as digital piracy is an adaptive practice, sustained by repeated engagement, normalized through rationalization mechanisms, and reshaped by technological innovations and shifting market structures (e.g., Gigirey et al., 2024; Sinha & Mandel, 2008).

Further, the current examination of direct antecedents of digital piracy behavior was confined to perceptions of two negative consequences of piracy (personal technical risk and moral intensity), and the explanatory power of the model regarding digital piracy behavior was fairly low. Future research could include anticipation of positive consequences of such behaviors in the conceptual model to provide a more balanced view. For example, in their empirical study, Vida et al. (2012) concluded that perceived benefits associated with digital piracy seem to strengthen piracy intent, while perceived risks reduce the magnitude of the behavior. Future research could also

introduce moderators of the proposed relationships, such as cultural values, measured at the individual level (Kos Koklic et al., 2022).

The goal of the current research was to evaluate the effects on the extent of rationalization used overall, rather than evaluate the effects on individual types of rationalization techniques. Previous studies have demonstrated that some types of rationalization approaches tend to be more effective and commonly used by individuals (Aydın, 2025; Smallridge & Roberts, 2013). Hence, to gain a more nuanced understanding of the rationalization phenomenon, it would be beneficial to compare different rationalization techniques in more detail in the future.

The samples were recruited from online consumer panels and were therefore non-probability samples. Although the Slovenian sample was matched to population distributions for age and gender and the US sample had a nearly balanced gender composition, the findings should not be interpreted as fully nationally representative and may under-represent population segments less likely to participate in online panels.

Finally, this research tested the proposed conceptual model of digital piracy behavior in two countries. The two samples and countries were carefully selected to a) secure comparable samples and b) ensure the two countries are far apart in terms of the salient factors of demand for pirated products. The findings support generalizability across these two diverse contexts, but wider testing would strengthen external validity. Given concerns that research on illicit behaviors is dominated by North American/Western perspectives (Eisend, 2019; Vida et al., 2012), future work should include additional—especially non-Western—settings (e.g., Asia, Latin America) to probe cultural contingencies in the antecedents and outcomes of digital piracy.

Conflict of Interest

The authors have no conflicts of interest to declare.

Use of AI Services

The authors declare they have used AI services, specifically ChatGPT and InstaText, for grammar correction and minor style refinements. They carefully reviewed all suggestions from these services to ensure the original meaning and factual accuracy were preserved.

Data Availability Statement

The data that support the findings of this study are available upon request.

Authors' Contribution

Mateja Kos Koklic: conceptualization, funding acquisition, investigation, methodology, project administration, supervision, validation, visualization, writing—original draft, writing—review & editing. **Monika Kukar-Kinney:** conceptualization, data curation, formal analysis, funding acquisition, investigation, methodology, software, validation, visualization, writing—original draft, writing—review & editing. **Irena Vida:** conceptualization, methodology, validation, visualization, writing—original draft, writing—review & editing.

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Appendices

Appendix A. Construct Measurement Items

Personal Risk

(adapted from Hennig-Thurau et al., 2007)

Illegally downloading files is risky because:

PR1: They might not work properly.

PR2: You might have your Internet access terminated.

PR3: They might infect your computer with a virus or malware.

PR4: It could allow access to your data, files or passwords.

PR5: They might damage your computer.

Moral Intensity

(magnitude of consequences and social consensus; McMahon & Harvey, 2006; Singhapakdi et al., 1996)

If you illegally download files from the Internet:

MI1: What would be the size of the impact on the society? (very small – very large)

MI2: How acceptable is downloading files without permission to society? (highly acceptable – highly unacceptable)

Piracy Behavior

(sum of units reported in all categories below)

PI: Please indicate how many units in the following categories you have illegally downloaded in the last month? (Films/TV episodes, music tracks, games software, e-books/books/magazines)

Rationalization

(Sykes & Matza, 1957)

RA1: I couldn't help myself; I had to illegally download the files.

RA2: It's no big deal as no one was hurt.

RA3: It's the industry's own fault they were taken advantage of.

RA4: I was only doing what others do all the time.

RA5: I wouldn't have bought the legal ones anyway.

Appendix B

Table B1. *Individual Measurement Item Correlations in the US and Slovenia.*

	PR1	PR2	PR3	PR4	PR5	MI1	MI2	PI	RA1	RA2	RA3	RA4	RA5
PR1	1	.36**	.52**	.47**	.47**	.24**	−.19**	−.00	−.04	−.01	−.08	−.01	−.02
PR2	.42**	1	.31**	.40**	.36**	.43**	.46**	−.10	−.17**	−.22**	−.18**	−.12*	−.16**
PR3	.47**	.47**	1	.66**	.76**	.24**	.17**	−.16**	−.08	−.03	−.05	.08	.03
PR4	.49**	.47**	.70**	1	.71**	.28**	.26**	−.12*	−.19**	−.17**	−.14*	−.04	−.09
PR5	.48**	.44**	.68**	.69**	1	.26**	.23**	−.16**	−.15**	−.11*	−.06	.03	−.06
MI1	.20**	.27**	.21**	.20**	.26**	1	.54**	−.18**	−.16**	−.38**	−.27**	−.24**	−.24**
MI2	.17**	.36**	.30**	.30**	.25**	.53**	1	−.17**	−.16**	−.26**	−.19**	−.27**	−.25**
PI	−.08	.05	−.03	−.06	−.03	−.30**	−.22**	1	.18**	.20**	.23**	.15**	.16**
RA1	−.02	−.02	−.10	−.08	−.09	−.24**	−.19*	.34**	1	.40**	.29**	.27**	.21**
RA2	−.08	−.00	−.18*	−.21**	−.26**	−.50**	−.43**	.24**	.36**	1	.42**	.49**	.39**
RA3	−.10	.08	−.14	−.18*	−.25**	−.41**	−.31**	.34**	.47**	.55**	1	.43**	.31**
RA4	−.05	.05	.00	−.10	−.07	−.34**	−.28**	.21**	.35**	.50**	.48**	1	.49**
RA5	−.01	−.17*	−.05	−.16*	−.16	−.25**	−.18*	.24**	.31**	.38**	.34**	.39**	1

Note. Study 1 (US) individual item correlations are provided below the diagonal and Study 2 (Slovenia) item correlations are provided above the diagonal. **Correlation is significant at *p*-value = .010; *correlation is significant at *p*-value = .050. PR1-PR5: Personal risk measurement items; MI1-2: Moral intensity measurement items; PI: Piracy measure; RA1-RA5: Rationalization measurement items.

Appendix C

Table C1. *Factor Loadings.*

	Factor loadings US	Factor loadings Slovenia
PR1	.59	.58
PR2	.58	.44
PR3	.83	.85
PR4	.84	.80
PR5	.81	.88
MI1	.71	.78
MI2	.74	.70
RA1	.54	.47
RA2	.74	.74
RA3	.74	.61
RA4	.64	.72
RA5	.50	.60

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