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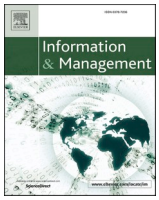

Antecedents and consequences of explicit and implicit attitudes toward digital piracy

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ABSTRACT

This study demonstrates the salience of explicit and implicit attitudes in the context of digital piracy and identifies their antecedents and consequences. Data were obtained by means of the Implicit Association Test and a survey. Explicit attitude has a positive effect on behavioral intentions which influence digital piracy engagement, whereas implicit attitude has a positive direct impact on digital piracy engagement. Idealism has a negative effect on explicit attitude but a positive impact on implicit attitude. Relativism has a positive effect on explicit and implicit attitudes. People's selfish characteristics manifest themselves in delinquent digital piracy actions through implicit cognitive processes.

1. Introduction

Illicit use, duplication, access, and distribution of digital products have existed since the invention of the first personal computers, and the ownership of digital intellectual property has been traditionally recognized as one of the most critical ethical issues of the information age [147]. In response, governments have implemented various regimes, policies, and mechanisms to create an integrated system of digital intellectual property protection [8; 9]. However, the legislative and technical measures failed to produce desirable outcomes, and the rate of digital piracy has been continuously growing [216]. Thus, instead of focusing on various prohibitive approaches, researchers proposed addressing the issue of digital piracy from the perspective of ethics and morals [51; 108; 117].

Accordingly, researchers have proposed, adapted, and applied various models and principles to understand the factors driving digital piracy behaviors [e.g., see 37; 55; 120; 136; 138; 173]. On the one hand, they were able to identify a number of antecedents of digital piracy and suggest corrective actions [245]. On the other hand, many scholars observed no link between ethics constructs (e.g., idealism, formalism, and morality) and intention to engage in illicit piracy activities [e.g., see 15; 140]. Other researchers also reported a lack of relationship between ethical judgments and questionable behaviors [157]. This seems counterintuitive because it is reasonable to assume that the higher one's moral standards are, the less likely he or she is to engage in wrongdoing. One of the possible explanations pertains to the fact that researchers tend to focus on explicit attitude which is obtained through self-reported measures, such as surveys and interviews [e.g., see 245]. However, evidence suggests that people's behaviors are governed by not only explicit but also implicit attitude, defined as a stable evaluation of an attitude object (e.g., an IT artifact, a person, a concept) that is "formed a-priori, is stored in special fast-access memory, and is activated with little or no conscious effort in response to internal or external stimuli associated with the attitude object" [208, p. 657–658]. People are generally unaware of the existence of implicit attitude and its effect on their behavior and often refer to their automatically driven actions as guided by intuition. This notion has already received recognition in academic research on ethical decision-making [31]. For example, it is documented that, during their routine, ethical decision-making, managers frequently rely on intuition to drive their behavior instead of employing time-consuming rational models [57; 182; 198]. Dedeke [64] proposed the cognitive-intuitionist model of moral judgment that emphasizes the role of automatic cognition and emotions. Woiceshyn [240] presented a model for ethical decision-making in business that includes two levels of processing: conscious/rational and subconscious/intuitive. Haidt [106] developed the social intuitionist model of moral judgment. Sonenshein [214] further argued that rationalist ethical models have numerous limitations because they ignore intuitive components.

The line of research above is remarkably consistent with the concept of dual-process systems that has received recognition in the fields of psychology [73; 238] and information systems [208; 209]. As such, it suggests that there are two distinct types of attitudes, explicit and

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implicit. Explicit attitude facilitates the development of behavioral intentions which, in turn, lead to actual behavior [3; 78]. In contrast, implicit attitude does not trigger behavioral intentions [19] because it exists beyond people's conscious control [23; 76; 77]. Instead, it has a direct effect on the resulting behavior [19; 208]. Explicit and implicit attitudes also differ in terms of their measurement: while explicit attitude may be measured by means of retrospective self-reports, implicit attitude may be measured only indirectly.

Focusing on implicit attitude is important because it may improve the predictive power of conceptual models and explain the inconclusive findings in previous studies of ethical behavior. Moreover, as demonstrated by Chavarria et al. [37], digital piracy research benefits from transcending disciplinary boundaries and bringing a cross-disciplinary perspective, particularly from the body of knowledge in psychology where the concept of implicit attitude takes its roots. In a comprehensive review of the empirical ethical decision-making literature, Craft [50] concluded that "implicit attitudes (subconscious evaluations) added positively to the prediction of ethical decision-making, whereas explicit attitudes (known evaluations) did not" (p. 254) and called for future research on this issue. Regrettably, only a handful of studies explored the effect of implicit attitude in the domain of ethical decision-making [125; 144; 146; 151]. Particularly, it is unknown what leads to the development of implicit attitude and what effect it has on people's engagement in digital piracy. Thus, the purpose of the present study is to understand the nature, antecedents, and consequences of implicit attitude in the context of digital piracy.

2. Theoretical background

2.1. Digital piracy

Digital piracy is the practice of illegally downloading, accessing, copying, using, and distributing digital music, video, games, computer software, etc. without the explicit permission of a copyright holder [5; 97]. It is a violation of a licensing agreement and is considered a criminal offense in most countries. Examples of digital piracy include watching the latest movies illegally obtained from peer-to-peer (P2P) sites, creating copies of DVD and Blu-ray disks (except for backups), uploading previously purchased songs on file-sharing networks, and installing cracked versions of software packages. Due to the availability of high-broadband networks, media platforms, and affordable computing devices, digital piracy activities have now become commonplace. For example, one out of three Internet users accesses at least one website every month that hosts illegal digital content, which results in hundreds of billion dollars lost per year [216]. The actual losses, in fact, are much higher because of lost jobs, unpaid value-added taxes, and lower incentives for digital intellectual property creators.

The content most frequently pirated digitally includes digital music, video, and software. On the one hand, music and video are similar in many ways to software [234]. For example, even though they are expensive to produce, they may be distributed and reproduced virtually for free. As well, illegally acquiring or sharing them does not decrease their value for the end consumer. It is also difficult to prevent their unauthorised copying and distribution. On the other hand, music and video are considered as experience goods which people must use before they can assess their quality [22; 127]. Further, music and video are predominantly consumed because of their entertainment value. As a result, there is a high degree of subjectivity inherent in the assessment of the entertainment value of digital music and video content. In addition, obtaining digital music and video does not require much technical expertise. In contrast, software products generally represent search goods because, in most cases, individuals can estimate their quality and value before obtaining and consuming them. Software is also mostly acquired for its utilitarian value, making its value less subjective than that of music and video. In addition, software products are often encrypted, require license keys, and must be updated frequently, each of which represents a burden for digital pirates. However, despite such differences, music and video as well as software constitute a major part of digitally pirated content.

Individuals engage in digital piracy for various reasons. First, some people, especially youngsters and young adults, are influenced by utilitarian considerations and are generally unwilling to pay for digital content [223; 235]. Price is a major factor driving the consumption of illicit digital content, especially for people residing in lower-income countries [96; 153; 181]. Second, digital piracy rates are influenced by national culture [220], particularly by the individualism-collectivism dimension. Research shows that more collectivistic (less individualistic) societies have higher digital piracy rates because they strongly emphasize in-group sharing of valuables, including copyrighted digital products, and so tolerate deviations from norms in favor of in-group equity [71; 121]. Third, digital pirates employ neutralization techniques to justify their actions [221; 246]. These include (a) the denial of responsibility (someone else is responsible, e.g., the provider of a file-sharing network); (b) the denial of injury (no harm is caused to the copyright owner because I would not pay for the content if I could not get it for free); (c) the denial of victim (the copyright owner is rich anyway); (d) the condemnation of condemner (publishers rip off artists too); (e) the appeal to higher loyalties (sharing copyrighted material allows many people to benefit from it); and (f) the defense of necessity (using illegal digital products for important purposes, such as research or education) [122; 152; 155].

Fourth, low self-control, defined as a relatively stable personal characteristic developed early in life, is linked to the likelihood of engaging in digital piracy [80; 110; 115]. For example, individuals exhibiting low self-control may not be able to delay their gratification. As a result, they find it difficult to wait for a weekend to go to a movie; instead, they may watch an illicit version online immediately. Fifth, the application of social learning theory [12] to the study of crime and delinquency suggests that individuals develop deviant behaviors as a result of their interaction with others [4; 116]. People who associate with friends or family members that regularly infringe digital copyright are more likely to participate in similar activities, especially if they observe no negative repercussions. Sixth, countries with a less developed IT infrastructure may have an inadequate supply of authentic digital products – including software packages, games, music, and video – which inflates prices. In some situations, people turn to pirated sources because they cannot legally obtain the specific digital material they are looking for [18]. Thus, piracy becomes a natural choice for those in such circumstances who need digital products [242].

Previously, numerous legal, regulatory, monitoring, and technical perspectives have been offered to curb the continuously growing rate of digital piracy, but they have had limited success [5; 11; 56]. Moreover, some measures had an opposite effect. The key problem is that it is difficult to physically prevent piracy actions, identify violators, and enforce punishment. Instead, the use of ethical approaches and appeal to morality were suggested to prevent such delinquent behaviors [49; 108; 222]. Particularly, it was concluded that the entire issue of digital piracy should be approached from the perspective of ethics and morals [5; 51; 108; 117].

Researches have employed a number of theoretical models, frameworks, and perspectives to understand personal, motivational, and contextual factors driving digital piracy behaviors [225]. These included the descriptive model of ethical decision-making [120], the concept of ethical predispositions [26], a model of ethical/unethical decision-making [25; 183], a theoretical framework of interpersonal behavior [136; 227], equity theory [1; 93], expected utility theory [172], deterrence theory [173], and the four-component model of morality [154; 186]. In addition, the theory of reasoned action (TRA) [3; 78] and the theory of planned behavior (TPB) [2] have been successfully integrated with ethics theories [244]. As empirically demonstrated by Yoon [245], TPB has a high explanatory power and is very appropriate for understanding the digital piracy phenomenon. Particularly, attitude

toward digital piracy, conceptualized according to TPB, has a strong effect on intentions to engage in digital piracy behavior. Therefore, the present study employs the TPB perspective as a starting point and specifically focuses on the role of attitude in the context of ethical decisions.

2.2. Explicit vs. implicit attitude

Evidence suggests that the findings of prior investigations focusing on the relationship between ethics or morality and engagement in illicit activities have been somewhat inconclusive. On the one hand, it was found that digital pirates are more likely to break the law in general, disregard ethical norms, ignore policies, neglect anti-piracy arguments, exhibit low integrity, take unnecessary risks, and endorse ethically questionable acts [95; 133; 180; 190]. As such, individuals engaging in digital piracy are believed to have low ethical and moral standards. On the other hand, a number of empirical studies reported no link between ethical judgments and questionable activities [157]. For example, Shang et al. [211] observed that the deontological norm of anti-piracy does not affect the ethical considerations of P2P users to illegally share copyrighted content with others. Bateman et al. [15] concluded that individuals with higher levels of moral absolutes (idealism and formalism) are more likely to believe that file sharing is a serious ethical issue, but this has no effect on their intentions to voluntarily participate in digital piracy. Lysonski and Durvasula [140] discovered that ethical idealists recognize the social costs and negative consequences of digital piracy, but the ethical arguments do not necessarily lead to the development of appropriate attitude and behavior. Moores and Chang [154] claimed that people recognize digital piracy as an illicit activity of copyright infringement, but this recognition does not affect their judgment of the morality of the piracy act. Accordingly, Morris and Higgins [155] concluded that "it is clear that there is an underexplored cross-theoretical dynamic in explaining self-reported piracy and willingness to engage in digital piracy" (p. 173). In a similar vein, Davis et al. [60] documented that people exhibiting a high degree of ethical ideology do not necessarily condemn unethical actions. Vitell and Patwardhan [232] also found that moral philosophies have limited, if any, effect on ethical decision-making processes.

As argued by Mudrack and Mason [157], the inconsistencies in findings described above may result from differences in terminology, labels, constructs, and measurement instruments. Most importantly, previous researchers traditionally relied on the use of self-reported explicit attitude that respondents are aware of. However, explicit attitude is subject to numerous constraints and portrays only part of the picture [193].

According to TPB, the actual behavior is influenced by intentions to perform the behavior, which, in turn, are driven by attitude toward this behavior [2]. Attitude is a psychological evaluation of a person, an object, or a concept with some degree of favor or disfavor [70], which translates into deliberate, informed, and conscious intention to act. TPB assumes that individuals are fully aware of their attitude and may accurately self-report it. However, research reveals that people may hold two types of attitudes: (1) explicit (of which they are fully aware) and (2) implicit (which exists beyond their awareness) [88; 102; 103].

Explicit and implicit attitudes are fundamentally different [13; 29; 171; 178; 196]. Explicit attitude is context-dependent, influenced by the most recent experience, controlled by a person, and deliberately retrieved from the memory during self-reports. It changes depending on the respondent's goal and expectations from others [89; 195; 197]. For example, to gain social approval, most residents of developed countries tend to refrain from publicly expressing a negative explicit attitude toward minorities, despite their true feelings [68]. Thus, explicit attitude reported by participants may change depending on the context of the study (e.g., depending on the context of the vignette in the study of an ethics position). This happens because explicit attitude is affected by social desirability bias [131], whereas implicit attitude is not [229].

In contrast, implicit attitude is a stable evaluation of an IT system (e.g., a torrent site), an object (e.g., a pirated software package), a person (e.g., a hacker), or a concept (e.g., digital piracy) that someone forms over a lifetime through experience, education, reading, passive socialization, and interaction with others [192; 194] during a "process of repeated pairings between an attitude object and related evaluations" [195, p. 995]. Implicit attitude forms and exists beyond one's conscious control and awareness; in most cases, people are unaware of its magnitude, valence, and behavioral impact. Generally, implicit attitude takes a long time to develop and is extremely difficult to change. It is activated automatically, quickly, spontaneously, and uncontrollably when a person is exposed to a cue (i.e., a stimulus) associated with an attitude object [23; 76; 77; 208; 209; 229]. Implicit attitude does not change based on the respondent's goals, motivation, and environment [61]. Thus, implicit attitude may not be assessed through self-reports, interviews, or retrospection-based questions. Explicit and implicit attitudes are not reliable predictors of each other. Instead, they may differ in strength, direction, and impact [105]. For example, someone may score high on the questionnaire measuring explicit attitude toward helping others (e.g., under peer pressure or to be consistent with social norms) yet may be extremely egoistic and possess an opposite implicit attitude. Thus, when his/her behavior is driven solely by implicit attitude, he/she may behave in selfish and quite unexpected ways that are inconsistent with his/her deliberately controlled behavior. This issue has far-reaching workspace implications because it creates distracting, unpredictable, and pressured working environments [45].

In the IT context, implicit attitude is different from habit [208]. First, habit is defined as "the extent to which people tend to perform behaviors (use IS) automatically" [135, p. 709]. Even though implicit attitude also involves automaticity (because it is activated automatically), habit refers to a mental representation of an action (i.e., automatic behavior) while implicit attitude is a mental evaluation of an object, a person, or a concept in one's memory. Second, habit is acquired when a person frequently repeats the same behavior in a stable context. While implicit attitude also emerges from repetitive behavior, it may also be formed by other means, including passive socialization, reading, deliberate thinking, single emotional events, and childhood experiences. Third, individuals are mostly cognizant of their habits while implicit attitude operates beyond people's awareness. Fourth, in most cases, people may control and deliberately change their habits, but they cannot easily do so with respect to their implicit attitude. Fifth, people mostly know what environmental factors trigger their habits, but they are generally unaware of external and internal cues that activate their implicit attitude. Sixth, habit is generally directed toward a particular goal while implicit attitude is goal neutral.

The concept of implicit attitude is not new to management researchers [202]. For example, it has been applied in marketing [32; 67; 112] and organizational behavior studies [247] in order to tap into the subconscious dimension of consumer and employee cognition. The concept of implicit attitude has also gained recognition in business ethics research [99; 159]. Recently, implicit attitude has entered the realm of information systems research. For instance, Belletier et al. [19] employed implicit attitude in the context of technology acceptance, Weinert et al. [236] developed a conceptual model that explains intentions toward using an IT via a combined effect of explicit and implicit attitudes, Turel and Serenko [229] showed that implicit attitude facilitates the problematic use of social networking sites, and Brailovskaia and Teichert [27] reported that implicit associations of social media lead to its addiction. Most importantly, Serenko and Turel [208] proposed and tested a dual-attitude model of system use that includes explicit and implicit attitudes. Particularly, they empirically confirmed that, in the context of IT, people may simultaneously hold two types of attitudes – explicit and implicit – and it is the combination of these attitudes that drives behavior although through different mechanisms.

A more formal treatment of the effect of explicit and implicit attitudes is explicated by the model of dual attitudes [238]. It posits that individuals may hold both explicit and implicit attitudes simultaneously

toward the same concept, person, or object. The effect of explicit attitude is well described by TRA and TPB: explicit attitude forms behavioral intentions which, in turn, drive actual behavior. However, when people are exposed to cues associated with attitude objects, they automatically generate implicit attitude which appears uncontrollably beyond their conscious awareness. In this case, implicit attitude does not trigger behavioral intentions. Instead, implicit attitude drives respective behaviors directly. Thus, behavior may be driven by explicit attitude, implicit attitude, or a combination of both, but the relationship between explicit attitude and behavior is fully mediated by intentions [217].

The overall impact of explicit and implicit attitudes is best explained from the perspective of the motivation and opportunity as determinants of the attitude-behavior relation (MODE) model [75; 165]. It states that the magnitude and effect of both attitudes vary. Implicit attitude is always evoked first, before the person generates explicit attitude. As such, implicit attitude is triggered instantaneously and automatically upon exposure to an attitude object, event, or concept. In contrast, the generation of explicit attitude requires deliberate cognitive effort. When an explicit attitude is created, it may partially or fully override the behavioral impact of implicit attitude. The strength of explicit attitude depends on two factors: (1) motivation, which may be inspired by task importance, need for the most accurate decision, or self-serving desires; and (2) opportunity to use cognitive resources required for deliberate processing, which may be determined by the amount of time available to assess relevant information and available cognitive resources. The MODE model suggests that, when motivation and opportunity to elaborate are low, explicit attitude is not created, and respective behavior is directed by implicit attitude only. However, as the salience of motivation increases and opportunity to consciously elaborate arises, explicit attitude appears and starts overriding implicit attitude. For example, medium-level motivation and opportunity create a medium-range explicit attitude. In this case, implicit attitude would be only partially overridden, and the final behavior would be a product of both explicit and implicit attitudes. At some point, when motivation and opportunity are high, explicit attitude completely overrides implicit attitude, and the resulting behavior is driven by explicit attitude only, through behavioral intentions [208].

With respect to the present study, the key contribution of a model of dual attitudes [238] and the MODE model [75; 165] is that they emphasize the existence and the role of explicit and implicit attitudes in human behavior and explain how they may drive one's digital piracy behavior. This important notion has found recognition in research that focuses on ethics and moral [14] which makes it highly relevant in the context of the present study.

2.3. Antecedents of attitude

Previous studies have explored a variety of factors that may facilitate the development of people's attitude toward digital piracy [e.g., see 5]. Given that it is best to approach the study of digital piracy from the perspective of ethics and morals [51; 108; 117], this investigation focuses on the antecedents of explicit and implicit attitudes that reflect the moral characteristics of digital pirates. The field of moral psychology, which recognizes the role of both conscious and subconscious cognitive processes and behaviors [106; 107], offers a variety of theories and constructs that may be employed in the context of digital piracy. Examples include Kohlberg's theory of moral development [130], moral foundations theory [100], the theory of basic individual values [204], and triune ethics theory [160]. While the role of these theories as lenses of analysis of people's behavior is unarguable, this study posits that ethics position theory [82], which identifies the dimensions of idealism and relativism, and the concept of selfishness [184], which represents a personality trait, are the most suitable antecedents of explicit and implicit attitudes toward digital piracy.

According to ethics position theory, idealism and relativism represent people's ethical ideology: a personal ethical system which influences their morality [84; 85]. Ethics position theory was selected because it allows researchers to directly examine the role of ethical ideologies that individuals employ to arrive at their judgment when coming across an ethically questionable issue [35]. Most importantly, ethical ideologies lead to the development of attitude toward various concepts, including digital piracy. The rationale is that ethical ideology shapes people's perceptions of and interactions with the external environment which, in turn, facilitate the development of their attitude in various contexts. For example, Galvin and Herzog [87] established that differences in personal ethical ideology form people's perceptions of animal treatment. Many studies have already emphasized the salience of ethical ideology in various contexts [e.g., see 36], including digital piracy [e.g., see 6; 35; 137].

Specifically, ethics position theory as proposed by Forsyth [82] argues that people exhibit dramatic differences when judging the morality of their decisions. It suggests that people are "intuitive moral philosophers, who base their judgments of right and wrong on a personal ethics position they have developed over a lifetime of experience in confronting and resolving moral issues" [85, pp. 814–815]. Ethics position theory classifies individuals along the dimensions of idealism and relativism [83; 84]. Idealism reflects "the concern for consequences" dimension of ethics position theory. It refers to the degree to which people believe that desirable outcomes can, given the "right" action, always be obtained. Individuals high on idealism assume that desirable consequences are always possible to achieve with no harm to others. In contrast, people low on idealism pragmatically accept the possibility of sacrifices and the necessity of choosing a course of action with minimal (yet possible) negative outcomes when an ideal situation may not be always achieved. Relativism pertains to "the concern for principles" dimension of ethics position theory. It refers to the extent to which individuals reject universal values, rules, and absolutes when assessing moral dilemmas. People high on relativism have little cognitive faith in unbreakable moral fundamentals, and they base their moral judgments on the features of each situation independently. Those who are low on relativism rely on moral norms to a great degree and make their judgments based solely on these absolutes. Overall, it is proposed that the dimensions of idealism and relativism may shape people's explicit and implicit attitudes toward digital piracy.

In addition to ethical ideology, people's personality traits also influence the development of attitudes toward various concepts [e.g., see 44; 191; 226]. Personality traits refer to organized, individual-specific mental representations of personality dimensions which apply across multiple contexts, are stable over time, and differ among individuals [7; 148]. To explore the notion of personality traits, researchers have developed a variety of trait theories and measurement approaches. Well-known ones are the Sixteen Personality Factor Questionnaire [34], Murray's system of needs [158], the Big Five personality traits [48; 66], the California Psychological Inventory [98], the Occupational Personality Questionnaire [201], the Myers–Briggs Type Indicator [28], the Temperament and Character Inventory [47], and the Eysenck Personality Questionnaire [74].

It is believed that a personality trait that plays the most salient role in the context of digital piracy should meet two criteria. First, it should be negative and appeal to the "dark side" of one's true nature. Second, it should pertain to a person's ego, self-focus, and disinterest in others' well-being, rights, and prosperity. The rationale is that an extremely negative, self-centered personality trait may facilitate users' disregard for normative, legal, and ethical principles when they access copyrighted digital content without paying for it and, therefore, it may drive their attitude toward digital piracy. For instance, digital pirates ignore the fact that the movies they are illegally watching and distributing through P2P networks take a lot of effort and money to create. Instead, they act in a purely selfish manner while disregarding the contribution of others. Thus, they are likely to exhibit a selfishness trait, defined as a concern with one's own interest at the expense of the interests of others [65; 184] which both reflects users' "dark side" and self-centrism. In

fact, the concept of selfishness has become a common yet controversial issue in ethics research [143]. Selfishness is different from self-interest because the former is completely devoid of ethical considerations, whereas the latter assumes that it is possible to focus on personal benefits while maintaining individual, corporate, and social responsibility [123]. Generally, it is deemed acceptable for people to pursue their personal benefits if they consider the physical, financial, and moral impacts of their actions. In sharp contrast, selfish behavior violates others' rights and interests. Selfish individuals display greed, self-absorption, narcissism, and lack of responsibility [141]. Common examples of selfish actions in the business environment include deception during job interviews [118], resume fraud [113], bribery [166], extortion [228], sabotage [205–207], and corruption [163].

Selfish motives also play an important role when it comes to digital piracy. For example, Bhal and Leekha [21] reported that individuals use the concept of selfishness as a moral justification of their illicit actions. Zopiatis and Krambia-Kapardis [248] also documented that selfish individuals exhibit a high tolerance for downloading copyrighted materials from the Internet. Plowman and Goode [181] and Tang and Farn [223] showed that people engage in digital piracy for selfish economic reasons. Thus, in addition to idealism and relativism, this study includes selfishness as an antecedent of explicit and implicit attitudes.

3. Model and hypotheses

At the initial stages of research in moral psychology, it was commonly assumed that rational, deliberate, and conscious processes, which may be identified and measured by means of self-reports, dominate ethical decision-making [130; 185]. Subsequent studies confirmed the usefulness of this paradigm but revealed that it does not portray a full picture. Instead, it was concluded that both explicit and implicit processes influence ethical and moral decision-making [125; 151], which is consistent with dual-process models commonly applied in psychology research [17; 73]. There are several reasons highlighting the importance of implicit processes in the context of ethical and moral decision-making.

First, the amount of deliberate processing required to construct an attitude toward a moral situation depends on the context [125]. In a complex, new, unique, or important environment (e.g., when being exposed to a critical moral dilemma), individuals may become highly engaged and motivated to accurately assess the situation. In this case, according to the MODE model [75; 165], they develop a strong explicit attitude. In contrast, when assessing a common real-life situation, people may not engage in deliberate thinking and, instead, automatically trigger implicit attitude residing in their long-term memory, which in turn drives their actions [106]. In other words, in order to employ explicit moral decision-making schemata, individuals must recognize a moral issue associated with the present dilemma. Many people, however, believe that digital piracy has a low degree of moral intensity [38; 93], defined as a person's perception of the extent of issue-related moral imperative in a particular situation [126; 156]. Individuals often fail to consider digital piracy as a serious ethical problem. They assume that engaging in digital piracy is not a big deal [21; 140]. Therefore, in this case, people often do not construct explicit attitude, and their behavior may be driven, at least in part, by implicit attitude. This explains the low predictive power of some explicit attitude-based models focusing on behavior in the digital piracy context.

Second, explicit attitude explains deliberate behaviors, whereas implicit attitude explains spontaneous actions [175; 177]. Explicit attitude requires propositional thinking and therefore should affect deliberate behavior – for example, tax evasion. In sharp contrast, implicit attitude is activated involuntarily and thus drives spontaneous, routine, and trivial behavior – such as downloading a song from a P2P network. Third, explicit processes are measured by means of self-reports which are susceptible to personal misinterpretation, presentation bias, and even deliberate deception [203]. Even the most honest respondents may be completely unaware of changes in their reported explicit attitude values, especially when they have an opportunity (e.g., enough time) and are motivated to construct the best or most appropriate response [165]. For example, the existence of social desirability bias, defined as a tendency to under-report socially unacceptable characteristics, traits, and behaviors and over-report acceptable ones [52; 131], is well documented in ethics research [46; 69]. In fact, Gergely [92] demonstrates that self-reports of software piracy behavior exhibit a high degree of social desirability bias. The concept of moral hypocrisy further suggests that individuals still appear moral to themselves even when they engage in immoral activities [16]. Thus, self-reported explicit attitude may not accurately reflect the true construct and may produce inaccurate results. In contrast, this is not an issue in the measurement of implicit attitude; implicit attitude is not affected by social desirability bias simply because individuals are unaware of it and its behavioral consequences [145; 229]. Fourth, neurological research shows that general explicit and implicit processes take place in different parts of the human brain [53; 215]. The same phenomenon has been observed with respect to explicit and implicit moral processes [101; 111]. Therefore, during ethical decision-making, explicit and implicit attitudes may produce different outputs and trigger opposite behaviors.

A number of studies have confirmed various differences existing between explicit and implicit processes in the ethical decision-making context. Saunders [200], Reynolds [187], and Epley and Caruso [72] argued that the dual-process attitude models are suitable for the context of ethics and morals. Bolender [24] further emphasized the existence of two systems in moral reasoning. Salvador and Folger [199] highlighted the leading role of intuitive, subconscious, and implicit dimensions in ethical decision-making. Cushman et al. [54] observed that moral principles and judgments often exist beyond people's conscious awareness. Payne and Cameron [170] argued that moral judgment does not always explain ethical behavior. Cameron et al. [33] demonstrated that people are generally more lenient in condemning unethical behaviors that resulted from subconscious biases. Pelham et al. [174] discovered that implicit egoism influences major life decisions beyond people's awareness of their actions. Reynolds et al. [188] showed that implicit assumptions shape moral behaviors in a business environment. Taylor [224] concluded that implicit processes may improve our understanding of digital piracy involvement. Most importantly, Marquardt [144] and Marquardt and Hoeger [146] demonstrated that, in moral decision-making, implicit attitude has a stronger predictive power than explicit attitude. Perugini and Leone [176] found that explicit moral personality processes fail to predict actual moral actions. At the same time, implicit processes successfully explain moral behavior.

When individuals are exposed to a cue associated with a moral concept (e.g., digital piracy), their implicit attitude is activated first, and it accurately reflects their true attitude toward this concept. However, due to social desirability bias which exists in the digital piracy context [92], people may be motivated to portray themselves as highly moral individuals, and, if they have an opportunity to do so (e.g., not being rushed when completing a survey), they may report explicit attitude that reflects their somewhat idealized self-image (e.g., someone who formally condemns this delinquent behavior) [75; 165]. As a result, their self-reported explicit attitude may differ from their implicit attitude. However, in some situations, people may not have a motivation and an opportunity to deliberately construct the most appropriate explicit attitude, and, in this case, their behavior is driven by their implicit attitude. In other words, implicit attitude is always activated first while explicit attitude may be constructed second, and both of them may affect one's behavior.

Implicit attitude is important because it does not trigger behavioral intentions [19; 208]. Instead, mental associations are automatically retrieved from the memory, beyond people's attention, upon a mere exposure to an attitude object. Because implicit attitude is always linked to a particular behavior, the resultant moral action takes place immediately and involuntarily. In this case, moral reasoning is a post-hoc

construction generated after the action to simply justify the behavior [106]. Thus, due to the direct implicit attitude-behavior link, implicit attitude has a strong predictive power with respect to routine and low-intensity moral decisions, including engagement in digital piracy. In contrast, explicit attitude requires the deliberate formation of behavioral intentions, which, in turn, drive people's actions. This view is consistent with the TPB [2]. Accordingly, a number of studies confirmed an explicit attitude-intention-behavior relationship in the digital piracy context [43; 134; 233; 235]. Therefore, the following hypotheses are proposed:

Hypothesis 1: Implicit attitude toward digital piracy has a positive direct effect on engagement in digital piracy.
Hypothesis 2: Explicit attitude toward digital piracy has a positive direct effect on intentions to engage in digital piracy.
Hypothesis 3: Intentions to engage in digital piracy have a positive direct effect on engagement in digital piracy.

Since its introduction, ethics position theory, which focuses on the role of idealism and relativism, has attracted the attention of management researchers [119; 168]. Overall, it has been established that idealism is supposed to have a suppressive effect on people's attitude toward unethical behavior, whereas relativism is expected to promote it [82–84]. The rationale is that idealism enhances one's perceptions of moral intensity, the importance of ethics, and a sense of social responsibility. As a result, people with a high level of idealism refrain from behaviors that may hurt others and, therefore, they perceive unethical actions negatively, including digital piracy because this behavior may harm copyright owners and other stakeholders. In contrast, relativism decreases one's perceptions of moral intensity, ethics, and social responsibility because individuals with a high level of relativism do not believe in strong moral fundamentals, ethical rules, and moral principles. Thus, they may easily engage in and develop a positive attitude toward violations of copyright laws and licensing agreements since they place little value on them.

However, despite the theoretical arguments above, the results of empirical studies that examined idealism and relativism in the context of digital piracy have been somewhat inconclusive. Specifically, a number of studies reported only partial support for relationships between idealism and attitude, and between relativism and attitude [see 15; 35; 137; 212; 239]. Moreover, Lysonski and Durvasula [140] reported that "the results clearly demonstrate a disconnection between ethical orientation and [explicit] attitudes toward piracy" (pp. 172–173). In a similar vein, according to a meta-analysis by Mudrack and Mason [157], idealism and relativism do not always explain ethical behaviors in other contexts.

The inconsistency observed above may be attributed to the fact that previous studies focused on explicit attitude, whereas in the domain of ethics and morals, idealism and relativism may also have an effect on implicit attitude. The relationships between idealism and attitude and between relativism and attitude may be explicated from the perspective of self-verification theory [219], which posits that individuals tend to seek external environments that match and reinforce their personal characteristics. This selective interaction process changes their perceptions and, as a result, individuals develop or alter their attitude toward these environments, thereby creating a corresponding personality-attitude link [191]. In the context of digital piracy, it is likely that IT users who exhibit a high level of idealism consciously reject the very notion of using and distributing illegal digital content and, therefore, refrain from interacting with it. Instead, they prefer legally acquired, copyrighted digital material. As a result, they form a negative explicit attitude toward digital piracy. In contrast, those who possess a high level of relativism do exactly the opposite: they deliberately seek interaction with pirated digital content and develop a positive explicit attitude toward it. Thus,

Hypothesis 4: Idealism has a negative direct effect on explicit attitude toward digital piracy.
Hypothesis 5: Relativism has a positive direct effect on explicit attitude toward digital piracy.

However, self-verification processes also function at the implicit (i.e., subconscious) level [10]. People who perceive themselves as possessing a high level of idealism may subconsciously develop an aversion to pirated digital material. In this, they implicitly reject the very notion of digital piracy because they may subconsciously feel that it infringes upon their personal values, ethics, and morals. As a result, they form a negative implicit attitude toward digital piracy, even though it may exist and function beyond their conscious awareness. At the same time, those who exhibit relativism characteristics may be subconsciously attracted toward digital piracy because it is consistent with their implicit personal worldview. It is hypothesized that:

Hypothesis 6: Idealism has a negative direct effect on implicit attitude toward digital piracy.
Hypothesis 7: Relativism has a positive direct effect on implicit attitude toward digital piracy.

Selfishness, which reflects people's concern with their personal interests at the expense of the interests of others [65; 184], is hypothesized to increase both explicit and implicit attitudes toward digital piracy. Consistent with the reasoning employed in the justification of H6 and H7, self-verification theory [219] posits that personality traits also lead to the development of attitudes in various contexts. For instance, the Big Five personality traits (extraversion, neuroticism, conscientiousness, agreeableness, and openness) affect employees' perceptions of task and job characteristics, which make them develop corresponding job attitudes [191]. By following the same line of reasoning, it is hypothesized that selfish IT users tend to consciously and subconsciously gravitate toward technologies and environments that allow them to satisfy their self-centered desires when they acquire digital content without paying for it and distribute it to like-minded others. As a result, they develop positive explicit and implicit attitudes toward digital piracy because these match their individual selfish predispositions. Thus,

Hypothesis 8: Selfishness has a positive direct effect on explicit attitude toward digital piracy.
Hypothesis 9: Selfishness has a positive direct effect on implicit attitude toward digital piracy.

Fig. 1 presents the proposed model.

4. Methodology

Implicit attitude toward digital piracy was measured by means of the Implicit Association Test (IAT) [32; 103; 104], which is considered one of the most appropriate tools to capture implicit social cognitions [62; 63; 105; 162]. The IAT has also attracted the attention of ethics researchers [99; 144; 146; 176]. The IAT measures the differential association of two target concepts with an attribute. It assumes that the stronger the association between two target concepts, the faster and more accurate the performance on the sorting task. When individuals deal with well-practiced cognitive associations, they perform sorting tasks faster and make fewer mistakes than when they work with less stable ones. Thus, a subject's difference in performance score [104] is used as a proxy of his/her implicit attitude. For more information on the IAT, refer to Greenwald et al. [103] and for a comprehensive theoretical explanation and demonstration in the information systems domain, see Serenko and Turel [209].

Attitude categories "moral" and "immoral" and related words were adapted from Marquardt [144]. Concept categories included "legal content" (i.e., legitimate, non-pirated digital content) and "illegal

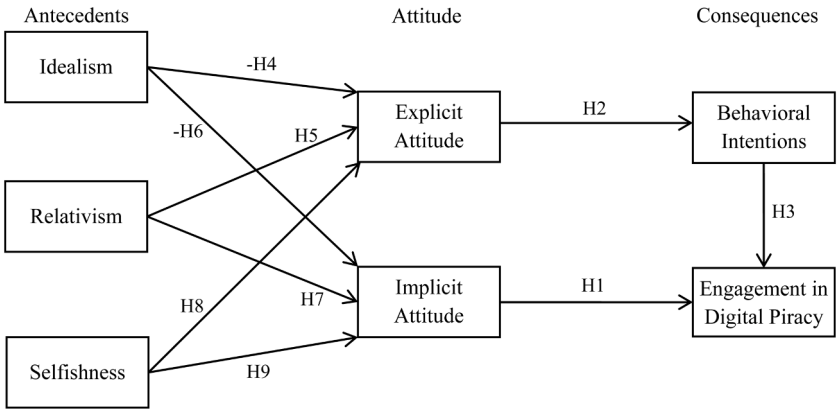

Fig. 1. Proposed model.

Table 1
The Implicit Association Test design.

Block	Number of trials	Objective	Left key	Right key
1	20	Practice: learning the construct dimension	Construct: Legal content (authorized, consented, lawful, legitimate, permitted, purchased)	Construct: Illegal content (illegitimate, unlicensed, stolen, taken, unauthorized, unlawful)
2	20	Practice: learning the attribute dimension	Attribute: Moral (just, fair, considerate, ethical, decent, helpful, right, responsible)	Attribute: Immoral (unjust, unfair, inconsiderate, unethical, indecent, harmful, wrong, irresponsible)
3	40	Test: construct-attribute pairing 1	Legal content + Moral	Illegal content + Immoral
4	20	Practice: learning to switch the spatial location of the constructs	Construct: Illegal content	Construct: Legal content
5	40	Test: construct-attribute pairing 2	Illegal content + Moral	Legal content + Immoral

content" (i.e., illicit, pirated digital content). As recommended by Serenko and Turel [209], each attitude category and concept was operationalized with the most common representative words. For this, several thesauri were employed. Extensive validity assessment of the words for all attribute and concept categories was done. For this, a group of ten subjects who previously engaged in digital piracy conducted a card-sorting procedure. First, the subjects were presented with attitude categories (i.e., moral and immoral) and a randomized set of words reflecting these two dimensions. They were asked to quickly assign each word to the more appropriate attitude. Second, the same procedure was repeated for the concept categories (i.e., legal content and illegal content). Based on the results, multiple adjustments to the representing words were made until no subject had difficulty sorting the items.

The *Free*IAT software package developed by Meade [150] was used to conduct the test. *Free*IAT offers a high degree of personalization, helps to identify negligent behaviors during the test (e.g., extremely fast responses), applies a five-block design recommended by Nosek et al. [162], uses robust randomization procedures for attributes and concepts, and employs the algorithm of Greenwald et al. [104] to calculate the IAT scores. It also reports two IAT scores per subject which are generated based on the first half of the stimuli and the second half of the stimuli. This allows measuring test reliability and using these two values as indicators of the implicit attitude construct in causal modeling software packages. Because of these advantages, this software tool has been successfully used in a number of studies to measure implicit attitude [86; 210; 241].

Table 1 presents the attributes (i.e., attitude categories), concept categories, related words, and test design. Blocks 1, 2, and 4 allowed respondents to practice the mental associations and were not scored (but the study participants were unaware of this). The IAT score was calculated as a difference in performance in Block 5 vs. Block 3 (see Greenwald et al. [104] for detail). The implicit attitude construct was operationalized with two indicators, which are reported by *Free*IAT [150]: (1) based on the first half of the stimuli and (2) based on the second half of the stimuli.

In order to measure ethics position (idealism and relativism), the original nine-point scale by Forsyth [82] was used. Selfishness was measured by employing the seven-point selfism scale by Phares and Erskine [179], which exhibits good psychometric properties [30]. Explicit attitude toward digital piracy was measured on a bipolar seven-point Likert-type scale by using the same pairs of words as were used to operationalize the attribute concepts in the IAT as recommended by Serenko and Turel [208]. This was done to achieve the most accurate comparison of the measured explicit and implicit attitudes. Items pertaining to intentions were adapted from Venkatesh et al. [230] and Yoon [244] and were measured on a seven-point scale. Digital piracy engagement was measured by asking respondents about their actual engagement in digital piracy. A cross-sectional design for the measurement of digital piracy engagement was selected for several reasons. First, this is a common approach in the operationalization of TPB-based models [58; 59]. Second, digital piracy behavior is relatively stable in the short run and is unlikely to quickly change. Third, the digital piracy engagement scale assesses the frequency of one's behavior over a long period of time (up to one year), and waiting for such a long time was not feasible. Fourth, the study design was very complicated because there were eight different sequences of the experimental procedure (as discussed below), and incorporating longitudinal design was very difficult. Social desirability bias was measured with a thirteen-item Marlowe--Crowne scale [189]. Basic demographic data were also collected. Appendix A presents the instrument.

To eliminate a potentially confounding effect of the order of tasks within the IAT, the attitude categories and concepts were assigned to the left and right keys in different sequences. Thus, four different versions of the IAT were designed. In addition, half of the subjects completed the IAT followed by a survey, and the other half filled in a survey followed by the administration of the IAT. Therefore, the experimental procedure

was organized in eight different sequences. Respondents were assigned to an experimental group randomly.

One hundred and twenty-six students at a North American university were invited to participate in the study. To increase results' generalizability, students were recruited from various faculties and programs. All participants enrolled in a study voluntarily and were not compensated. As demonstrated in prior research, students are considered a representative sample with respect to digital piracy [129; 190; 213] as well as the administration of the IAT [e.g., see 144; 146]. The IAT was administered in a computer laboratory in a quiet environment one participant at a time. Before the IAT, all subjects were provided with a general description of the study and a technical demonstration of the test, but the actual purpose of the IAT was not revealed and the IAT was referred to as a "computer test." Those who expressed interest in the purpose of the study were briefed after the completion of the IAT and the survey. Respondents also completed a paper-based survey before or after the IAT (depending on the experimental version assigned to them) on their own. Fifteen participants did not complete the entire task (e.g., some completed either the IAT or the survey) for non-study-related reasons (e.g., being too busy). Two IAT entries were flagged because more than 10% of all trials were below 300 milliseconds (i.e., too fast) and were completely removed from the study [104]. Six entries were excluded due to poor IAT reliability as recommended by Serenko and Turel [209]. Thus, the final dataset contained 103 valid entries.

Forty-eight and fifty-two percent of respondents were women and men, respectively. They were twenty-one years old on average, ranging from eighteen to thirty-five. Most were enrolled full-time, majoring in various areas including business/commerce, engineering, science, education, English, psychology, geology, etc. All, except four subjects, engaged in digital piracy within the last year.

5. Results

5.1. The measurement model assessment

A MANOVA test was conducted on all constructs of the model with the sequence of tasks (eight in total) as a fixed factor. Because no statistically significant differences were observed in construct means (Wilks' Lambda = 0.566, $p = 0.320$, n.s.), it was concluded that task order had no confounding effect. To perform the Harman's [109] one-factor test, all explicitly measured indicators were entered into an un-rotated factor solution. Because multiple factors emerged, and the first factor explained only 20% of total variance, there was no indication of common method variance. No statistically significant correlations were detected between social desirability bias and all constructs. Thus, the analysis of the measurement model proceeded.

Table B1, Appendix B presents descriptive statistics and reliability assessment. All items, except one (REL1), showed acceptable psychometric properties based on the item loadings, Cronbach's alphas, average variance extracted (AVE), and composite reliability measures [81; 164]. REL1 had a low loading, and it was removed from the measurement model. The loadings of all remaining items were significant at $p < 0.01$. Table 2 provides the evidence of strong discriminant validity of the constructs because the square root of AVE exceeded all inter-construct correlations [90; 91]. A matrix of item loadings and cross-loadings (available from the corresponding author) showed that all items loaded on their respective construct much higher than they cross-loaded on the other constructs. This further establishes the discriminant validity of the measures. Note that the negative mean of implicit attitude indicates that, on average, respondents held a somewhat negative implicit attitude toward digital piracy.

Table 2
Construct correlations (elements on the diagonal are the square root of the AVE).

	IDL	REL	SLF	EATT	IATT	BI	ENG
IDL	**0.745**						
REL	0.164	**0.737**					
SLF	0.252	0.376	**0.761**				
EATT	−0.145	0.295	0.074	**0.838**			
IATT	0.477	0.273	0.377	0.090	**0.894**		
BI	−0.029	0.103	0.110	0.390	0.198	**0.977**	
ENG	0.124	0.111	0.171	0.152	0.486	0.527	**1.000**

IDL – Idealism; REL – Relativism; SLF – Selfishness; EATT – Explicit attitude; IATT – Implicit attitude; BI – Behavioral intentions; ENG – Engagement in digital piracy.

5.2. The structural model assessment

SmartPLS Partial Least Squares (PLS) was used to estimate the model [231]. PLS is the variance-based second-generation structural equation modeling data analysis technique [39; 41; 42]. PLS does not produce fit indices; instead, it allows assessing the strength and significance of causal paths among multiple constructs simultaneously, which is the purpose of this study (i.e., to explore a number of hypotheses instead of obtaining the best fit of the model). Because PLS standardizes all indicators in the measurement model, differences in the ranges of the indicator scales did not confound the structural model.

Fig. 2 presents the results of the structural model assessment. First, consistent with H1, implicit attitude directly drives people's engagement in digital piracy. Second, explicit attitude affects behavioral intentions (H2) which, in turn, lead to digital piracy engagement (H3) with an overall effect of 0.18 (0.39 × 0.45). The impact of explicit attitude on digital piracy engagement is fully mediated through behavioral intentions: no direct relationship between explicit attitude and digital piracy engagement was observed (β = -0.067, ns.). Third, idealism negatively affects explicit attitude (H4), but it has a positive impact on implicit attitude, which contradicts H6. Fourth, as predicted, relativism has a positive effect on both explicit attitude (H5) and implicit attitude (H7). Fifth, the effect of selfishness determines one's implicit attitude (H9) but not explicit attitude (H8). Sixth, the differences in the strength of relationships between idealism and explicit attitude (H4) and between idealism and implicit attitude (H6) as well as between selfishness and explicit attitude (H8) and between selfishness and implicit attitude (H9) were different at $p < 0.01$. However, no difference was observed between the strengths of relationships between relativism and explicit attitude (H5) and relativism and implicit attitude (H7). Last, the effect of idealism, relativism, and selfishness on both behavioral intentions and digital piracy engagement was fully mediated through explicit and implicit attitudes. Table 3 summarizes the results of hypothesis testing.

Finally, the effect size (f^2) of implicit attitude was calculated according to the formula by Chin [40, p. 316]. For this, explicit attitude and behavioral intentions were entered as predictors of digital piracy engagement into the model first, and the model was re-estimated. Then, the implicit attitude was added. The effect size of implicit attitude is 0.27, which is considered a medium-large effect at the structural level.

6. Discussion

The purpose of this study was to explore the antecedents and consequences of explicit and implicit attitudes toward digital piracy. For this, a model of dual attitudes [238] was adapted as a lens of analysis. Based on the findings, several phenomena were observed that warrant further elaboration.

6.1. Theoretical implications

First, this study confirms the existence of dual attitudes in the context of ethical decision-making in the context of IT. It demonstrates that ethical IT behavior is governed not only by explicit processes but also by implicit ones. Explicit attitude has already been well explored in previous research through several important perspectives, such as the TRA

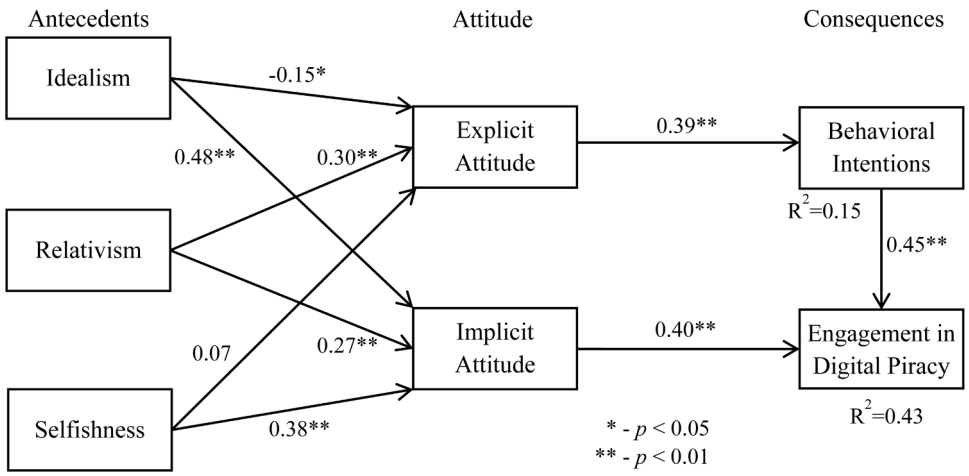

Fig. 2. The structural model.

Table 3
Hypothesis testing.

H#	Relationship	Strength	Conclusion
H1	Implicit attitude → engagement in digital piracy (+).	$\beta = 0.40$, $p < 0.01$	Supported
H2	Explicit attitude → digital piracy intentions (+).	$\beta = 0.39$, $p < 0.01$	Supported
H3	Intentions → digital piracy engagement (+).	$\beta = 0.45$, $p < 0.01$	Supported
H4	Idealism → explicit attitude toward digital piracy (–).	$\beta = -0.15$, $p < 0.05$	Supported
H5	Relativism → explicit attitude toward digital piracy (+).	$\beta = 0.30$, $p < 0.01$	Supported
H6	Idealism → implicit attitude toward digital piracy (–).	$\beta = 0.48$, $p < 0.01$	Rejected
H7	Relativism → implicit attitude toward digital piracy (+).	$\beta = 0.27$, $p < 0.01$	Supported
H8	Selfishness → explicit attitude toward digital piracy (+).	$\beta = 0.07$, ns.	Rejected
H9	Selfishness → implicit attitude toward digital piracy (+).	$\beta = 0.38$, $p < 0.01$	Supported

[3; 78], the TPB [2], and the model of ethical decision-making [120]. Whereas the contribution of these frameworks to our understanding of digital piracy is unarguable, the present study shows that it is possible to improve them by incorporating implicit attitude as another predictor of ethical IT behavior. The combination of explicit and implicit attitudes explains 43% of the variance in the digital piracy engagement construct, which may lead to important theoretical and practical recommendations.

Second, this study shows that the strength of the overall effect of explicit attitude on digital piracy engagement is less than a half of that of implicit attitude (i.e., $\beta = 0.18$, $p < 0.01$ for the overall effect of explicit attitude vs. $\beta = 0.40$, $p < 0.01$ for implicit attitude). The effect size (f^2) of implicit attitude also falls within the medium-to-large range (0.27). Thus, digital piracy behavior is strongly driven by implicit attitude. The leading role of implicit attitude may be explained by the low moral intensity of the digital piracy issue [38; 93]. Moral intensity may influence the extent to which explicit attitude is triggered. If the moral intensity is high, an individual may be highly motivated to seriously assess the moral dilemma and develop a strong explicit attitude by means of a deliberate process of thinking. In this case, explicit attitude overrides implicit attitude and creates conscious behavioral intentions, which, in turn, drive resulting behavior [75; 165]. However, conscious thinking and deliberate mental processing, which are needed to develop explicit attitude, require the use of cognitive resources. People are cognitive misers who have limited ability to deal with incoming information [79; 237]. They want to preserve mental energy, avoid thinking, and ignore important cues [149]. Especially when the moral intensity of an issue is low, a person may not be motivated to engage in deliberate thinking to form explicit attitude simply because the issue is not worth the deliberate effort. Implicit attitude, however, always appears upon a mere exposure to an attitude object. Thus, the resulting behavior is mostly (or even solely) driven by implicit attitude. As observed in this study, this phenomenon exists in the context of digital piracy: this questionable behavior is driven by implicit attitude because individuals perceive the issue to be of a low degree of moral intensity.

Third, idealism, defined as the extent to which individuals believe that the desirable consequences may always be obtained [82; 85], has a different effect on explicit and implicit attitudes. As proposed in H4, idealism has a negative effect on explicit attitude ($\beta = -0.15$, $p < 0.05$), which shows that more idealistic individuals develop negative explicit attitude toward digital piracy. At the same time, contrary to H6, idealism has a strong positive impact on implicit attitude ($\beta = 0.48$, $p < 0.01$). The underlying mechanisms behind this discrepancy are not yet fully understood. Nevertheless, this explains the inconsistent findings of prior investigations on the role of ethics position in moral decision-making [157]. A negative relationship between idealism and explicit attitude may exist because idealistic individuals may explicitly consider digital piracy to be a negative behavior. Thus, when their behavior is guided by deliberate reasoning processes, they consciously refrain from engaging in piracy. In sharp contrast, a positive relationship between idealism and implicit attitude toward digital piracy reveals that people may have a double standard toward this moral issue. Idealistic IT users may develop an implicit assumption (which they are not aware of) that all digital property should be free. They may subconsciously consider the software industry a public enemy that uses oppressive practices to deprive people of their right to use IT [94]. Idealistic individuals may involuntarily and subconsciously develop a "Robin Hood mentality" [161]: when they engage in digital piracy, they subconsciously feel no sympathy toward rich copyright holders and/or they subconsciously believe that their actions do not hurt them. Thus, they illicitly consume and distribute intellectual property (i.e., use it themselves and give it to those who cannot afford it) [212], and they do so for purely idealistic and altruistic reasons. Consistent with this hypothesis, Kwong et al. [132] demonstrated that the perceived social benefit of software dissemination has a positive impact on the intention to acquire pirated digital products.

Fourth, relativism, defined as the degree to which people reject universal values and absolutes in moral decision-making [82; 85], has a positive effect on both explicit ($\beta = 0.30, p < 0.01$) and implicit attitudes ($\beta = 0.27, p < 0.01$). This finding may be explained theoretically: the more likely individuals are to reject moral absolutes, the more likely they are to develop a positive attitude toward digital piracy engagement. Thus, relativism is an important factor in the context of digital piracy. Fifth, selfishness has no impact on explicit attitude ($\beta = 0.07$, *ns.*), but it has a positive effect on implicit attitude ($\beta = 0.38$, $p < 0.01$). Selfish people are only concerned with their own interests at the expense of the interests of others [184]. Generally, selfishness is considered a major force driving digital piracy [e.g., see 21]. This shows that selfish, illicit behaviors are mostly manifested through the automatic mode. When explicit mechanisms are idle, they do not control people's actions. Moreover, in some situations, individuals may not even recognize their behavior or realize the potential consequences. Prior research suggests that people are generally unaware of a negative effect of their implicit attitude on their spontaneous actions [20]. This study shows that individuals do not consciously let their selfish values drive their digital piracy behavior. Instead, their selfish characteristics manifest themselves in illicit actions through implicit processes.

Last, the Implicit Association Test was developed within the discipline of psychology [103], but it has already received recognition in various business domains, including IT [210; 229], as a valid method to measure the strength of implicit attitude. At the same time, except for a few noteworthy examples [e.g., see 99; 144; 146; 176], it has not achieved widespread acceptance in the domain of ethical decision-making. Yet, as argued by Craft [50], the measurement of implicit attitude is an important issue in future ethics research. Thus, the present investigation demonstrates the validity of the Implicit Association Test in the ethical decision-making context, such as digital piracy, and offers guidelines for future scholars.

6.2. Practical recommendations

In addition to its theoretical contribution, this study has several important practical implications. First, managers and policymakers should be aware that the issue of digital piracy should be approached from the perspective of ethics and morals. Ultimately, the final decision whether to voluntarily engage in illicit digital activities rests with an individual who is dramatically empowered by information and communication technologies. Because the prohibitive measures, such as legal regulations and technical restrictions, have had only limited success, appealing to the moral qualities of contemporary IT users may curb the growing digital piracy rates. Second, as demonstrated in this study, engagement in digital piracy is driven by both explicit and implicit attitudes. However, when people are motivated and given an opportunity to deliberate on their actions, explicit attitude overrides implicit one. Thus, a strong culture should be created that fosters deliberate assessment of people's actions with respect to someone else's intellectual property: when people carefully evaluate their behavior a priori, their explicit attitude may override their implicit attitude toward digital piracy. In this case, they are less likely to engage in digital piracy.

Third, a "Robin Hood" digital culture should be discouraged. People should stop considering the software industry an oppressor and stop idealizing the "fair" distribution of copyrighted digital materials. One possible approach is to emphasize the risk and financial expense involved in the creation of digital property. Fourth, educational programs may be developed to teach people how to engage in deliberate decision-making processes and how to ignore automatic and impulsive (i.e., implicit) urges. This may potentially reduce people's probability of making fast, automatic, yet questionable decisions they may later regret. Fifth, policymakers need to realize that it will take a long time to alter people's implicit attitude toward engaging in digital piracy. Generally, implicit attitude is resistant to change. Currently, many individuals have (unfortunately) already developed positive implicit attitude toward using illegally obtained digital content, distributing copyrighted material, and disregarding intellectual property laws. Thus, policies should be developed to gradually change this detrimental paradigm in people's minds. This may be achieved through various educational programs that should start in early childhood and continue afterward. Last, the Implicit Association Test may be employed in the organizational environment to measure implicit attitude toward negative matters, such as hostility toward the management, unfriendliness, stealing, addiction, etc. This test, which is not influenced by social desirability bias or falsification, may offer a valuable insight into the factors that may not be reliably measured through self-reports.

7. Limitations, research directions and conclusion

Despite its innovativeness and potential contribution, this study has several limitations. First, this research was done in the context of digital piracy. Thus, the results may not be generalizable to other ethical IT decision-making contexts. Future researchers should replicate and revalidate the proposed model in other IT environments, especially ones that have a high degree of moral intensity, such as cyberbullying or hacking. Second, respondents from only one country were selected. There are arguments that models developed and tested in the USA and Western contexts may not generalize to the entire world [114; 167; 243]. Moreover, because national culture plays an important role in digital piracy [e.g., see 71; 121; 153], future scholars should further test the proposed model and hypotheses by using non-North American samples. Third, there are other personal characteristics that may also affect explicit and implicit attitudes toward digital piracy. These include Machiavellianism, utilitarianism, moral equity, and contractualism. For example, future scholars may employ the Dark Triad constructs [139; 169] as antecedents of explicit and implicit attitudes. Fourth, as mentioned in the theoretical background section, digital pirates may consume and perceive music/video and software products differently [22; 127; 234]. Therefore, it may be prudent to study digital piracy of music/video and software separately [92]. A comprehensive definition of digital piracy employed in this study includes all types of digital content. Thus, future researchers are recommended to independently test the role of implicit attitude with respect to music/video and software. Fifth, the proposed model identifies the antecedents and consequences of explicit and implicit attitudes as well as their impact, but it does not explicate the processes which govern the existence of the causal relationships within the model. Whereas this study uses a strong theoretical framework to explain this issue, such as the MODE model [75; 165], future scholars may operationalize and test the MODE model in the context of digital piracy. Sixth, even though the Implicit Association Test is the most frequently employed tool to measure implicit attitude [62], several other methods, including the Stroop effect [142; 218] and the conditional reasoning test [124], are also available for future researchers. Seventh, this study rests on the assumption that digital piracy is a negative, undesirable phenomenon which must be eliminated. However, evidence suggests that some levels of piracy may have a positive impact on the manufacturers and retailers of digital goods [128]. Thus, future scholars are recommended to keep this notion in mind. Eighth, future researchers may consider using constructs employed in alternative ethics theories as control variables to improve the predictive power of this study's model. Last, future investigators should implement a longitudinal design to collect the measure of digital piracy engagement after the collection of other variables.

Traditionally, most researchers have relied on self-reported explicit measures of attitude toward various moral constructs. Whereas the contribution of this line of research is undeniable, the present study suggests that it is possible to improve conceptual models by including implicit attitude. In addition, this study shows that some personal characteristics may have a different effect on explicit and implicit attitudes. It is hoped that future researchers will further explore the role of implicit attitude as well as its antecedents and consequences in various IT contexts.

Credit author statement

NA
This is a solo-author publication.

Declarations of Competing Interest

none.

Appendix A. The questionnaire

Note: item codes did not appear in the administered questionnaire.

Instructions

Digital piracy is the practice of illegally downloading, accessing, copying, using, and distributing digital music, video, games, computer software, etc. E.g., downloading copyrighted music without paying for it.

Please answer the questions below with respect to digital piracy.

Explicit attitude

Engaging in digital piracy is:

EATT1	unjust						just
	−3	−2	−1	0	1	2	3
EATT2	unfair						fair
	−3	−2	−1	0	1	2	3
EATT3	inconsiderate						considerate
	−3	−2	−1	0	1	2	3
EATT4	unethical						ethical
	−3	−2	−1	0	1	2	3
EATT5	indecent						decent
	−3	−2	−1	0	1	2	3
EATT6	harmful						helpful
	−3	−2	−1	0	1	2	3
EATT7	wrong						right
	−3	−2	−1	0	1	2	3
EATT8	irresponsible						responsible
	−3	−2	−1	0	1	2	3

Behavioral intentions

Scale: 1-completely disagree; 2-mostly disagree; 3-somewhat disagree; 4-neutral; 5-somewhat agree; 6-mostly agree; 7-completely agree.

BI1. Assuming that I face no negative consequences for my actions, I intend to engage in digital piracy in the future.

BI2. If I have no negative repercussions, I predict I would engage in digital piracy in the future.

BI3. As long as I can get away with it, I plan to engage in digital piracy in the future.

Digital piracy engagement (ENG)

During the previous 12 months, on average you engaged in digital piracy:
_ daily (8) _twice a week (7) _once a week (6) _twice a month (5) _once a month (4) _once in three months (3) _once in six months (2) _once a year (1) _never (0)

Ethics position

Instructions: You will find a series of general statements listed below. Read each statement carefully. Each represents a commonly held opinion, and there are no right or wrong answers. You will probably disagree with some items and agree with others. We are interested in the extent to which you agree or disagree with such matters of opinion.

Scale: 1-completely disagree; 2-mostly disagree; 3-moderately disagree; 4-slightly disagree; 5-neither agree nor disagree; 6-slightly agree; 7-moderately agree; 8-mostly agree; 9-completely agree.

Idealism

IDL1. A person should make certain that their actions never intentionally harm another even to a small degree.

IDL2. Risks to another should never be tolerated, irrespective of how small the risks might be.

IDL3. The existence of potential harm to others is always wrong, irrespective of the benefits to be gained.

IDL4. One should never psychologically or physically harm another person.

IDL5. One should not perform an action which might in any way threaten the dignity and welfare of another individual.

IDL6. If an action could harm an innocent other, then it should not be done.

IDL7. Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral.

IDL8. The dignity and welfare of people should be the most important concern in any society.

IDL9. It is never necessary to sacrifice the welfare of others.

IDL10. Moral actions are those which closely match ideals of the

most "perfect" action.

Relativism

REL1. There are no ethical principles that are so important that they should be a part of any code of ethics.

REL2. What is ethical varies from one situation and society to another.

REL3. Moral standards should be seen as being individualistic; what one person considers to be moral may be judged to be immoral by another person.

REL4. Different types of moralities cannot be compared as to "rightness."

REL5. Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual.

REL6. Moral standards are simply personal rules which indicate how a person should behave, and are not to be applied in making judgments of others.

REL7. Ethical considerations in interpersonal relations are so complex that individuals should be allowed to formulate their own individual codes of ethics.

REL8. Rigidly codifying an ethical position that prevents certain types of actions should stand in the way of better human relations and adjustment.

REL9. No rule concerning lying can be formulated; whether a lie is permissible or not permissible totally depends upon the situation.

REL10. Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.

Selfishness

Please help us understand your ideas about life. Be honest with yourself and think very carefully how these questions fit you.

Scale: 1-completely disagree; 2-mostly disagree; 3-somewhat disagree; 4-neutral; 5-somewhat agree; 6-mostly agree; 7-completely agree.

SLF1. Thinking of yourself first is no sin in this world today.

SLF2. It is more important to live for yourself rather than for other people, parents, or future generations.

SLF3. I regard myself as someone who looks after his/her personal interests.

SLF4. It's best to live for the present and not worry about tomorrow.

SLF5. Getting ahead in life depends mainly on thinking of yourself first.

SLF6. Call it selfishness if you will, but in this world today, we all have to look out for ourselves first.

SLF7. In striving to reach one's true potential, it is sometimes necessary to worry less about other people.

SLF8. Not enough people live for the present.

Social desirability bias

Please indicate whether the statements below are true or false with respect to yourself:

Scale: True / False.

SDB1. It is sometimes hard for me to go on with my work if I am not encouraged.

SDB2. I sometimes feel resentful when I don't get my way.

SDB3. On a few occasions, I have given up doing something because I thought too little of my ability.

SDB4. There have been times when I felt like rebelling against people in authority even though I knew they were right.

SDB5. No matter who I'm talking to, I'm always a good listener.

SDB6. There have been occasions when I took advantage of someone.

SDB7. I'm always willing to admit it when I make a mistake.

SDB8. I sometimes try to get even, rather than forgive and forget.

SDB9. I am always courteous, even to people who are disagreeable.

SDB10. I have never been irked when people expressed ideas very different from my own.

SDB11. There have been times when I was quite jealous of the good fortune of others.

SDB12. I am sometimes irritated by people who ask favors of me.

SDB13. I have never deliberately said something that hurt someone's feelings.

Appendix B. Descriptive Statistics and Reliability Assessment

Table B1

Table B1
Descriptive statistics and reliability assessment (AVE – average variance extracted).

Item	Mean	SD	Item-total correlation	Loading	Error	Cronbach's alpha	AVE	Composite reliability
IDL1	6.39	1.84	0.74	0.794	0.032	0.92	0.555	0.926
IDL2	5.73	1.93	0.75	0.801	0.029			
IDL3	5.87	1.97	0.70	0.705	0.047			
IDL4	7.25	1.85	0.70	0.632	0.081			
IDL5	7.03	1.70	0.75	0.781	0.044			
IDL6	7.18	1.85	0.71	0.730	0.050			
IDL7	5.30	1.88	0.60	0.702	0.040			
IDL8	6.68	1.61	0.68	0.773	0.037			
IDL9	6.09	1.86	0.72	0.807	0.029			
IDL10	5.99	1.63	0.61	0.707	0.046			
REL2	6.34	1.76	0.71	0.741	0.062	0.90	0.543	0.914
REL3	5.98	1.89	0.66	0.651	0.090			
REL4	5.73	1.64	0.69	0.680	0.079			
REL5	5.85	1.79	0.71	0.691	0.079			
REL6	5.29	1.81	0.63	0.704	0.050			
REL7	5.33	1.56	0.71	0.793	0.043			
REL8	5.16	1.39	0.65	0.765	0.037			
REL9	5.17	1.87	0.63	0.797	0.032			
REL10	5.44	1.89	0.63	0.793	0.034			
SLF1	4.50	1.52	0.65	0.710	0.052	0.90	0.580	0.917
SLF2	3.70	1.57	0.64	0.738	0.041			
SLF3	4.70	1.41	0.66	0.720	0.046			
SLF4	3.83	1.56	0.61	0.708	0.046			

(*continued on next page*)

Table B1 (*continued*)

Item	Mean	SD	Item-total correlation	Loading	Error	Cronbach's alpha	AVE	Composite reliability
SLF5	3.81	1.57	0.69	0.778	0.037			
SLF6	4.17	1.72	0.84	0.891	0.018			
SLF7	4.08	1.61	0.70	0.788	0.031			
SLF8	4.50	1.45	0.62	0.742	0.039			
EATT1	3.11	1.38	0.82	0.856	0.031	0.95	0.703	0.950
EATT2	3.23	1.46	0.81	0.874	0.016			
EATT3	3.00	1.22	0.81	0.865	0.021			
EATT4	3.11	1.29	0.87	0.837	0.050			
EATT5	3.34	1.30	0.88	0.780	0.086			
EATT6	3.70	1.57	0.67	0.763	0.036			
EATT7	3.28	1.44	0.83	0.880	0.018			
EATT8	3.56	1.28	0.80	0.846	0.023			
IATT1	−0.66	0.46	0.60	0.885	0.022	0.75	0.800	0.889
IATT2	−0.71	0.44	0.60	0.904	0.017			
BI1	4.87	2.03	0.95	0.979	0.005	0.98	0.954	0.984
BI2	5.06	2.06	0.93	0.969	0.008			
BI3	4.81	2.10	0.96	0.982	0.003			
ENG	4.43	2.67	NA	1.000	0.000	NA	NA	NA

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