

4-1-2022

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Recommended Citation

Sikolia, David, "EFFECTS OF NEUTRALIZATION IN SOFTWARE PIRACY INTENTIONS" (2022). *SAIS 2022 Proceedings*. 24.

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EFFECTS OF NEUTRALIZATION IN SOFTWARE PIRACY INTENTIONS

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ABSTRACT

This study is partial replication of (Siponen et al., 2012) study on the effects of neutralization, shame, and moral beliefs on software piracy. The Information Systems discipline has outlined the importance of replication studies in a replication manifesto (Dennis & Valacich, 2014). The primary objective of Siponen et al. study was to examine which neutralization techniques most strongly influence software piracy. They developed and tested a model composed of all the seven neutralization techniques, but only two, *appeal to higher loyalties*, and *condemn the condemners* were found to be significant. In our study, all but one neutralization technique, *denial of victim*, strongly predict software piracy intentions.

Keywords

Software piracy, Neutralization techniques, Illegal copying of software.

INTRODUCTION

Software piracy is the unauthorized use, copying or distribution of copyrighted software and can be a source of legal liabilities for organizations. Software piracy is illegal and there are strict laws for these illegal activities. Software piracy is serious enough and has received attention from Information Systems scholars who have advanced several approaches to explain why individuals pirate software. This study is a partial replication of one of the papers by Siponen et al.

In their paper, (Siponen et al., 2012) state previous research indicates that neutralization, a form of rationalization is an effective way for explaining software piracy. However, prior studies had examined neutralization as a single construct, and thus did not provide insight into which techniques contribute most to software piracy. To address the research gap, they proposed and empirically tested a model that examined the effects of various neutralization techniques on intention to pirate software.

THEORETICAL MODEL AND HYPOTHESIS

Siponen et al. model as shown in figure 1 was based on two criminological theories, neutralization, and deterrence. The deterrence constructs, “shame”, “formal sanctions”, and “moral beliefs” were not examined in our replication study.

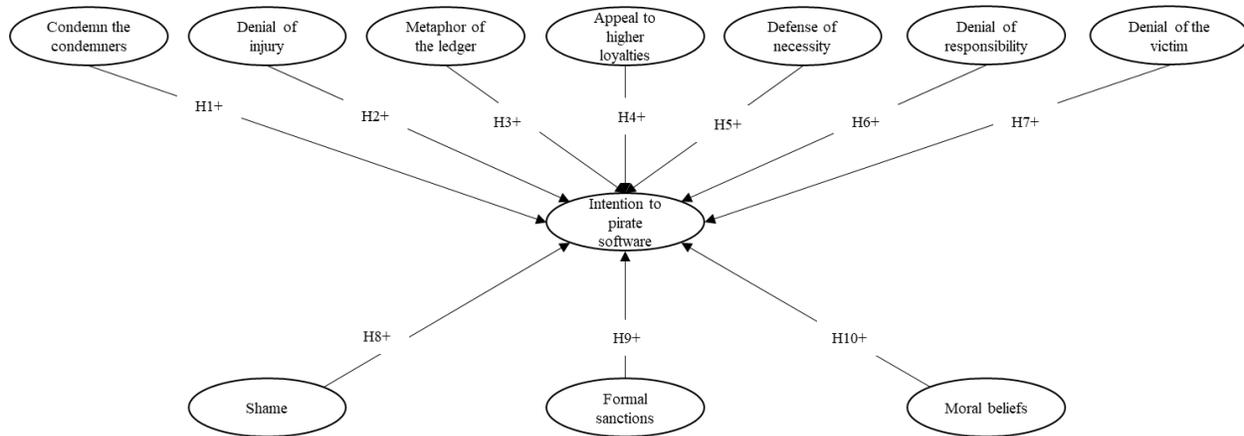


Figure 1: Siponen et al. research model

Neutralization theory claims that both the law abiding, and law-breaking individuals all believe in the norms and values of the community in general. But the law-breaking individuals engage in anti-social actions because they apply techniques of neutralization. Neutralization techniques offer the violators justification for breaking the law. In its original formulation, five techniques of neutralization were proposed: *denial of responsibility*, *denial of injury*, *denial of the victim*, *condemnation of the condemners* and *appeal to higher loyalties* (Sykes & Matza, 1957). Later, other techniques were added, the *metaphor of the ledger* and the *defense of the necessity* (Minor, 1981).

Using the *denial of responsibility* technique, the individual denies responsibility for his or her violation. An example is claiming ignorance of the law as their defense. I can't be guilty of breaking a law if I didn't know it existed. *Denial of injury* is justifying behavior by minimizing the harm it does. For example, there is no harm if I leave my computer and go away from my office for a few minutes; nobody is going to get hurt. *Defense of necessity* is the technique that views law breaking as necessary: Individuals feel no guilt in violating the law. *Denial of victim* technique is used if the victim is "absent, unknown, or a vague abstraction. The offenders justify their actions by claiming that there is no victim.

Condemnation of the condemners is a technique whereby the individual blames those who are the target of the action. For example, an employee could claim a security policy is so unreasonable it is necessary to act otherwise. *Appeal to higher loyalties* is a technique used by those who feel they are in a dilemma that can only be resolved by obeying a superior law and violating an inferior law. The *metaphor of the ledger* uses the idea of compensating bad behavior with good behavior. I have been performing so well and deserve goodwill and therefore a little stretching of the law here and there is alright (Siponen & Vance, 2010).

- H1. "Condemn the condemners" positively affects the intention to commit software piracy.
- H2. "Denial of injury" positively affects the intention to commit software piracy.
- H3. The "metaphor of the ledger" positively affects the intention to commit software piracy.
- H4. The "appeal to higher loyalties" positively affects the intention to commit software piracy.
- H5. "Defense of necessity" positively affects the intention to commit software piracy.
- H6. "Denial of responsibility" positively affects the intention to commit software piracy.
- H7. "Denial of the victim" positively affects the intention to commit software piracy.

RESEARCH METHOD

We used one of the four hypothetical scenarios used in the original paper to examine software piracy.

Brandon is considering downloading an unauthorized copy of an inexpensive image editing program. The software is developed by a modestly successful, foreign software company, which is currently the market leader. Brandon mainly makes unauthorized copies of computer games, but also copies software programs, just to see if he likes them. Brandon, who does not have a lot of money, likes to try out software before buying it. However, Brandon has never paid for software. The software user manual states that making unauthorized copies is prohibited. Brandon decides to copy the software

The participants were asked, “What is the chance that you would do what Brandon did in the described scenario?” Items for neutralization were drawn from the original study as shown in table 1 below. Data was collected from 210 undergraduate students in a large business school in the United States southeast.

Construct	Name	Item text
Appeal to higher loyalties	Neutloyal1	It is all right to make unauthorized copies of software if it is done to aid a friend in need
	Neutloyal2	It is all right to make unauthorized copies of software if it is done to help others
	Neutloyal3	It is all right to make unauthorized copies of software if it is done to help someone who does not have money to purchase the software
Condemn the condemners	Neutcond1	It is not as wrong to break software copyright agreements that seem unfair to you
	Neutcond2	It is not as wrong to break software copyright agreements that seem too restrictive
	Neutcond3	It is not as wrong to break software copyright agreements that seem unjustified
Defense of necessity	Neutnecess1	It is all right to make unauthorized copies of software under circumstances where it seems like you have little other choice
	Neutnecess2	It is acceptable to make unauthorized copies of software under circumstances where it seems like there is no other option
	Neutnecess3	It is alright to make unauthorized copies of software if the situation requires you to do so
Denial of injury	Neutinj1	It is OK to make unauthorized copies of software if no one gets hurt
	Neutinj2	It is OK to make unauthorized copies of software if no harm is done
	Neutinj3	It is OK to make unauthorized copies of software if no damage is done to the software company
Denial of responsibility	Neutresp1	It is OK to make unauthorized copies of software if you are not sure what the law is
	Neutresp2	It is OK to make unauthorized copies of software if the law is unclear
	Neutresp3	It is OK to make unauthorized copies of software if you are not sure what the law is
Denial of victim	Neutvict1	It is not wrong to make unauthorized copies of software if the software is sold by Microsoft
	Neutvict2	It is not wrong to make unauthorized copies of software if the software is sold by a wealthy software company
	Neutvict3	It is not wrong to make unauthorized copies of software if the software is sold by software company that is the market leader
Metaphor of the ledger	Neutledger1	I feel my legitimate use of software compensates for my occasional unauthorized copying of software
	Neutledger2	I feel my overall law-abiding behavior compensates for my occasional unauthorized copying of software
	Neutledger3	I feel my other good actions compensate for my occasional unauthorized copying of software

Table 1: Instrumentation items

RESULTS

We used SPSS version 28 and Amos version 28 for measurement validation and to test the structural model. Amos uses a structural equation modelling (SEM) statistical technique which is largely used for confirmation. Convergent validity was examined using the pattern matrix below in table 2, which was extracted using principal-component analysis and Promax rotation with Kaiser Normalization.

Item	Component						
	1	2	3	4	5	6	7
Neutloyal1	.956						
Neutloyal2	.961						
Neutloyal3	.884						
Neutcond1				.771			
Neutcond2				.986			
Neutcond3				.880			
Neutnecess1						.868	
Neutnecess2						.918	
Neutnecess3						.895	
Neutinj1							.788
Neutinj2							.853
Neutinj3							.879
Neutresp1			.992				
Neutresp2			.727				
Neutresp3			.957				
Neutvict1					.921		
Neutvict2					.867		
Neutvict3					.858		
Neutledger1		.902					
Neutledger2		.873					
Neutledger3		.906					

Table 2: Pattern matrix

The internal consistency was assessed using Cronbach's alpha. All the factors had a value above the 0.7 threshold.

Construct	Cronbach's Alpha
Appeal to higher loyalties	.950
Condemn the condemners	.913
Defense of necessity	.955
Denial of injury	.955
Denial of responsibility	.908

Construct	Cronbach's Alpha
Denial of victim	.950
Metaphor of the ledger	.953

Table 3: Cronbach's Alpha

The goodness-of-fit of the model was tested using SPSS Amos. The fit criteria as shown in the table below suggests that the structural model has adequate fit with the data (Gefen et al., 2000).

Fit criteria	Model value	Acceptable value
CMIN/Df	2.178	< 3
IFI	0.965	> 0.9
CFI	0.964	>0.95
NFI	0.937	>0.9
AGFI	0.820	>0.8

Table 4: Fit indices

The standardized regression weights for the model are shown in the figure 2 below. The results show that 33% of variance in software piracy intentions was explained by our model. The findings also indicate that all the paths were significant except "Denial of the victim".

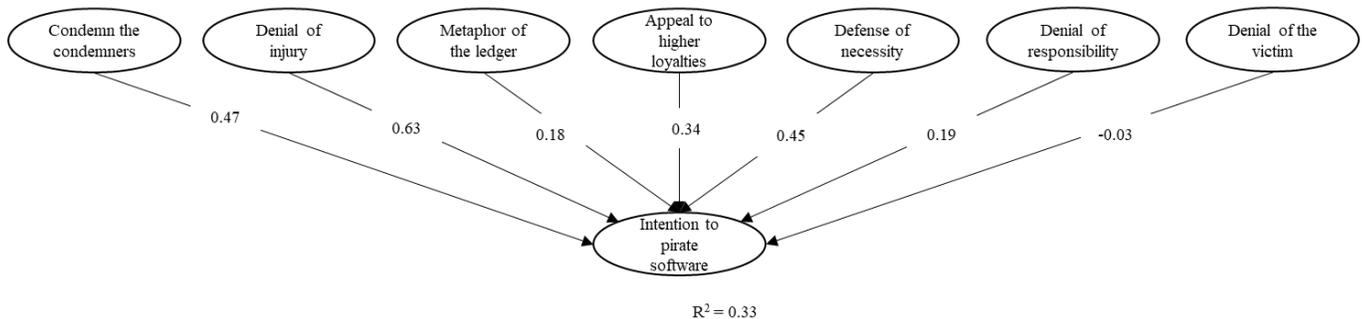


Figure 2: Research model and results

DISCUSSION

The primary objective of Siponen et al. was to examine which neutralization techniques most strongly influence software piracy. In their study, only two neutralization techniques were found to significantly increase the intention to pirate software. These were *appeal to higher loyalties* and *condemn the condemners*. The results of our partial replication indicate that six of the techniques significantly increase the intention to pirate software. *Denial of victim* was the only technique not to have significant influence on intention to pirate software. In the original study, data was collected from graduate students in a European Business school, whereas data for this study was collected from undergraduate students (freshmen) in the US. The hypothetical vignette used in both studies was a better fit for the participants in the current study, which might explain the difference in the findings.

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