

# Tolerance Of Intellectual Property Theft

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## ABSTRACT

*A survey of the public tested the proposition that the degree to which theft is tolerable or reprehensible is significantly determined by whether the owner/victim is or is not directly deprived by the theft. Respondents registered their degree of condemnation of theft of physical goods from an individual and from a company, as well as theft of physical property and of intellectual property by copying the content. The findings indicate that theft of physical, personal property is regarded as significantly more reprehensible than either theft of physical goods from a non-personal owner or theft of intellectual property by copying content.*

**Keywords:** Copyright Infringement, Ethics, Intellectual Property, Piracy, Security, Theft

## INTRODUCTION

If you learned that a friend had gone into an acquaintance's home and stolen a piece of personal computer equipment valued at more than \$200, you would almost certainly be appalled at your friend's actions. But what if you learned your friend had gone into someone else's office and made a copy of a computer program worth the same amount for his own personal use? Even though the value of the theft is the same, if you are typical of the average individual, you would be far less alarmed at such behavior! Similarly, people who would be outraged to find a friend or coworker had stolen a CD or DVD from their home might hardly flinch on learning the same person had borrowed and made a copy of those media. For reasons this study seeks to identify, people appear to be much less concerned with theft of *intellectual* property than with that of *physical* property.

## BACKGROUND

Differential attitudes toward theft of physical versus intellectual property become an increasingly serious problem as the latter become an ever greater share of the total economic value of production. "Intellectual capital's rising value in the production of wealth has been mirrored by its increasing vulnerability to crime" (Snyder & Crescenzi, 2009). The cost of intellectual property theft in 2004 was estimated to be \$250 billion and climbing (Wright, 2004). Losses due to online piracy in the music and film industries alone are currently estimated to be in the tens of billions of dollars (Szuskin, et al., 2009). Software piracy has become a very serious problem as the result of computers' increasing role in the everyday life of the public (Aminmansour, 1996; Picard, 2004).

Traditional approaches to the prevention of theft are mainly to protect the goods and to catch and punish perpetrators, but these are increasingly difficult to accomplish in this digital age (Peace & Thong, 2003). The facility with which digital information can be stored, communicated, and disseminated makes it exceedingly difficult to contain and protect. When physical property is stolen, its absence makes the theft far more readily noticed than when digital property is copied while the original data remains intact and appears untouched. Thus, detection of the crime and capture of the thief are no easy matter. Despite these limitations, producers of digital property are striving to develop and improve protective measures (Im & Koen, 1990; Waterman, et al., 2007; Wright, 2004).

Awareness of the probability of detection and punishment have been shown to affect attitudes and behavior regarding theft of computer software by individuals (Moore, et al., 2009). In the music industry, income and risk perceptions, as well as personal ethics, are important determinants of willingness to pay when "free," pirated copies are available (Chen, et al., 2009; Chiang, E, & Assane, D, 2009). There is also evidence that intellectual property

theft may result purely because the perpetrators do not recognize copyright infringement of such intellectual property as training manuals and materials is illegal (Doherty, 2006).

Perhaps the study most relevant to this research sought to discover why people are so prone to steal software (Nunes, Hsee, & Weber, 2004). It examined why typically law-abiding people are more inclined to steal intellectual property products than more tangible material products. The main thrust of that study was that consumers believe they cause less harm if their failure to pay prevents the owner of the property from recovering fixed, rather than variable cost; therefore, they feel less obligated and are less likely to pay voluntarily.

## RESEARCH QUESTIONS

The thesis to be tested here is that people's reactions toward theft depend significantly on their perceptions of the degree of *deprivation of a victim*, rather than merely on the value of the item stolen. If an identifiable individual is personally, directly and immediately deprived by the theft, that appears to earn substantial condemnation. By contrast, if the individual in possession of the object that is stolen is *not* personally deprived by the theft—if that person is *not* a direct victim, others are likely to be significantly more tolerant of the thievery. The following propositions emerge:

- With the theft of physical property (e.g., a computer printer) the thief obtains the property and the owner is directly deprived of the property.
- With the theft of intellectual property (e.g., a computer program) the thief obtains a *copy* and the owner is *not* deprived of the property.
- Thus, theft of intellectual property is more acceptable or less reprehensible because there is no direct deprivation of the victim.
- The degree to which a theft is tolerable or reprehensible is significantly determined by whether the owner/victim is seen as *deprived* or *not deprived* by the theft.

When the object of a theft is some form of physical goods that are the personal property of an individual, that person is clearly an identifiable, personal victim. On the other hand, if the goods belong to a non-personal entity—a company, organization, or government unit—one or more individuals may be inconvenienced or temporarily deprived of the use of the object, but the precise victim is far less visible and identifiable. This leads to the first of two research hypotheses:

- To the degree that tolerance or condemnation of theft depends on the perceived effect on victims, respondents should regard theft from an individual as more reprehensible than that from a non-personal victim, (e.g., a company).

If the object in question is *intellectual property*, rather than *physical property* and the thief merely makes a *copy* rather than stealing the original, the owner is *not* deprived of the possession and use of the goods, whether the item is owned by an individual or by a company, organization, or government. Thus, the second research hypotheses:

- If tolerance or condemnation of theft depends on the perceived effect on victims, respondents should regard theft of intellectual property (by copying) as less reprehensible than theft of physical property.

## METHODOLOGY

A survey questionnaire was designed to simultaneously test both hypotheses. Respondents also reported their status on several demographic categories.

### Questionnaire

Testing the first hypotheses required comparison of reactions to thefts of various items of physical goods from either an *individual person* or from a *non-personal entity*, a company. Testing the second hypothesis involved a similar measurement with items with the same specified value, but this time reactions toward theft of a *copy of intellectual property* and toward theft of *physical property* owned by an individual were obtained for comparison. In each case, the format and content of the instructions to respondents, the items and rating scales were as closely comparable as possible.

The first section of the questionnaire listed, in random order, 18 items of property. These were selected on a judgment basis by the research team from an extensive list of items commonly owned by consumers or companies. The items are identified in Table 2.

Six of the items were valued at \$75, 6 at \$150, and the remaining 6 at \$225. Half of the items were listed as belonging to a company and the remaining half, to an individual. A 9-point scale with extremes labeled "None" and "Severe" was shown beside each item. The instructions at the top of the page were as follows:

- How much should someone be punished if caught taking each of the following things that don't belong to them from the owners identified below?

On each line below, circle the number 1 if you think they should not be punished at all, the number 9 if they should be punished very severely, or some number between 1 and 9 to show how much you think they should be punished.

The second section of the questionnaire also listed 18 randomly ordered items, similarly selected, and also valued at \$75, \$150, and \$225. Half of the items, shown in Table 03, identified *physical* property, while the remaining half were identified as a *copy of intellectual property* (e.g., computer program, music CD, etc.). The instructions were as follows:

- How much should someone be punished if caught taking each of the following things or duplicating copies of things that don't belong to them?

On each line below, circle the number 1 if you think they should not be punished at all, the number 9 if they should be punished very severely, or some number between 1 and 9 to show how much you think they should be punished.

Lastly, respondents reported their status on the demographic variables shown in Table 1.

**Table 1: Demographic Distributions of the Responding Sample\***

<b>Sex</b>	<b>Percent</b>	<b>Employment</b>	<b>Percent</b>
Male -----	50.0	Company Employed-----	42.5
Female-----	50.0	Education, Government-----	14.4
<b>Marital Status</b>		Self-Employed -----	9.8
Married-----	48.7	Student -----	22.3
Not Married-----	51.3	Not Employed	11.0
<b>Adults in Home</b>		<b>Occupation</b>	
One-----	15.2	Professional-----	13.7
Two -----	52.0	Managerial, Technical -----	16.7
Three or More -----	32.8	Admin., Clerical -----	10.1
<b>Children in Home</b>		Sales, Marketing -----	8.9
None -----	65.0	Skilled, Semi-Skilled-----	11.9
One-----	16.1	Student -----	22.3
Two -----	12.2	Not Employed or Reported-----	16.4
Three or More -----	6.7	<b>Home Ownership</b>	
<b>Age</b>		Owner -----	63.7
Twenties-----	33.5	Renter -----	36.3
Thirties -----	16.3	<b>Income</b>	
Forties -----	17.9	Under 40,000-----	9.3
Fifties -----	23.9	40,000 to 59,000 -----	7.3
Sixties & Over-----	8.5	60,000 to 79,000 -----	9.5
<b>Education</b>		80,000 to 99,000 -----	7.9
High School Graduate	28.1	100,000 to 139,000 -----	12.9
Some College	26.2	140,000 & Over-----	17.9
College Graduate	35.2	Total -----	64.8
Post-Graduate	10.5	Refused-----	35.2

\*N = 1,273 Respondents

## Survey Procedures

A convenience sample of 1,283 adult consumers from the general public in the Mid-Atlantic region was surveyed to obtain the data to test the research hypotheses. Respondents completed the self-administered questionnaire delivered to and retrieved from them by university student field workers, each assigned a quota of one man and one woman from each age decade from the twenties to sixties and over. The four-page questionnaire was accompanied by a cover letter explaining the nature of the project and seeking their participation.

**Table 2: Mean Severity of Punishment Ratings by Item\***  
*Personal and Non-personal Victims*

Value	Victim	Item Stolen	Mean
\$75	Individual	Leather Briefcase	5.12
		Jacket	4.89
		Kitchen Blender	4.55
\$75	Company	Desk Lamp	4.36
		Cordless Phone	4.64
		Power Drill	4.97
\$150	Individual	Barbecue Grill	6.00
		DVD Player	5.82
		Decorative Vase	5.10
\$150	Company	Set of Books	5.03
		Stereo Speakers	5.58
		Office Chair	5.29
\$225	Individual	Power Mower	6.22
		Lawn Furniture	5.96
		Wrist Watch	6.20
\$225	Company	Binoculars	5.56
		Portable TV	6.18
		Air Conditioner	6.33
<b><i>Intellectual and Physical Property</i></b>			
\$75	Intellectual	Copy of Computer Game Program	3.72
		Copy Electronic of Music CD	3.54
		Copy of Electronic Mailing List	5.02
\$75	Physical	Computer Keyboard	4.66
		External Computer Hard Drive	5.67
		DVD Player	5.12
\$150	Intellectual	Copy of Set of House Plans	5.25
		Copy of Computer Graphics Program	4.74
		Copy of Documentary Video Program	4.38
\$150	Physical	Digital Camera	5.95
		Set of Mechanical Wrenches	5.18
		Oil Painting	5.55
\$225	Intellectual	Copy of DVD Video Training Program	4.45
		Copy of Computer Financial Program	5.54
		Copy of Technical Design Blueprints	5.60
\$225	Physical	Negotiable Financial Securities	6.83
		Flat Screen TV	6.87
		Portable Electric Air Compressor	5.97

\*9-point scale, 1 = No Punishment, 9 = Severe Punishment

## RESULTS

The demographic distributions of the responding sample, shown in Table 1, indicate there was a somewhat disproportionate number of young, well-educated singles, compared to other categories. Nonetheless, the sample does include a broad demographic spectrum of the adult population.

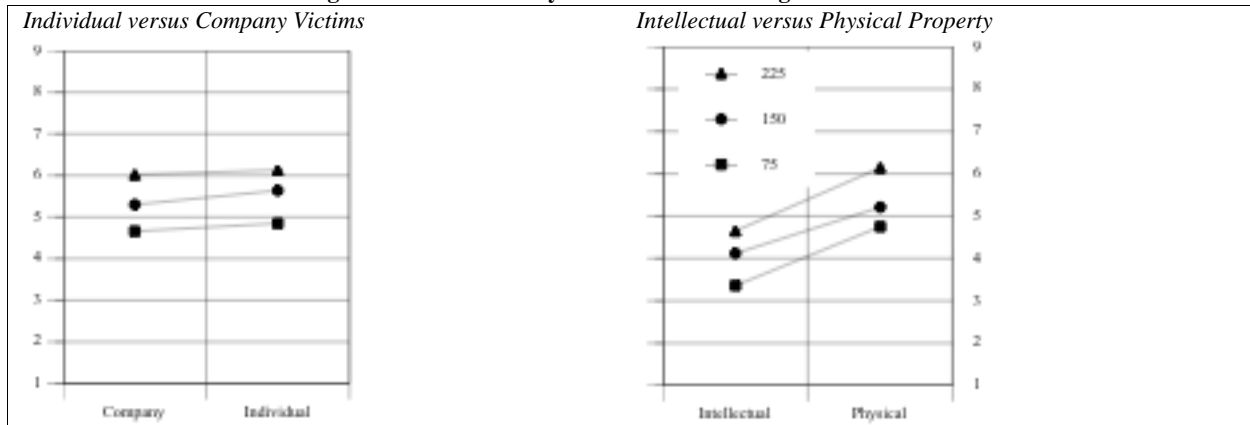
**Individual Versus Company Victims**

The upper section of Table 2 contains the mean punishment severity ratings for *physical property* valued at \$75, \$150, and \$225 when the victims were either *individuals* or *companies*. These data were submitted to factorial analysis of variance to determine the significance of differences among mean values. The main effects of *value*, *victim*, *item*, and *inter-subject* differences, as well as all first-order interactions all proved to be statistically significant beyond the .0001 level of probability.

**Table 3: Mean Ratings of Severity of Punishment (9-point scale)**

Victim	Value of the Property			
	\$ 75	\$ 150	\$ 225	All
Individual	4.85	5.64	6.13	5.54
Company	4.66	5.30	6.02	5.33
Both	4.76	5.47	6.08	5.43
Article	\$ 75	\$ 150	\$ 225	All
Intellectual	5.15	5.56	6.56	4.04
Physical	4.10	4.79	5.20	5.37
Both	4.06	4.67	5.40	4.71

**Figure 1: Mean Severity of Punishment Ratings**



**Intellectual Versus Physical Property**

The lower section of Table 2 displays the mean ratings for corresponding values of goods that are either *intellectual* or *physical* property. Factorial analysis of variance revealed that all main effects and first-order interactions were statistically significant beyond the .0001 level of probability.

**Combined Mean Ratings**

Mean ratings for each set of three corresponding items of the same value, representing personal versus non-personal victims and physical versus intellectual goods are summarized in Table 3 and depicted in Figure 1. The greater the specified value of the item, the higher the punishment severity ratings are in every case, as might be expected. For each value level, severity ratings for company-owned items are lower than those when the victim is an individual person. Similarly, severity of punishment ratings for theft of intellectual property were lower than for physical goods; however, the differences at all three value levels were markedly greater than for company versus individual property.

## **Demographic Effects**

An index composed of the differences between company versus personal property and intellectual versus physical property theft punishment ratings for each of the three price levels was computed. These mean values were submitted to analysis of variance for each of the demographic categories shown in Table 1. The degree of distinction in condemnation of theft of company versus personal property and physical versus intellectual property proved to be virtually independent of the demographic status variables.

## **CONCLUSIONS**

The results of this study provide substantial support for the proposition that there is an *inverse* relationship between tolerance of theft, on the one hand, and the degree of *direct deprivation* of a victim, on the other. Thus, the most reprehensible thefts are those of physical, personal property, and the greater the value of the goods, the greater the condemnation.

## **Research Hypotheses**

This study was designed to test the proposition that the degree to which a theft is tolerable or reprehensible is significantly determined by whether the owner/victim is seen as deprived or not deprived by the theft. Thus, theft of intellectual property is more acceptable or less reprehensible because there is no *direct* deprivation of the victim.

The first research hypothesis stated that the degree of tolerance or condemnation of theft depends on the perceived effect on victims. Thus, respondents should rate theft from an individual as more reprehensible than that from a non-personal victim such as a company. The results revealed this to be the case, furnishing support for that hypothesis.

It follows, then, that if tolerance or condemnation of theft depends on the perceived effect on victims, respondents should regard theft by copying of intellectual property as less reprehensible than theft of physical property, where the victim is deprived of the stolen goods. The findings provide substantial support for this second hypothesis, as well.

## **The Moral Issue**

It is axiomatic in the area of criminology that most people do not refrain from crime mainly because they fear detection or punishment. Rather, they do not commit crimes simply because they are not criminals. They do not steal because they are not thieves. It is a moral constraint, but this is only a partial explanation. It raises the question of what lies behind the moral restriction against theft. Aside from religious stricture, the most likely candidate is the individual's sense of *empathy*. One does not victimize another because one would not want to be victimized one's self.

If this is the case, this sense of empathy is particularly potent and prohibitive with regard to stealing the physical, personal property of another individual. The perpetrator knows full well that the victim has been deprived of whatever goods were stolen. There is no escaping the knowledge that the victim has been harmed in direct proportion to the value the owner places on the stolen property. But what of the case of intellectual property?

When a thief takes a copy of intellectual property, whether it is "pirated" software, digital music, copyrighted text, a patented design, or some other content, it is vastly more difficult to see who has been victimized. The remoteness of the individual or entity harmed enables the rationalization that nobody has been hurt. Even if there is an awareness of impropriety in the background, the actual victim and the dispossession are nebulous, at best.

## **Intellectual Property Security**

Obviously, technical and legal protection against theft of intellectual property will always be necessary, just as it is necessary for the security of physical goods, but clearly, intellectual property is something of a special case.

It is "slippery" in a way that physical goods can never be. Even when stolen by copying, the original is not gone, so detection is difficult and sometimes theft is almost entirely undetectable. Such difficulties do not suggest technical and legal protection should be reduced or abandon; rather, that they should be intensified to keep pace with the growing threats.

As a complement to technical and legal protection of intellectual property, public policy and educational programs could support the effort to create understanding of the harm that results from theft of intellectual property. Until there is as much personal guilt and public shame associated with stealing intellectual property as there is with theft of physical goods, there are likely to be many who continue to break the law by violating others' property rights.

Media in every form and those who compose and provide the content might do much in this regard. It is common, even in academic literature, to have authors refer to "pirating" software. It does not seem to create much condemnation. On the other had, most people would be outraged if someone "pirated" their cell phone or laptop! Until such tolerance of intellectual property theft is abandon in favor of vehement, open condemnation of it, the creator and owners of intellectual property, as well as society at large, are likely to continue to be victimized.

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**NOTES**