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Paths to Softlifting Intention

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Introduction

Softlifting is an individual act of copying software without the legal right to do so, and is distinct from two other forms of software piracy: commercial piracy (for distribution and sale) and corporate piracy (institutional lack of appropriate means to control software distribution within an organization) [Hornik, 1994]. That the concept of software piracy has been distinguished into three classes of behaviors reflects both the growing concern and understanding of the nature of these activities. The earliest attempts to control software piracy were aimed at minimizing the vendors' losses from both commercial and corporate piracy, which began with the introduction of microcomputers in the 1980s. The formation of the US Software Publishers Association (SPA) in 1988, and, subsequently, the international Business Software Alliance, resulted in a highly visible spate of successful lawsuits against US and international firms engaging in either commercial or corporate piracy (BSA, 1994). The software industry's focus on commercial and corporate piracy reflects a reasonable effort to protect themselves from tens of billions of lost sales dollars worldwide, since these types of pirates are both easier to detect and easier entities from which to recover lost revenues.

Our work focuses on individual level of piracy, whereby individuals copy software for personal use. Softlifting research draws upon not only the piracy literature, but also on the broader domains of social psychology (theories of planned behavior and of cognitive dissonance), ethics, and information systems. This empirical work complements broader works on ethical theory and concepts advanced most recently by Walsham (1996), who relates classical ethical theory to the practice of IS; Conger et al. (1995), who emphasizes the need to understand users so that policies, rewards and punishments can be developed; Laudon (1995), who contributes a typology of ethical theories within which the IS community can reason about ethical issues; and, most broadly, Mason (1995), who calls upon the IS community to help shape the direction of society.

This study builds directly on the growing literature attempting to identify demographic characteristics that can predict the likelihood of softlifting. Most recently, Simpson et al. (1994) hypothesize a two-stage model in which five factors (stimulus, socio-cultural, legal, personal, and situational) affect one's ethical decision process - and that the decision process alone accounts for one's softlifting behaviors. They conclude that gender, religion, personal gain and situational factors affect the decision to softlift, and that ethical perceptions of softlifting have no bearing upon the practice. Logsdon et al. (1994) report prevalence of softlifting among university students with little support for their hypothesis that softlifting is related to level of moral judgment, suggesting that this issue has low moral intensity. These recent results are largely consistent with earlier works in the field: Im and Van Epps (1992), who found soft-lifting prevalent in accredited business schools; Solomon and O'Brien (1990), and later, O'Brien et al. (1991), who found that softlifting is both wide-spread and deemed acceptable among university students; and Taylor and Shim (1993), who report that while business executives softlift less than academicians, both view softlifting as mildly unethical.

Model and Hypotheses

Our main dependent variable is the *Intention* to softlift (see Fig. 1), and we hypothesize that *Intention* is a function of two main constructs: *Background* and *Attitudes*. *Background* factors are assumed stable over time for an individual and directly influence the *Intention* to softlift. We also hypothesize that *Background* influences *Attitudes*, a construct that varies over time. *Attitudes* about softlifting separately influence the *Intention* to softlift. (This influence will either amplify or diminish the *Background* influence, depending on

the individual's stage of resolving any cognitive dissonance.) Each of the constructs is comprised of several factors. While the full model is the subject of an ongoing study, this paper focuses exclusively upon "Path 1," the influence of *Background* upon *Intention* to softlift.

We investigate these hypotheses defining Path 1: (1) perceptions of higher rates of softlifting among peers yields greater softlifting *Intention*; (2) a strong ethical profile is associated with weaker *Intention* to softlift; (3) increased levels of computer use at home yield higher levels of softlifting; (4) increasing levels of purchased software yields lower levels of softlifting; (5) increased knowledge of the piracy statutes are associated with lower levels of softlifting; and (6) gender has no effect on *Intention* to softlift. We include gender in our set of independent variables because its role in the existing literature is not well understood. A complete discussion of these hypotheses is available from the authors.

Methodology

Three hundred seventy-three students from several MBA, Executive MBA, and undergraduate business and engineering classes were given a questionnaire covering demographics, access to computers, knowledge of copyright law, attitudes about copying software, as well as their willingness to do so under several scenarios. The questionnaire includes twenty items from Paulhus (1990) Balanced Inventory of Desirable Responding (BIDR) which has been shown to detect and measure impression management bias. A total of ninety-seven responses were discarded: 85 for incompleteness and 12 for impression management bias, leaving 276 usable responses (74% usable response rate). We re-used the BIDR items in the study to develop a set of ethics factors within our *Background* construct, because these items have strong face validity as indicators of an individual's practical ethical profile. To our knowledge, this is the first study to use these items for broader purposes.

The dependent variable, *Intention* to softlift, is investigated using three sets of scenarios concerning respondents' intent to copy software for friends' entertainment, school, and work purposes. If respondents agree to softlift for any item within the entertainment scenario, they are classified as demonstrating *Intention* to softlift. Respondents who answer "no" for all of the entertainment scenarios are classified as demonstrating no *Intention* to softlift. The same scheme is used to determine softlifting *Intentions* for school and work scenarios.

Factor analysis is employed to identify the orthogonal components of the twenty BIDR items in conjunction with three questions relating to the peer environment. This analysis indicates seven (7) significant dimensions (eigenvalues greater than 1). The corresponding factor scores are used as the independent variables *Peer Views* and *Ethical Factor 1* through *Ethical Factor 6* within a regression framework. As previously discussed, we employ several additional independent variables: computer *Use-at-home*, measured in sessions per week; *Purchase level* (lowest level in the intercept, with Purchase level 2 through 6 in the model); *Knowledge of laws* (number of correct responses out of 10 questions); and *Gender* (dummy variable with 0=female; 1=male).

Findings

Our results support the proposed model in that the *Background* construct is shown to be a significant predictor of *Intention* to softlift. There is variation, however, among the predictors for the three different softlifting scenarios. Table 1 presents our regression findings with significant variables shown in bold. We hypothesized that softlifting would be more prevalent among people who frequently use a computer at home, a hypothesis that is partly supported by our model when the intended software is for school purposes (but not for entertainment or work). Perhaps computer use at home is irrelevant with respect to softlifting work-related software due to the specialized nature of the software, or a perception that work-related software should be purchased by one's employer. The meaning of our findings with respect to entertainment is not clear.

The hypothesis that people who purchase greater amounts of software are less likely to softlift is supported by the estimates shown for *Purchase level 6*: an indication that there is a significant difference between the lowest and highest purchase levels. This result suggests that not only do people who purchase a considerable amount of software tend to follow rules, but that they also expect their friends to do so. This interpretation also suggests that they internalize a deontological ethical perspective that suggests individuals are guided by a set of unvarying principles (Walsham, 1996).

Peer Views is a significant predictor of softlifting in all three scenarios, and is consistent with other works (Peace and Galletta, 1996). In addition, at least one *Ethical Factor* is significant in each scenario, with four of the six significant for work purposes. While we did not expect this variation, the result is broadly consistent with consequential ethical theories (Walsham, 1996) that individuals consider the context of behaviors in judging their ethicality.

These *Ethical Factors* have not yet been investigated to understand fully how they relate to constructs from social psychological or ethical theories. Our results indicate that respondents' *Intention* to softlift is influenced by ethical considerations, a conclusion that differs from previous research. Since variables chosen to represent ethics constructs differ across studies, it is possible that the works are identifying different sub-factors included within a broad ethics construct. Our results suggest the opportunity to explore more fully ways of operationalizing the ethics construct.

Conclusion

Softlifting is as complex a phenomenon as it is prevalent, and individuals are continually faced with the opportunity to copy software without the authority to do so. Demonstrating the *Intention* to softlift under a variety of scenarios has been shown to be a function of several variables in one's *Background*. This result supports the existence of Path 1 on our proposed model, and work is underway to investigate the two remaining paths. To the extent that we can uncover the correlates to softlifting, the IS profession will be positioned to offer guidance on methods and policies to minimize the occurrence. Further work is required to understand more fully the dynamics leading to softlifting.

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References

Available from the first author

TABLE 1: REGRESSION RESULTS
Items in each factor available from the authors

		INTENTION TO SOFTLIFT FOR ENTMENT		INTENTION TO SOFTLIFT FOR SCHOOL		INTENTION TO SOFTLIFT FOR WORK	
		Parameter estimate	T	Parameter estimate	T	Parameter estimate	T
	Peer Views	0.068388	3.182*	0.079734	4.172*	0.057448	2.102*
	Ethical factor1	0.066586	3.150*	0.065237	3.471*	0.123989	4.614*
	Ethical factor2	0.011797	0.567	0.018746	1.012	0.024987	0.944

	Ethical factor3	0.028897	1.281	0.019439	0.969	0.070105	2.444*
	Ethical factor4	0.044438	2.049*	0.027044	1.402	0.065824	2.388*
	Ethical factor5	0.02267	1.082	0.017202	0.923	0.07703	2.891*
	Ethical factor6	-0.006924	-0.333	-0.004069	-0.22	0.026704	1.009
	Use-at-home	0.005111	1.562	0.006181	2.124*	0.001474	0.354
	Purchase level2	-0.001688	-0.033	0.054664	1.194	0.011318	0.173
	Purchase level3	-0.045487	-0.665	-0.065853	-1.082	-0.061815	-0.711
	Purchase level4	-0.002043	-0.021	-0.025935	-0.3	-0.010117	-0.082
	Purchase level5	0.012422	0.12	0.051157	0.561	0.021442	0.164
	Purchase level6 (highest)	-0.237792	-2.47*	-0.218574	-2.554*	-0.31482	-2.573*
	Knowledge of laws	-0.014322	-1.503	-0.011488	-1.356	-0.018839	-1.555
	Gender	0.064466	1.427	0.007866	0.196	0.062098	1.081
		F Value	Pr>F	F Value	Pr>F	F Value	Pr>F
		2.834	0.0004	3.895	0.0001	4.589	0.0001
		R²	0.1405	R²	0.1835	R²	0.2093
		Adj R²	0.0909	Adj R²	0.1364	Adj R²	0.1637

***Significant at the .01 level**