



## **Chapter 9**

# **Why Do We Do It If We Know It's Wrong? A Structural Model of Software Piracy**

Darryl A. Seale

University of Nevada, Las Vegas, USA

This study examines predictors of software piracy, a practice estimated to cost the software industry nearly \$11 billion in lost revenue annually. Correlates with software piracy were explored using responses from a university wide survey (n=589). Forty-four percent of university employees reported having copies of pirated software (mean = 5.0 programs), while 31 percent said they have made unauthorized copies (mean = 4.2 programs). A structural model, based in part on the theory of planned behavior (Ajzen, 1985) and the theory of reasoned action as applied to moral behavior (Vallerand, Pelletier, Cuerrier, Cuerrier & Mongeau, 1992), was developed which suggests that social norms, expertise required, gender, and computer usage (both home and at work) all have direct effects on self-reported piracy. In addition, ease of theft, people's sense of the proportional value of software, and various other demographic factors were found to affect piracy indirectly. Theoretical as well as practical implications for the design and marketing of software are discussed.

## **INTRODUCTION**

If dollar estimates are correct, software piracy rivals organized crime as one of our nation's most costly offenses. Although scholars are far from agreement on the level of legal protection that should be afforded software and other forms of

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intellectual property (Nelson, 1995) and engage in considerable debate regarding the actual costs of software piracy (Masland, 2000), most researchers agree that piracy is widespread. Industry surveys estimate that for every legitimate copy of software, there are between two and ten illegal copies (James, 2000; Conner & Rumelt, 1991). In some studies, over half of those surveyed admitted that they had made unauthorized copies of computer software. Even in the more conservative business arena, estimates suggest that in the US 25% of all installed applications are pirated. The Business Software Alliance (1999) estimates that, worldwide, the industry is losing nearly \$11 billion annually in lost revenue. In the US alone, lost sales are estimated at \$2.8 billion, plus a loss of over 100,000 jobs, amounting to \$4.5 billion in wages and \$991 million in tax revenues.

Beyond the economic impact, studying software piracy is important for other reasons. First, it may help us better understand how social norms and moral standards develop for new technologies, especially technologies involving intellectual property issues. Second, research on software piracy may expand the important philosophical debate on intellectual property. A central controversy in this debate is that many of the owner's rights commonly associated with tangible property are not violated when intellectual property is copied or used by others. Further, many philosophers and economists contend that intellectual property rights should not be protected by law (Davidson, 1989), arguing the such protection is anticompetitive, monopolistic, and can stifle creativity and progress (Abbott, 1990; Cooper-Dreyfuss, 1989; Davidson, 1989; Samuelson, 1989; Wells-Branscomb, 1990). The many proponents of stronger copyright and patent protection argue that property rights should be strictly enforced, claiming that piracy is an insult to hardworking inventors and essential to foster innovation in one of the largest value-added industries in the world (Schuler, 1998). A final reason for studying piracy behavior, and an important theme of this book, is that understanding society's norms and values regarding piracy adds to our understanding of social responsibility in the information age, which has widespread implications for design and marketing in the software industry.

## **THEORY AND MODEL DEVELOPMENT**

Software piracy has been investigated from varied disciplinary perspectives, including: (1) economics (Gopal & Sanders, 1998; Bologna, 1982); (2) those that attempt to deter or detect would-be offenders (Holsing & Yen, 1999; Jackson, 1999; Sacco & Zureik, 1990); (3) as a risk-taking phenomenon (Parker, 1976); (4) or simply by the failure of society's morals to keep up with the growth in technology (Johnson, 1985). Much of the empirical research on software piracy has focused on ethical and legal aspects (Im & Koen, 1990) while a few studies have

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