

The Role of Regulatory Focus and Message Framing on Persuasion of Anti-piracy Educational Campaigns

Completed Research Paper

Bong-Keun Jeong

Metropolitan State University of Denver
bjeong@msudenver.edu

Tom E. Yoon

Metropolitan State University of Denver
tyoon@msudenver.edu

Abstract

Drawing upon regulatory focus theory and message framing research, this study examines the impact of regulatory focus and message frame on the persuasive effectiveness of anti-piracy campaign messages. Results of our experiment show that the message presented in positive frame is more persuasive when the message is promotion focus, whereas the negative frame is more persuasive when the message is prevention concerns. We also found that when the fit between regulatory goal and message frame is congruent, participants demonstrate more negative attitude toward pirated product. Therefore, anti-piracy campaigns with a promotion focus should highlight achievement and advancement by approaching to desired end states (gains) while anti-piracy campaigns with a prevention focus should emphasize protection and safety by avoiding undesired end states (losses).

Keywords

Digital piracy, educational campaign, message framing, regulatory focus, persuasion

Introduction

To protect intellectual property and increase legitimate sales, digital good industries have employed numerous anti-piracy strategies including technology, education, and law enforcement. Despite various piracy control efforts, there is little evidence that these policies have successfully decreased piracy levels (Sinha and Mandel 2008). Technological controls using piracy-prevention software and hardware (e.g., digital rights management) have been implemented. However, they have often had limited success and imposed the restrictions on what legitimate consumers can do with the products they have bought. Law-suits initiated by industry associations (e.g. BSA, RIAA, MPAA) have resulted in shutting down some of the most well-known file sharing websites such as Napster. However, the traffic volume of peer-to-peer (P2P) sites does not decrease significantly even after the legal threats, and the total number of files shared continue to increase (Bhattacharjee et al. 2006). This may be the reason why RIAA recently decided to stop filing a law-suit against file-sharers, and start focusing on different approaches such as educational campaign or cooperation with Internet service providers (McBride and Smith 2008).

Educational campaign aims to disseminate information about the damage piracy causes (Chiu et al. 2008b; Shultz and Saporito 1996). Companies have designed and delivered public campaigns that attempt to educate and inform consumers about the risks of illegal download and the benefits of legal products. Through this educational approach, companies encourage consumers to think critically about how they acquire intellectual properties (Akman and Mishra 2009). Prior studies suggest that educational strategy is an effective way to dissuade consumers from using illegal files (Jeong and Khouja 2013; Jeong et al. 2012). However, changing consumers' attitude toward piracy yet seems to be difficult even with educational deterrence efforts. For example, The Software Alliance (BSA) recently launched a Facebook initiative called "No Piracy" (<https://www.facebook.com/reportsoftwarepiracy>). BSA has developed

different type (focus) of educational campaigns aims to change consumers' attitude toward software piracy and to educate appropriate copying behaviors.



Figure 1. Examples of BSA anti-piracy campaign

Nevertheless, almost all comments and opinions posted by users are against what BSA seeks to achieve (e.g. “Go away. No one likes you”, “I have pirated all my 1000's of hours of music. Come at me”, “Sharing is caring”, “You call it piracy. We call it FREEDOM”, “The more you fight it, the more it fights back”). These negative attitudes toward BSA's public campaigns indicate that BSA's efforts to educate intellectual property rights are not effective. It also demonstrates the importance of uncovering factors that contribute to the effectiveness of anti-piracy educational campaigns. Considerable studies have examined the persuasiveness of messages in the domain of health-related promotions, advertising, and environmental contexts; however, research into the effectiveness of anti-piracy campaign messages has not received much attention.

The objective of this research is to investigate the persuasive effectiveness of anti-piracy educational campaign messages based on different types of message frame and regulatory focus. A review of the message framing literature indicates that a persuasive message depends on whether the message stresses either the positive consequences of performing an act (positive frame) or the negative consequences of not performing the act (negative frame) (Levin and Gaeth 1988; Levin et al. 1998; Meyerowitz and Chaiken 1987; Tversky and Kahneman 1986). And the effects of message framing can be enhanced or eliminated by various moderating factors. One of the commonly used moderators is regulatory focus proposed by Crowe and Higgins (1997). Regulatory focus theory suggests that there are two distinct self-regulation strategies on the pursuit of goal (Crowe and Higgins 1997; Higgins 2002). Promotion focus emphasizes the pursuit of gains, whereas prevention focus emphasizes the avoidance of losses. And persuasion can be enhanced when there is a match between an individual's regulatory focus and the end-state on which the frame is anchored (Higgins 2000; Yi and Baumgartner 2009). In this study, we examine the interactive effect of message frame and regulatory focus on the persuasion of messages, and offer recommendations on the implementation of anti-piracy campaign.

Related Literature and Hypotheses

Message framing refers to the emphasis in the message on positive consequences of following a recommendations or negative consequences of failing to do so (Levin and Gaeth 1988; Meyerowitz and Chaiken 1987). Gain frame presents the benefits or positive outcomes of adopting a certain behavior while loss frame usually delivers the costs or negative outcomes of not adopting the suggested behavior. Although these two messages may convey essentially the same information, one may be more persuasive than the other in certain setting. Prospect theory (Kahneman and Tversky 1979) serves as the foundation for message framing research. According to this theory, individuals are risk-seeking in the domain of losses but risk-averse in the domain of gains. When it applies to the framed message, this indicates that individuals will be more likely to take risks when information is presented in negative frame, and less likely to take risk when information is framed positively (Loro 2007; Tversky and Kahneman 1986).

The persuasiveness of message frame has been extensively studied in health-related promotions, advertising, and environmental contexts because it involves a behavioral consequence (Chang 2007; Dardis and Shen 2008; Loro 2007). Yet, findings on the effectiveness of positive versus negative frames on persuasion are still inconclusive. Some studies show that positive-framed messages have greater

persuasiveness, whereas others demonstrate greater persuasive power in negative frames (Chang 2007; Levin et al. 1998; Maheswaran and Meyers-Levy 1990; Zhao and Pechmann 2007). To address the seemingly inconsistent findings, researchers also have examined the effect of moderating factors on the message frame. Studies have shown that the effect of message framing may not be uniform in all situations, and can be enhanced, eliminated, or even reversed by a variety of characteristics of the situation such as regulatory focus, risk perception, issue involvement, and message evidence (Cheng and Wu 2010; Das et al. 2008; Kühberger 1998; Meyers-Levy and Peracchio 1996).

This conceptualization of positive and negative frame is similar to regulatory focus theory (Crowe and Higgins 1997). According to this theory, there are two distinct self-regulation strategies on the pursuit of goal. One strategy aims to attain advancement and achievement by approaching to desired end states (promotion focus), whereas the other strategy is geared to achieve protection and safety by avoiding undesired end states (prevention focus). While any goals can be pursued with either a promotion or prevention focus, some goals are more compatible with a particular self-regulatory strategy, resulting in a higher level of “fit” (Higgins 2000). In other words, goals that seek to achieve a desirable end state (gain) tend to be more compatible with a promotion focus. By contrast, goals that steer away from an undesirable end state (loss) tend to be more compatible with a prevention focus (Higgins 2002). When there is a fit between self-regulatory strategy and the end state defined by desirability (e.g. positive vs. negative), it provides increased persuasion (Higgins 2000). For example, Jain et al. (2007) found that negative frames lead prevention-focused respondents to exhibit higher evaluations for the advertised brand and lower evaluations for the comparison brand. Under promotion focus, positive frames lead to more favorable attitudes toward the advertised brand (Jain et al. 2007). Lee and Aaker (2004) also showed that the message focused on promotion focus is more persuasive when presented in positive-framed information. In contrast, the message focused on prevention concerns is more persuasive in negative-framed information (Lee and Aaker 2004).

In the context of anti-piracy educational campaign, promotion-focused anti-piracy message may emphasize the unique benefits of using legitimate products. For instance, when a consumer uses the genuine software, he/she will receive latest product features, updates, and continuous technical support. Other value-added services may include customization, personalized recommendation, and reward programs (Gopal and Sanders 1997). The emphasis in promotion-focused message is exclusive benefits only available with legal product so that consumers are motivated to achieve desired end states (e.g. keep the computer performing at its best). Prior piracy literature also indicated that additional benefits offered by legitimate products are important to encouraging consumers to engage in long-term relationships, and satisfied customers are less likely to pirate (Chiu et al. 2008a; Chiu et al. 2008b). On the other hand, prevention-focused anti-piracy message may emphasize protection and safety so that consumers are motivated to avoid any undesired end states. For example, when a consumer uses genuine software, he/she can protect a computer from viruses, malwares, and other malicious threats. Other types of risk that can be avoided by using genuine product are a loss of private and confidential information, legal prosecution, tension or psychological discomfort, and a monetary loss due to re-installment of software and data recovery (Jeong et al. 2012). Unlike the promotion focus, the emphasis in prevention-focused message is protection and safety by avoiding any threats and risks.

We propose that when the end state on which the message frame is anchored (positive vs. negative) is compatible with regulatory focus (promotion vs. prevention), increased persuasion occurs. In other words, a positive frame is more persuasive when the information highlights promotion focus, whereas a negative frame is more effective when the message emphasizes prevention concerns. This leads to our hypothesis:

H1: *Consumers will perceive an anti-piracy message more persuasive when the fit between regulatory focus (promotion vs. prevention) and message framing (positive vs. negative frame) is congruent (vs. incongruent). Specifically, when anti-piracy message emphasizes promotion focus, positive framing will be more persuasive than negative framing. In contrast, when anti-piracy campaign emphasizes prevention concern, negative framing will be more persuasive.*

Kim (2006) showed that when the fit between regulatory focus and message frame is congruent, adolescents demonstrated more negative attitude toward smoking (Kim 2006). Similarly, we expect that when consumers have a greater persuasiveness to anti-piracy message due to the regulatory fit, anti-piracy message will influence consumers' attitude toward piracy. Thus, the following hypothesis is proposed:

H2: *When the fit between regulatory focus (promotion vs. prevention) and message framing (positive vs. negative frame) is congruent, consumers will demonstrate higher level of negative attitude toward piracy.*

Methodology

The subjects for this study were undergraduate students in a major university. Students are considered good subjects for studying piracy since they are most likely to be engaged in pirating activities (Limayem et al. 2004). Also, student subjects have been widely used in previous studies investigating the impact of software/music piracy (Cheng et al. 1997; Thong and Yap 1998). A total of 136 students enrolled in computer information systems courses were asked to review an anti-piracy campaign and then respond to a series of questions.

All participants were randomly assigned to the condition of 2 (regulatory focus: promotion vs. prevention) * 2 (message frame: positive vs. negative) between-subjects design. Two types of campaign message for software piracy were created to prime either a promotion or prevention focus. Since a promotion focus is related to achievement and advancement, participants in the promotion condition read the following message.

“When using genuine software, you will receive the latest product features, support and ongoing improvements to keep your PC performing at its best.

It is no secret that software programs sometimes have problems. But software manufacturers are always working to repair any problems with their software. Using genuine software will give you the benefit of receiving updates and upgrades when available. Pirated software closes the door for any software updates and upgrades. And 24 hour technical support that you can count on. The assurance of being able to pick up the phone and call the software manufacturers because you need assistance with their product is invaluable.”

On the other hand, a prevention focus is concerned with protection and safety, thus the message stated

“When using genuine software, you can protect your computer from viruses, malwares, and other malicious threats.

A recent study by Microsoft shows that 63% of pirated software available on peer-to-peer networks (e.g. KaZaa, Bitorrent, Limewire) contains viruses and malwares. These viruses and malwares disable critical security updates and make your PC defenseless against any malicious threats.

The study also indicates that currently, 91% of all home PCs that have installed pirated software are infected with some kind of spyware. Spyware is a form of software that can install itself on computer systems with or without the consent of the computer’s operator. Even anti-virus software, such as Norton Anti-virus, is useless in stopping a spyware attack. The effects of spyware may be disastrous, as some form of it may lead to fraud or identity theft.”

Message frame was also manipulated via the headline and statement shown in the message. Specifically, within the promotion-focus conditions, the positive frame statement *“Get latest product features, updates and technical support by using genuine software”* highlighted the desirable end state, whereas the negative-frame statement *“Don’t miss out on the latest product features, updates and technical support by using genuine software”* made salient the undesirable end state of missing out product features, updates, and technical support. For the prevention appeal, the positive-frame was *“Protect your PC from viruses, malwares and spywares by using genuine software”* and the negative-frame was *“Don’t expose your PC to viruses, malwares and spywares by using genuine software”*.

After reading the message, participants were asked to evaluate persuasiveness of the message and their attitudes toward software piracy using a seven-point scale ranging from strongly agree to strongly disagree (see Appendix 1 and 2 for full advertisements and survey questionnaires). To ensure construct validity, past operational measures were identified, and slightly modified to fit our context of software piracy (Al-Rafee and Cronan 2006; Chiou et al. 2005). Of 136 subjects, 101 usable responses were used to test our hypotheses.

Results

To check the priming manipulation, participants were also asked to rate the extent to which the message concerned achievement (promotion focus) or protection (prevention focus) in all conditions. The analysis showed that participants in the promotion-primed condition thought that the message conveyed more ideas about achievement and enhancement, $M=5.26$ vs. 4.60 , $t(99)=2.47$, $p<0.05$, whereas participants in the prevention-primed condition believed that the message conveyed more ideas about protection and safety, $M=5.58$ vs. 4.38 , $t(99)=4.90$, $p<0.001$. Thus, the regulatory manipulation check was operated as intended. All questionnaire items were assessed with an exploratory factor analysis. The exploratory factor analysis showed that the loadings of those items on their respective constructs were above the threshold value of 0.60 (Chin 1998). A single composite measure for persuasiveness and piracy attitude was created by averaging four persuasiveness items (Cronbach's $\alpha=0.82$) and five attitude items (Cronbach's $\alpha=0.91$) respectively.

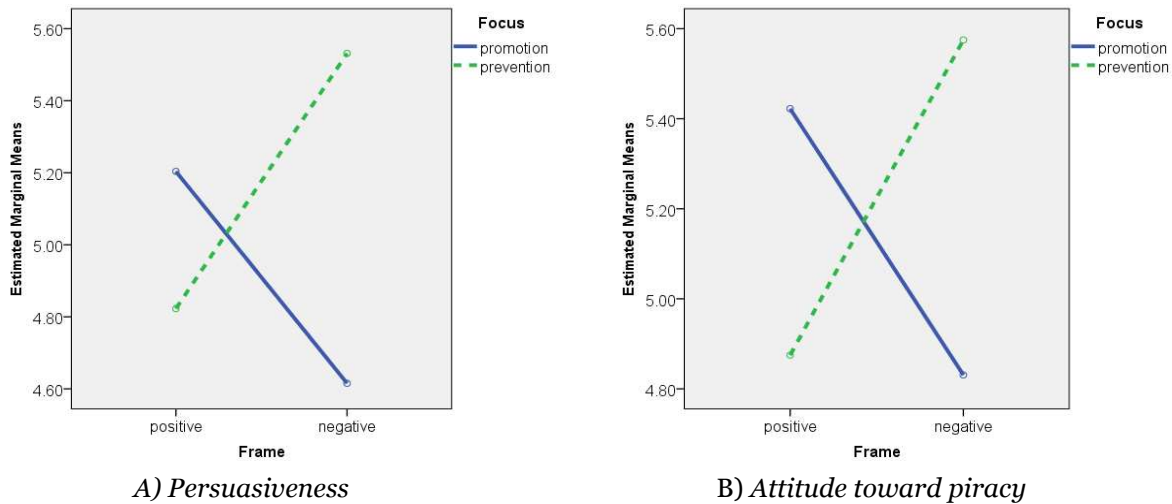


Figure 2. Interactive effect of regulatory focus and message framing on message persuasiveness and piracy attitude

To test the hypotheses, 2 (regulatory focus: promotion vs. prevention) * 2 (message frame: positive vs. negative) between-subjects ANOVA was performed. H1 posits that when anti-piracy message emphasizes promotion focus, positive framing will be more persuasive than negative framing. In contrast, when anti-piracy campaign emphasizes prevention concern, negative framing will be more persuasive. As hypothesized, we found a significant interaction between message frame and regulatory focus on persuasiveness of anti-piracy campaigns, $F(1, 97)=12.734$, $p<0.001$. Follow-up contrast analysis, as shown in Figure 2A, revealed that participants in the promotion-focused condition perceived the anti-piracy message as being more persuasive when they were exposed to positive-framed message than when they were exposed to negative-framed message, $M=5.20$ vs. 4.61 , $t(51)=2.20$, $p<0.05$. On the other hand, participants in the prevention-focused condition rated the anti-piracy message as being more persuasive when they were exposed to negative-framed message than when they were exposed to positive-framed message, $M=5.53$ vs. 4.82 , $t(46)=2.93$, $p<0.01$. Therefore, our first hypothesis was supported.

H2 posits that when the fit between regulatory focus and message framing is congruent, consumers will demonstrate higher level of negative attitude toward software piracy. We found that there is a significant interaction effect for piracy attitude, $F(1, 97)=6.17$, $p<0.05$. Contrast analysis showed that participants in the promotion-focused condition did not demonstrate higher level of negative attitude toward pirated software when they were exposed to positive-framed message than when they were exposed to negative-framed message. However, participants in the prevention-focused condition revealed significantly higher level of negative attitude toward pirated software when they were exposed to negative-framed message than when they were exposed to positive-framed message, $M=5.58$ vs. 4.88 , $t(46)=2.26$, $p<0.05$. Thus, our second hypothesis was supported as well.

Discussion and Conclusion

This study examined the impact of regulatory focus and message frame on the effectiveness of anti-piracy campaign messages. While educational campaign is known as an effective way to dissuade consumers from downloading illegal contents, several evidences suggest that, even with educational deterrent controls, it is yet difficult to change consumers' attitude toward piracy. We provided the evidence that appropriate message design plays an important role in the effectiveness of anti-piracy educational campaign. Anti-piracy campaign messages have a greater impact in their persuasiveness when a fit between regulatory focus and message frame is congruent.

Findings in this study may provide a roadmap to guide marketing communications and persuasion activities. Currently, anti-piracy campaigns pay little attention on the structure, content, and focus of message. Without proper design, the messages present multiple topics such as peer pressure, fear, quality of product, reward/whistle blowing, and they are often mixed with negative and/or positive frame. It is important to understand that persuasive effectiveness of anti-piracy educational campaign can be improved by properly designing the arguments. Our experimental results show that positive framing is more persuasive than negative framing when anti-piracy message emphasizes promotion focus (i.e. achievement, advancement). In contrast, when anti-piracy campaign focuses on prevention concerns (i.e. protection, safety), negative framing is more persuasive than positive framing. Therefore,

Furthermore, most anti-piracy campaigns emphasize how piracy leads to aversive consequences. The goal that steers away from undesired end states is more compatible with prevention focus, thus the persuasiveness of campaign messages and changing consumers' attitude toward piracy can be enhanced when they are conveyed using negative frame. However, negative frame will be less effective when anti-piracy campaigns emphasize how the use of legal product leads to positive consequences. Using Figure 1 as an example, if BSA wants to highlight the benefits of using genuine software (*"Reducing piracy will create jobs, and spur economic growth"*), the anti-piracy campaign messages should be framed positively. When consumers are motivated to realize opportunities for advancement and achievements, positive-framed messages (e.g. *"Support American workers"*, *"Help U.S. economy"*) is more persuasive than negative-framed messages (e.g. *"Don't hurt American workers"*). On the other hand, if BSA wants to emphasize the risk of using pirated software (*"Protect yourself from malware at work!"*), negative-framed messages (e.g. *"Don't put yourself at risk"*, *"Don't expose your computer to viruses, malwares, and spyware"*) is more effective than positive-framed messages (e.g. *"Protect yourself from risk"*) because consumers are more concerned about avoiding undesired end states (losses) by focusing on safety and protection.

Our study has several limitations as well as potential avenues for future research. First, the use of undergraduate students is appropriate and convenient for testing our hypotheses, but the results may have limited generalizability. Therefore, the external validity needs to be verified by extending this study to other populations. Second, perceived risk is measured as a combination of uncertainty plus seriousness of outcome involved, but we did not differentiate the possibility of loss and the severity of loss. For example, with the risk of prosecution, we did not distinguish between the likelihood of being found, the likelihood of being punished, and the severity of punishment. All three together contribute to people's perceived prosecution risk. Lastly, prevention-focus campaigns that we developed in this study are based on a specific type of piracy risk (privacy/security risk). Perceived risk is a multidimensional construct which includes different types of risk (e.g. prosecution risk, social risk, financial risk, time risk). It would be interesting to examine how different types of risk impact on the persuasiveness of anti-piracy campaign messages.

Appendix 1. Software piracy campaign messages

1) Promotion focus

Get (Don't miss out) the latest product features, updates and technical support by using genuine software

When using genuine software, you will receive (not miss out) the latest product features, updates, and technical support to keep your computer performing at its best.

It is no secret that software programs sometimes have problems. But software manufacturers are always working to repair any problems with their software. Using genuine software will give you the benefit of receiving updates and upgrades when available. Pirated software closes the door for any software updates and upgrades. And 24 hour technical support that you can count on. The assurance of being able to pick up the phone and call the software manufacturers because you need assistance with their product is invaluable.

Use genuine software and get (don't miss out) the latest product features, updates and technical support.

2) Prevention focus

Protect (Don't expose) your computer from viruses, malwares and spywares by using genuine software

When using genuine software, you can protect your computer from (your computer will not be exposed to) viruses, malwares, and other malicious threats.

A recent study by Microsoft shows that 63% of pirated software available on peer-to-peer networks (e.g. KaZaa, Bitorrent, Limewire) contains viruses and malwares. These viruses and malwares disable critical security updates and make your computer defenseless against any malicious threats.

The study also indicates that currently, 91% of all home computers that have installed pirated software are infected with some kind of spyware. Spyware is a form of software that can install itself on computer systems with or without the consent of the computer's operator. Even anti-virus software, such as Norton Anti-virus, is useless in stopping a spyware attack. The effects of spyware may be disastrous, as some form of it may lead to fraud or identity theft.

Use genuine software and protect (do not expose) your computer from viruses, malwares, and spywares.

Appendix 2. Survey questionnaires

Persuasiveness

- 1) This advertisement is persuasive.
- 2) This advertisement is convincing.
- 3) This advertisement is believable.
- 4) This advertisement is credible.

Attitudes toward pirated software

- 1) Using pirated software is unethical.
- 2) Using pirated software is foolish.
- 3) Using pirated software is bad.
- 4) Using pirated software is harmful.
- 5) Overall, my attitude toward pirated software is unfavorable.

Manipulation check (promotion vs. prevention)

- 1) This advertisement is focused on enhancement benefits.
- 2) This advertisement is focused on promotion benefits.
- 3) This advertisement is focused on protection benefits.
- 4) This advertisement is focused on prevention benefits.

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