Fast track report

Tailoring visual images to fit: Value creation in persuasive messages

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Abstract

The present studies aimed to extend Regulatory Fit Theory in the domain of persuasive communication by (a) using printed advertisement images without any verbal claim, instead of purely or mostly verbal messages; (b) selecting the images to fit the distinct orientations of regulatory mode rather than regulatory focus; and (c) priming regulatory mode orientation instead of relying on chronic prevalence of either locomotion or assessment orientation. We found that recipients primed with a locomotion orientation experienced fit, and were more persuaded, when exposed to “dynamic” versus “static” visual images; conversely, recipients primed with an assessment orientation experienced fit and were more persuaded when exposed to “static” versus “dynamic” images. Our findings show that the experience of fit can be induced by visual messages, resulting in positive effects in terms of attitude toward product advertisement and estimated price of advertised products. Copyright © 2010 John Wiley & Sons, Ltd.

Thus far, psychological research on persuasive communication has focused mostly on verbal messages, despite the fact that much of everyday commercial advertising involves visual rather than verbal messages. In marketing research on images, aiming to reconcile the semiotic and the information-processing research traditions, Larsen, Luna, and Peracchio (2004) recently advanced a Resource Matching Hypothesis (RMH) according to which visual messages, differing on basic attributes, require different amount of cognitive resources. If there is a match, i.e., a kind of “fit,” between required cognitive resources and recipient’s available cognitive resources the message is more effective than if there is a mismatch. In other words, RMH suggests that for persuasion to be maximized there must be a quantitative “fit” of cognitive resources.

In this article, we present a complementary approach for understanding recipients’ reactions to visual advertisements by considering a qualitative type of “fit” between message’s features and recipient’s psychological states; specifically, an approach based on Regulatory Fit Theory (RFT, Higgins, 2000, 2002, 2005). RFT (Higgins, 2000, 2002) posits that motivational strength is enhanced when the manner in which people pursue a goal sustains their current regulatory orientation. RFT has been applied to a broad range of topics: fruit and vegetable consumption (Cesario, Grant, & Higgins, 2004; Spiegel, Grant-Pillow, & Higgins, 2004); consumer preferences (Florack & Scarabis, 2006; Lee & Aaker, 2004); narrative engagement and persuasion (Vaughn, Hesse, Petkova, & Trudeau, 2009); and political election speeches (Cesario, 2006).

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European Journal of Social Psychology
Published online 21 January 2010 in Wiley InterScience
(www.interscience.wiley.com) DOI: 10.1002/ejsp.726

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Received 20 March 2009
Accepted 29 October 2009
All these studies have examined the fit of verbal persuasive messages with recipients’ regulatory focus (Higgins, 1997) – a promotion focus on hopes and aspirations (ideals) versus a prevention focus on duties and responsibilities (oughts). Thus, not much is known about either fit for visual images or fit for orientations other than regulatory focus. Since advertising research has pointed out that advertisers increasingly rely on figurative images, even when unsupported by explanatory words (Phillips & McQuarrie, 2002), we decided to investigate fit in relation to visual images rather than written communication. To the best of our knowledge, the only previous research on regulatory fit and persuasion that involved a visual manipulation is the research by Cesario and Higgins (2008) where promotion-focused and prevention-focused participants received a persuasive message that was delivered with different nonverbal cues. The speaker in a video was ostensibly a teacher who advocated implementing a new after-school program for grade schools. The text of the persuasive messages was identical but the speaker’s nonverbal cues while delivering the message differed with respect to his body position, movements, gestures, and speech rate, which conveyed an eager versus vigilant style of goal pursuit. The research found that a message is more persuasive when it is delivered with a nonverbal style that fits (vs. does not fit) recipients’ regulatory focus.

The present research differs from the Cesario and Higgins (2008) research not only by examining regulatory mode differences rather than regulatory focus differences, but by considering the role of the commercial visual images used in advertising rather than a speakers’ nonverbal cues when delivering a message. Regarding the first difference, the regulatory focus distinction between promotion and prevention is a distinction between two different kinds of desired end-states – ideals versus oughts as desired end-states. In contrast, regulatory mode theory (Higgins, Kruglanski, & Pierro, 2003; Kruglanski et al., 2000) distinguishes between two different functions involved in the process of self-regulation – locomotion and assessment. Locomotion “constitutes the aspect of self-regulation concerned with movement from state to state and with committing the psychological resources that will initiate and maintain goal-related movement in a straightforward and direct manner, without undue distractions or delays” (Kruglanski et al., 2000, p. 794). Assessment, in contrast, “constitutes the comparative aspect of self-regulation concerned with critically evaluating entities or states, such as goals or means, in relation to alternatives in order to judge relative quality” (Kruglanski et al., 2000, p. 794).

Though locomotion and assessment may be thought of as interdependent functions within the larger self-regulatory system, each may receive an independent emphasis in certain circumstances. As a consequence, some situations can induce individuals to assign greater weight to the locomotion function than the assessment function, whereas other situations can do the opposite. Avnet and Higgins (2003), for example, situationally induced stronger locomotion or stronger assessment and found that participants were willing to pay 40% more for objects that were chosen with a decision strategy that fit their current regulatory mode orientation as opposed to a nonfit decision strategy.

As noted earlier, there is considerable evidence that a regulatory fit between the verbal and nonverbal style of a persuasive message and the regulatory focus of the message recipient can enhance the effectiveness of the message. It has also been suggested that a similar regulatory fit effect on persuasion could be found for other self-regulatory distinctions, including the locomotion versus assessment distinction (e.g., Cesario, Higgins, & Scholer, 2008). Thus far, however, this suggestion has not been empirically tested. It is important to test this suggestion because there could be something special about the case of promotion versus prevention given that it distinguishes between types of desired end-states. Perhaps the regulatory fit effect on persuasion is restricted to the case of message recipients being oriented toward different desired end-states. Perhaps it would not occur for the case of message recipients being concerned with different functions of the self-regulatory process (i.e., locomotion vs. assessment). It is important, then, to test whether the fit effect on persuasion generalizes beyond regulatory focus to regulatory mode. To provide an especially strong test of this new case, regulatory mode was experimentally manipulated rather than relying on chronic individual differences in locomotion and assessment concerns.

It is also important to generalize the fit effect on persuasion from the verbal and nonverbal style of a person’s message advocacy to the case found in commercial advertising where the message varies in its visual image without any verbal copy. We anticipated that when recipients’ are locomotion-oriented, “dynamic,” movement-related images will induce fit and will thus be more persuasive. In contrast, when recipients are assessment-oriented, “static” images that highlight a critical evaluative feature of a product will be more persuasive.

The current studies tested two predictions. First, we predicted that print advertisements using images that fit (vs. do not fit) situationally induced regulatory mode orientations would result in more positive attitudes toward the product advertisement, with “dynamic” images yielding more positive attitudes than “static” images for locomotion-state
recipients, and the opposite being true for assessment-state recipients. Second, we predicted that regulatory fit would induce a willingness to pay a larger amount of money to buy the advertised product.

**STUDY 1**

Since at least one of the likely reasons for the lack of attention given to images in persuasion research is the financial difficulties of producing professional level images, in our first study we decided to test our regulatory fit hypotheses by selecting images actually used in contemporary commercials concerning a product of interest for young people. We aimed at finding visual advertisements of the same product with either a dynamic or a static image that we hypothesized would fit, respectively, a locomotion and an assessment orientation. We ended up selecting two images that were found on Google and were drawn from actual iPod communication campaigns (see Appendix A). The first image is an image in which the visual representation of the product is fused with the background consisting of a female dancing human figure, who keeps an iPod in her hand while dancing. We assumed that such a dynamic, movement-related representation would fit a locomotion orientation. The second image consists of an iPod displayed from different perspectives (frontal, lateral), presumably in order to highlight a critical evaluative feature of the iPod – how slim it is. We assumed that a static image of such a critical evaluative feature would fit an assessment orientation. In order to check the a priori classification of the images as static or dynamic, we ran a pilot study to test whether the first image was, indeed, perceived as dynamic and the second image as static.

Regulatory mode orientation was experimentally induced, following Avnet and Higgins’s (2003) procedure, in order to avoid any ambiguity in drawing casual inferences. We hypothesized that the “dynamic” image would produce a fit for recipients in the locomotion condition and that the “static” image would produce a fit for recipients in the assessment condition. We predicted that the experience of regulatory fit (locomotion/”dynamic image” ; assessment/”static” image) would induce a more positive attitude toward the iPod advertisement and a willingness to pay a larger amount of money to buy the iPod. Furthermore, we predicted that the more positive attitude toward the iPod advertisement induced by regulatory fit would mediate the effect of regulatory fit on willingness to pay more to buy the iPod.

**Method**

**Design and Participants**

Design of the present experiment was a 2 × 2 factorial with regulatory mode orientation (locomotion vs. assessment) and product’s presentation (dynamic vs. static) as between-subjects factors. Seventy-one female students at the University “Sapienza” of Rome were randomly assigned to the four experimental conditions (Age $M = 21.88, SD = 2.80$).

**Check of Perceived Features of the Selected Images**

A pilot study was carried out with 19 psychology students at the University of Rome to test whether the selected images were perceived as dynamic or static. Participants were presented with both the image chosen to present the product in a static fashion and the image chosen to present the product in a dynamic fashion. All participants rated both images on 6 scales related to dynamics (i.e., energy, movement, change, dynamism, adventure, and doing always different things) and 6 scales related to statics (e.g., slowness, stability, doing always the same thing, meditation, reflection, and evaluation). Ratings (from 1 = not at all to 7 = very much) were averaged into a static index ($\alpha = .77$) and a dynamic index ($\alpha = .73$).

The dynamic index was analyzed by a within-participants ANOVA (analysis of variance); we found as expected that the dynamic image was rated as more dynamic ($M = 3.81, SD = 1.14$) than the static image ($M = 1.77, SD = 0.71$) $F(1, 18) = 56.95, p < .001$. Another within-participants ANOVA on the static index found that the static image was rated as more static ($M = 3.19, SD = 1.33$) than the dynamic image ($M = 1.97, SD = 0.79$; $F(1, 18) = 13.63, p < .01$).
Procedure

Upon arrival in the laboratory, participants were asked to take part in two ostensibly unrelated tasks. The first task was intended to manipulate regulatory mode orientation. To this purpose, we closely followed the procedure used by Avnet and Higgins (2003). More specifically, participants were asked to read the following instructions: You are requested to recall three different behaviors you have used successfully in the past and to write a short example for each behavior. In the locomotion condition, participants were requested to recall the following three behaviors (the items were taken from the locomotion scale, Kruglanski et al., 2000): Think back to the times when you acted like a “doer”; Think back to the times when you finished one project and did no wait long before you started a new one; Think back to the times when you decided to do something and you could not wait to get started. In the assessment condition, the participants were requested to recall the following three behaviors (the items were taken from the assessment scale, Kruglanski et al., 2000): Think back to the times when you compared yourself with other people; Think back to the times when you thought about your positive and negative characteristics; Think back to the times when you critiqued work done by others or yourself.

The second task was presented as a survey about an advertisement of new product (i.e., an iPod) specifically designed for young consumers. Manipulation of product’s presentation was obtained by showing participants either the dynamic image (a girl dancing with the iPod in one hand) or the static image (iPod displayed from different view points). As our purpose was to examine the fit between regulatory modes and images, claims were not included in the advertisements. Subsequently, participants were asked to answer several questions about the advertisement and the iPod.

Measures

The main dependent variable was the amount of money that participants say they are willing to spend to buy the iPod. Attitude toward the advertisement was also measured by asking participants to answer four items: “Advertisement was very attractive”; “Advertisement was very nice”; “Advertisement was captivating”; and “Advertisement was hard to forget” (1 = Totally disagree, to 7 = Totally agree). Ratings were averaged (α = .81).

Results and Discussion

Attitude toward iPod Advertisement and Amount of Money Offered

A 2 × 2 ANOVA on attitude toward the iPod advertisement revealed the predicted interaction between induced regulatory mode orientation and product’s presentation, F(1, 67) = 10.34, p < .01, η² = 0.13. Simple effect analysis showed that participants in the locomotion condition preferred the dynamic (M = 4.80, SD = 1.09) rather than static product presentation (M = 3.76, SD = 1.27), F(1, 67) = 6.54, p < .05, whereas participants in the assessment condition preferred the static (M = 4.40, SD = 1.32) rather than the dynamic presentation (M = 3.55, SD = 1.26), F(1, 67) = 4.02, p < .05.

A similar pattern of results showed up when amount of money that participants were willing to pay to buy the iPod was analyzed with a 2 × 2 ANOVA. Namely the significant two-way interaction, F(1, 67) = 8.87, p < .01, η² = 0.12, indicated that participants were willing to pay a greater amount of money to buy the iPod in the fit conditions. Figure 1 shows that in the locomotion condition participants offered 51% more when the iPod was presented in the dynamic (M = €135.89, SD = 62.09) rather than static image (M = €89.67, SD = 61.27), F(1, 67) = 4.05, p < .05; whereas participants in the assessment condition were willing to pay 62% more when presented with the static (M = €137.22, SD = 95.36) rather than dynamic image (M = €84.68, SD = 49.58), F(1, 67) = 4.82, p < .05.

Consistent with previous research, Study 1 showed that fit between advertising image and induced regulatory mode orientation (i.e., locomotion/dynamic image; assessment/static image) intensified positive attitudes toward the iPod advertisement, which in turn translated into a willingness to pay more to buy an iPod. In Study 1 we used print images already available on the web that were potentially already known to participants. Furthermore, in these images there was no distinction between background or context and the advertised object, so that the image of the product in the two advertisements was different in terms of size and visible details. These properties of the images we used might limit the generality of our results. Therefore, we conducted a second study where only the background image was manipulated to be dynamic or static while keeping identical the image of the product itself. By manipulating only the background of the advertised image, we could examine whether fit induced by an image simply juxtaposed to a product can impact the evaluation of the product.
In the present study, images were composed of two independent elements: the product to be judged and the background. In this case we selected a picture of a wristwatch with no visible logo and juxtaposed it to two different backgrounds (see Appendix B). In the dynamic condition the background consisted of a picture of American football players taken during an active phase of the game. In the static condition, the background consisted of American football players’ picture taken during a static phase of the game. As our purpose was to examine the fit between regulatory modes and images, claims were not included in the advertisements.

**Method**

**Design and Participants**

Design of the present experiment was a $2 \times 2$ with regulatory mode orientation (locomotion vs. assessment) and product’s background (dynamic vs. static) as between-subjects factors. Seventy-two female students at the University “Sapienza” of Rome were randomly assigned to experimental conditions (age $M = 21.30$, $SD = 2.90$).

**Check of Perceived Features of the Selected Images**

A pilot study was carried out on 19 psychology students at the University of Rome to test whether the selected images were perceived as dynamic or static. The participants were presented with both the image chosen to constitute the static background and the image chosen to constitute the dynamic background. All participants rated both images on the same 6 items used in Study 1.

A within-participants ANOVA on ratings of dynamics showed that, as expected, the dynamic image was rated as more dynamic ($M = 4.90$, $SD = 0.91$) than the static image ($M = 2.57$, $SD = 0.85$), $F(1, 18) = 52.89$, $p < .001$. Similarly, the static image was rated as more static ($M = 4.20$, $SD = 1.12$) than the dynamic image ($M = 2.54$, $SD = 0.68$), $F(1, 18) = 52.38$, $p < .001$.

**Procedure and Measures**

The procedure and manipulation of regulatory mode orientation were identical to Study 1, as were all of the dependent measures.
Results and Discussion

Attitude toward the Watch Advertisement and Money Offered

ANOVA on attitude toward the watch advertisement with regulatory mode orientation (locomotion vs. assessment) and background (static vs. dynamic) as between-participants factors revealed no significant main effects ($F_s < 1$). As expected, the two-way interaction was significant $F(1, 68) = 11.55, p < .01$, $\eta^2 = 0.14$. Simple effect analysis showed that, when participants were induced to adopt a locomotion orientation, the dynamic background advertisement ($M = 4.04$, $SD = 1.83$) was preferred to the static background advertisement ($M = 2.90$, $SD = 1.37$), $F(1, 68) = 5.47, p < .05$. Conversely, in the assessment orientation condition, participants preferred the static ($M = 4.33$, $SD = 1.49$) rather than dynamic advertisement ($M = 3.10$, $SD = 1.08$), $F(1, 68) = 6.06, p < .05$.

Money offered to buy the watch was analyzed in the same $2 \times 2$ ANOVA (regulatory mode vs. background) which yielded a significant interaction between the variables, $F(1, 68) = 10.73, p < .01$, $\eta^2 = 0.14$. Figure 2 shows that participants in the locomotion orientation offered a higher amount of money (about 40% more) when the watch was accompanied by a dynamic background ($M = €83.58$, $SD = 63.53$) rather than a static background ($M = €58.11$, $SD = 41.38$), $F(1, 68) = 3.28, p = .07$ (marginal). Among participants in the assessment condition, a higher amount of money (about 80% more) was offered when the watch was accompanied by a static background ($M = €89.50$, $SD = 50.80$) rather than a dynamic background ($M = €48.76$, $SD = 47.09$), $F(1, 68) = 7.93, p < .01$.

GENERAL DISCUSSION

There is little doubt that images have become a key element in contemporary advertising. Very often recipients infer the identity or personality of products or brands from images. Therefore, images need to be, and surely are, carefully selected. The results of our studies suggest that such a selection should take into account the opportunity for inducing a fit experience that can result in creating value for the advertised product.

In Study 1, visual printed advertisements that were drawn from an actual commercial campaign induced a more positive attitude toward iPod, and, as a consequence, a higher monetary evaluation of the advertised product when they were selected in order to fit the experimentally induced regulatory mode orientation of the message recipients. In Study 2 the same results were obtained using two background images in front of which the same image of an unbranded watch was juxtaposed.

These results extend previous studies concerning regulatory fit effects on persuasive communication. While previous studies have shown the positive effect of using verbal claims and taglines, the present studies show that fit can also be effective for visual images that match recipients’ regulatory mode orientation. Our studies show that fit enhances attitudes toward the product advertisement and increase the amount of money that individuals say they are willing to spend to buy the advertised product.

![Watch](image_url)

Figure 2. Amount of money willing to spend to buy the watch as a function of regulatory mode orientation and image background (Experiment 2)
A potential limitation of the present studies is that the dimension of visual images that was selected, i.e., the dynamic–static dimension, would seem to be more relevant to locomotion concerns that assessment concerns. Generally speaking, this would seem to be the case given that movement and change versus stability and doing always the same thing – which was the difference tested by the pilot study – more obviously relates to locomotion concerns. Why then did the studies consistently find a reversal effect in the assessment condition? One possibility, which we suggested earlier, is that critical evaluative features of products might be more evident when the visual image is static than dynamic. The question, then, is whether this characteristic of a static (vs. dynamic) image is inherent to its being static or it just happened to be true in our studies? If it is not inherent, then there is a need in future studies to manipulate a quality of visual images that is more obviously relevant to assessment concerns. But we believe that there might be something else going on that is inherent to the static versus dynamic distinction and is also relevant to assessment concerns. Movement and change make it difficult to establish the truth about something, whereas stability and doing always the same thing make it easier. It is perhaps this quality of the dynamic–static dimension that created nonfit and fit, respectively, with participants’ assessment concerns. Future research needs to address these different possibilities.

Beyond applying for the first time RFT to visual images used in persuasive communication, the present studies provide empirical support for the claim that regulatory fit can be referred to “any motivational orientation with a preferred manner of goal pursuit” (Cesario et al., 2008, p. 445) – in this case, locomotion versus assessment orientations that are experimentally induced. It should also be noted that our studies used a fit induction technique that differs somewhat from previous ones because the regulatory mode manipulation was not integral to the persuasive situation (i.e., it was incidental) but the choice of visual image was integral to the persuasion situation. In Cesario et al.’s (2008) terms, then, our fit induction technique was a mixed integral and incidental technique. Therefore, the evidence of fit enhancing persuasion that was obtained in the present studies demonstrates that regulatory fit can be experimentally induced in many different ways and still be effective. This suggests a broad range of applicability of fit to message effectiveness. To broaden application even further, other elements of advertisements should be investigated, including other common integral features of TV advertisements like music and movement in the images. It could be, for example, that specific combinations of music and images would be especially effective when tailored to fit specific audiences. Given that “products” include public service messages about ways to improve our health and the environment, it is important to learn more about how messages can become more effective.

ACKNOWLEDGEMENTS

We thank Alessandra Lazzaro for images editing.

REFERENCES


**APPENDIX A**

Images used in the first experiment. Image placed first was presented in the “dynamic” condition. Image placed next was presented in the “static” condition.
APPENDIX B

Images used in the second experiment. Image placed first was presented in the “dynamic” condition. Image placed next was presented in the “static” condition.