Imagery-Text Congruence in Online Commerce: a Processing Fluency Account

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This paper addresses effects of congruence among meanings connoted by product picture and product description in online vendor sites on consumer response. Based on processing fluency accounts, it is argued that congruence increases processing fluency, in turn positively affecting product attitude. Since integration of meanings requires elaborate processing, it was predicted that this effect would be most pronounced for participants high in need for cognition. To test this prediction, an experimental study was conducted in which congruence among meanings connoted by hotel appearance and hotel description was manipulated. Results were in line with our predictions, and provide insight in consumers’ online decision making.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/14368/volumes/v36/NA-36

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Imagery-Text Congruence in Online Commerce and its Influence on Attitude Formation: A Processing Fluency Account

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EXTENDED ABSTRACT

Recent research indicates that design features of products and (online) environments may influence consumer choice and attitude formation (e.g., Griffith 2005; Mandel and Johnson 2002). Part of this influence relates to whether, and the extent to which, meanings connoted across different design elements match or mismatch (e.g., Van Rompay and Pruyn in press). For instance, online environments comprise many different elements (e.g., color, layout, textual information, and visuals) whose connotations require integration in order for a consumer to form an opinion or make a (purchase) decision. The authors propose that meaning (in)congruence impacts the relative ease with which informational elements are integrated. Ease of information integration, in turn, is expected to shape consumer response. To test these predictions, an experimental study is reported in which meanings connoted throughout product visualization and product description on a hotel booking site were manipulated.

In motivating these predictions, of particular interest is recent theorizing on processing fluency (e.g., Lee and Labroo 2004; Reber, Schwarz, and Winkielman 2004). The kernel of this proposal holds that people evaluate stimuli more positively the more fluently they can be processed. Arguably, meaning congruence also impacts processing fluency. For instance, when confronted with online vendor sites connoting various meanings through text (e.g., product description) and visuals (e.g., thumbnails of products), consumers face the task of integrating these various meanings into an overall impression in order to assess product quality and relevance, and to decide on purchase. Compared to highly incongruent information, matching or congruent information connoted by different website elements requires less integration, and, thus, makes the target product’s meaning easier to grasp (cf. Lee and Labroo 2004).

Based on the above, it was predicted that online vendor sites in which product description and product visualization connot congruent meanings pose less information integration requirements, i.e., are more easily processed, compared to websites connoting incongruent meanings through product description and visualization. In line with the proposed relation between processing fluency and product evaluations, fluent processing was, in turn, expected to positively affect consumers’ attitude towards the product presented. Since meaning integration requires, at least to some extent, elaborate processing, it was predicted that congruence effects would be particularly pronounced for participants high in need for cognition, as opposed to participants low in need for cognition.

To test these hypotheses, an experimental study was conducted in which participants were asked to evaluate a hotel booking site in which meaning congruence was manipulated. Based on pretesting, three hotel images were selected; a hotel image connoting coziness, a hotel image connoting modernity and a hotel image neutral with respect to these constructs. Similarly, two hotel descriptions were selected either stressing the hotel’s cozy atmosphere or its modern atmosphere. By cross pairing the product visualizations and product descriptions, six versions of the website were created, crystallizing in a 3 (Product appearance: cozy versus neutral versus modern) * 2 (Product description: cozy versus modern) * 2 (Need for Cognition: low versus high) between-participants design. Dependent measures comprised measures of processing fluency and attitude formation.

Results indicated that meaning congruence, as opposed to meaning incongruence, indeed facilitated processing and positively affected attitude formation. Hence, processing fluency and attitude ratings were highest when a modern hotel appearance was accompanied by a hotel description stressing the hotel’s modern atmosphere, and when a cozy hotel appearance was accompanied by a description stressing its cozy atmosphere. In contrast, websites connoting incongruent meanings through text and visuals received lower ratings on the fluency and attitude measures. In line with predictions, congruence effects were particularly apparent for participants high in need for cognition. Furthermore, using moderated mediation analyses (Muller, Judd, and Yzerbyt 2005), it was shown that meaning congruence indeed impacts attitude formation via processing fluency, confirming that meaning congruence is an important antecedent of processing fluency and via this route affects consumer attitude formation.

The findings reported are of practical relevance, not in the least because product descriptions and product visualizations are the two most important sources of product information on online vendor sites. Considering that this particular type of service (i.e., a hotel booking site) is also high in experience characteristics (i.e., the service can only be evaluated after consumption; Klein 1998), the importance of information congruence is all the more apparent. Under these conditions in particular, information gathering to reduce uncertainty and perceived risk associated with the wrong choice (e.g., booking a modern hotel high in formalized procedures when looking for a warm and personal atmosphere) benefits from information congruence.

Taking note of these considerations, the findings reported can be integrated with, seemingly contradictory, findings from research addressing congruence effects in advertising (e.g., Heckler and Childers 1992; Lee and Mason 1999). Findings from these studies indicate that text-image incongruence in ads may attract attention and positively affect consumer response in low involvement situations. The results reported here indicate that, when consumer involvement and perceived risks are high, information incongruence should be avoided. Nonetheless, incongruence may yield positive effects when applied to peripheral or stylistic website elements (e.g., color, layout or typeface) that are not central to information processing (cf. Eroglu, Machleit, and Davis 2001). In addition, future research should explore to what extent moderators such as browsing intentions and online experience qualify congruence effects.

Awaiting further studies addressing these and related issues, in the meantime the findings presented testify to the importance of careful consideration of textual and visual elements comprising the online environment, and stress the importance of website design in general.
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