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The Differential Effects Of Celebrity And Expert Endorsements On Consumer Risk Perceptions

By: Dipayan Biswas, Abhijit Biswas, and **Neel Das**

Abstract

This paper examines the differential effects of celebrity and expert endorsements on consumer risk perceptions via three studies. Using source model theories, it is hypothesized that for high technology-oriented products there will be stronger effects of expert endorsers than celebrity endorsers in reducing consumer risk perceptions. In addition, for high technology-oriented products, there is likely to be an interaction effect between endorser type and consumer knowledge on respondents' risk perceptions. Such an interaction effect is likely to be absent for products with a low technology orientation. These hypotheses are supported by the first two studies. The third study examines the underlying theoretical processes of internalization versus identification and shows that the stronger effects of expert (versus celebrity) endorsers for high technology-oriented products is somewhat neutralized for certain types of perceived risks when there is high congruency between the celebrity endorser and the product.

THE DIFFERENTIAL EFFECTS OF CELEBRITY AND EXPERT ENDORSEMENTS ON CONSUMER RISK PERCEPTIONS

The Role of Consumer Knowledge, Perceived Congruency, and Product Technology Orientation

Dipayan Biswas, Abhijit Biswas, and Neel Das

ABSTRACT: This paper examines the differential effects of celebrity and expert endorsements on consumer risk perceptions via three studies. Using source model theories, it is hypothesized that for high technology–oriented products there will be stronger effects of expert endorsers than celebrity endorsers in reducing consumer risk perceptions. In addition, for high technology–oriented products, there is likely to be an interaction effect between endorser type and consumer knowledge on respondents' risk perceptions. Such an interaction effect is likely to be absent for products with a low technology orientation. These hypotheses are supported by the first two studies. The third study examines the underlying theoretical processes of internalization versus identification and shows that the stronger effects of expert (versus celebrity) endorsers for high technology–oriented products is somewhat neutralized for certain types of perceived risks when there is high congruency between the celebrity endorser and the product.

Celebrity endorsements are widely prevalent in advertisements. According to some estimates, almost 20% of all television advertisements in the United States feature a famous person as an endorser (Agrawal and Kamakura 1995). Some of the benefits accrued from using celebrity endorsers lie in making the advertisement more effective in certain instances (Kamins et al. 1989), enhancing message recall (Friedman and Friedman 1979), and aiding in the recognition of brand names (Petty, Cacioppo, and Schumann 1983). Although perhaps not as frequently used as celebrity endorsements, there has also been a steady rise in expert endorsements in advertisements in recent times. Expert endorsements are usually manipulated by focusing on the credentials or qualifications of the endorser. For example, a doctor recommending Zantac® is a form of expert endorsement. Similarly, exercise equipment endorsed by fitness experts (as is common in infomercials) is a form of expert endorsement. According to extant literature, expert endorsements enhance the believability of an advertisement primarily due to increased source credibility (Maddux and Rogers 1980). In recent times, there has been an increased inter-est on the part of the FTC (Federal Trade Commission) to monitor expert endorsements. In fact, for certain product categories with potentially serious health impacts, the FTC has strict guidelines for any form of expert endorsement (www.ftc.gov/bcp/guides/endorse.htm).

While many studies have examined celebrity as well as expert endorsements, a few interesting elements are lacking from prior literature. For example, not many direct comparisons for the differential effects of celebrity and expert endorsements have been made within a single study (with Freiden 1984 being a notable exception). We extend prior work in this area in several ways. First, we attempt to show how the differential effects of celebrity versus expert endorsements are likely to be contingent on the product type. Second, Freiden (1984) focused on respondents' attitudes (e.g., trustworthiness, likability, believability, etc.) toward the endorser. We focus on the respondents' judgments in terms of their risk perceptions toward the product rather than toward the endorser. Also, very little research has examined the moderating effects of consumer product knowledge on the endorsement outcomes; the present research attempts to take an important step in that direction. Finally, a significant contribution of this research involves empirical examination of the underlying processes for the differential effects of celebrity versus expert endorsements. Although a few prior studies (e.g., Kamins and Gupta 1994; Kelman 1961) have assumed identification and internalization as explanations for the differential effects of celebrity versus expert endorsements, ours is the first attempt to empirically examine this phenomenon.[1]

In essence, this paper attempts to examine the differential

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effects of celebrity and expert endorsements on consumer risk perceptions for high versus low technology–oriented products, and the moderating role of consumer product knowledge on the endorsement outcomes. This paper also empirically examines when and how there might be differential effects between celebrity and expert endorsements. It is hypothesized that expert (versus celebrity) endorsements are more effective in reducing consumer risk perceptions for high technology-oriented products,[2] with the effect being magnified for more (versus less) knowledgeable consumers. No such main or interaction effects are proposed for low technology–oriented products. That is, for low technology–oriented products, expert endorsements are not likely to be stronger than celebrity endorsements for reducing perceived risks, and this effect pattern remains the same regardless of consumer knowledge. The potential role of celebrity endorser–product congruency on the endorsement outcomes is also examined, and an insight into the underlying processes for the differential effects of celebrity versus expert endorsements is provided.

In the next section, we first examine the key aspects of consumer risk perceptions, and then follow with a discussion of the theoretical models for the different endorsement processes and outcomes. Next, we discuss the moderating role of consumer knowledge on consumer risk perceptions. Based on the discussions in this section, hypotheses pertaining to the effects of endorsements and the moderating effects of consumer knowledge on consumer perceived risks are offered. Two experiments test these hypotheses. A third experiment empirically tests the underlying theoretical processes and attempts to rule out a potential alternative explanation in terms of congruency between the endorser and the product. Thereafter, discussions with implications for researchers and managers are offered, followed by a discussion of the limitations of the study and suggestions for future research.

THEORETICAL BACKGROUND AND HYPOTHESES

Consumer Risk Perceptions

Consistent with prior studies (e.g., Cox and Rich 1964; Grewal, Gotlieb, and Marmorstein 1994), *perceived risk* is defined in this paper as the nature and amount of uncertainty perceived by a consumer in contemplating a particular purchase decision. Since there is some form of uncertainty involved for any product purchase scenario due to the information asymmetry existing between buyers and sellers, there will always be some level of perceived risk for consumers for almost any purchase decision. The perceived risk for a product purchase is directly related to the amount at stake for the product (Cox 1967; Dowling and Staelin 1994). Hence, higher priced products and products with higher involvement will invoke higher

risk perceptions for consumers. Although the economics literature has identified several types of risks, two types of risks (*performance* and *financial*) have assumed more importance in the marketing literature (Grewal, Gotlieb, and Marmorstein 1994). *Performance risk* is the risk associated with uncertainties regarding the product not performing according to expected levels. *Financial risk* is the risk associated with the costs and expenses involved with the product, and with uncertainties about whether the product is worth that amount of money (Grewal, Gotlieb, and Marmorstein 1994). This paper examines performance and financial risks as the key dependent variables of interest.

Endorser Effects and Source Model Theories

In the first two studies, this research primarily examines two types of endorser effects: celebrity endorser (CE) and expert endorser (EE), and a control condition of non-celebrity non-expert endorser (NCNE). Research in the area of endorsements has been addressed mainly in the context of two theories— source credibility theory and source attractiveness theory (Horai and Fatoullah 1974). Source model theory (SMT) is a combination of these two theories. According to SMT, endorsements are effective usually because of their source's credibility and attractiveness (Sternthal and Craig 1973). Source attractiveness has been traditionally viewed as having three interrelated aspects—familiarity, similarity, and liking (McGuire 1969). Familiarity is defined as knowledge of the source through exposure; similarity is the supposed resemblance between the source and receiver of a message; likability is affection for the source as a result of the source's physical attractiveness, behavior, or credentials. According to McGuire (1969), sources that are known to, liked by, and/or similar to the consumer are considered attractive and persuasive.

Celebrity Endorsements

A celebrity endorser is defined as "any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement" (McCracken 1989, p. 310). In comparison with other types of endorsements, celebrity endorsements are more effective in dimensions such as trustworthiness, believability, persuasiveness, and likability (Freiden 1984; Till and Shimp 1998). The effectiveness of a celebrity endorser compared with an anonymous endorser lies in bringing a distinguishing feature in terms of personality and lifestyle meanings to an endorsement process (McCracken 1989). Consumers have a preconceived image about any celebrity endorser, and this image affect is transferred to the endorsed brand (Atkin and Block 1983). However, some researchers suggest that the presence of a celebrity endorser acts as a peripheral cue and is likely to

be more effective with less involved consumers (Petty, Cacioppo, and Schumann 1983).

The effects of celebrity endorsements have also been explained using associative learning theory (ALT). Associative learning principles are based on a conception of memory as a network consisting of various nodes connected by associative links (Collins and Loftus 1975). At a conceptual level, celebrities and brands represent nodes in the memory, which become linked over time through the endorsement process. Hence, feelings toward a celebrity and/or meanings associated with the celebrity are expected to transfer to the endorsed brand through their recurring association. The repeated exposure to these two stimuli would result in simultaneous activation of memory nodes, representing those stimuli, building an associative link between the two nodes (Klein 1991). Hence, both SMT and ALT predict effects for a celebrity endorser.

Expert Endorsements

In a way, some celebrity endorsers could be considered experts in their own fields, since sometimes one has to be the best in his or her career to become a celebrity (Kahle and Homer 1985; Ohanian 1990). Expert endorsers are not necessarily celebrities, however. The expertise of an endorser accrues "from an actor's ability to provide information to others because of his [or her] experience, education, or competence" (Horai and Fatoullah 1974, p. 601). Traditionally, an expert has been defined as a source of valid assertions (Hovland, Janis, and Kelley 1953), one who knows the correct stand on an issue (McGuire 1969), or one whose statements have been verified empirically (Birnbaum and Stegner 1979). Expertise is topic-specific; an expert source must possess expertise on a particular topic rather than having it at the generalized level (Birnbaum and Stegner 1979; Norman 1976). Expert endorsements are effective because communications attributed to an expert endorser produce greater agreement with the subject than the same communications attributed to a nonexpert (Tedeschi 1972). Since the objective of most ads is to convey certain meanings and/or views associated with a brand (or an issue) in order to persuade trial usage or repeat usage of that brand, the use of an expert endorser will tend to make viewers more agreeable to the conveyed meanings.

Differential Effects of Celebrity and Expert Endorsements

The processes by which celebrity and expert endorsements influence consumer attitude and belief change are likely to be different (Freiden 1984). According to Kelman (1961), when the source model of a communication is a celebrity, the consumer's attitude change occurs through the process of *identification*. Identification occurs when an individual attempts to establish or maintain the identity associated with a celebrity endorser (Kelman 1961). Hence, when an individual at-

tempts to believe the meanings or image portrayed by a celebrity endorser, it can be said that he or she is attempting to go through an identification process. When the source is an expert, however, the influence occurs through the process of *internalization*. Internalization is said to occur when an individual accepts influence that is congruent with his or her value or belief systems (Kelman 1961). An individual will be influenced by an expert endorser when the views presented seem useful for the solution of a particular problem.

As a result, the greater effectiveness of a particular type of endorsement (celebrity or expert) is, to a great extent, contingent on the type of product being advertised. For more involving, durable, higher priced, or high technology–oriented products, expert endorsements are likely to have stronger effects than celebrity endorsements. This is because with high-priced or more technology-oriented items, there is likely to be greater levels of involvement with the product purchase,[3] and hence, the internalization process will be more effective than mere identification (Kelman 1961; Petty, Cacioppo, and Schumann 1983). The identification process brought about by celebrity endorsements is more effective when the consumer is only peripherally processing the information presented for a product. In such a scenario, the various cues associated with the object or context (such as the celebrity endorser) exerts maximum influence (Sengupta, Goodstein, and Boninger 1997). This would not be the case for high technology–oriented products, however. For these products, the consumer is likely to be highly motivated to process the information presented in the ad, and the expert status of the endorser will have a stronger effect (Chaiken 1980). There is indirect support for our arguments in the work of Petty, Cacioppo, and Schumann (1983). While Petty, Cacioppo, and Schumann (1983) did not examine expert endorsements, they found that when an advertisement concerned a product of low involvement, the celebrity status of the endorser had a strong influence on consumer perceptions and attitudes. When the advertisement concerned a product of high involvement, however, the celebrity status of the product endorsers had hardly any effect on perceptions and attitudes. Based on SMT, we argue that, in general, expert endorsers are likely to be more effective than celebrity endorsers in reducing risk perceptions. This stronger effect is likely to be evident only for high-technology products, however. For low-technology products, the peripheral cue (i.e., the celebrity endorser) would have some effect, and would therefore attenuate the stronger effects of expert endorsers. Thus, effectively, expert endorsers are likely to have greater effects than celebrity endorsers for high technology–oriented products and similar effects as celebrity endorsers for low technology–oriented products. It can therefore be formally proposed:

H1: For high technology–oriented products, consumers' perceived (a) performance risk and (b) financial risk will be lower when an expert, rather than a celebrity, endorses the product.

H2: For low technology–oriented products, consumers will have similar levels of perceived (a) performance risk and (b) financial risk for both expert and celebrity endorsements.

The Role of Consumer Knowledge in Evaluating Endorsements

The moderating role of consumer knowledge has already been examined for various contexts of consumer behavior (e.g., Maheswaran and Sternthal 1990; Rao and Monroe 1988; Srivastava and Mitra 1998). However, no study has examined the moderating effects of consumer product knowledge in the context of endorser effectiveness. Consistent with prior literature, in this paper, consumer knowledge is defined as having two major components: *familiarity* and *expertise* (Jacoby 1986). Familiarity has been defined as the number of product-related experiences that have been accumulated by the consumer. Expertise is defined as the ability to perform product-related tasks successfully (Alba and Hutchinson 1987). Therefore, rather than being generic in nature, consumer knowledge is specific to a particular product.

One major outcome of product familiarity is that it may allow consumers to efficiently process available information. In addition, the highly knowledgeable consumer may exhibit a tendency to delve into the details of the message, especially for high technology–oriented products (Roehm and Sternthal 2001). However, it might be noted that there can be certain situations under which more knowledgeable consumers might not process the given information more efficiently (for a detailed discussion on such extraordinary situations, refer to Alba and Hutchinson 2000).

Based on the process of *internalization,* we propose that for a consumer who is highly knowledgeable about a product, the credibility of the claims made in an ad will be higher when it comes from an expert than when it is coming from a celebrity who is not perceived to be an expert on the concerned product. High-knowledge consumers have base knowledge that is richly endowed with attribute information, which allows them to use this knowledge for making decisions (Cowley and Mitchell 2003; Roehm and Sternthal 2001). Therefore, the opportunity for knowledgeable consumers to be influenced by a celebrity endorser in their decision making is minimal.

For consumers with low product knowledge, there may be a greater reliance on the use of peripheral cues as diagnostic signals to analyze the risks associated with a product purchase (Rao and Monroe 1988). Any form of endorsement present in the ad is therefore likely to be diagnostically evaluated by low-knowledge consumers. Hence, there are likely to be similar effects of both types of endorsements (EE and CE) in reducing risk perceptions for low-knowledge consumers. Also, the degree to which people are willing to accept a message regarding an issue from someone else is inversely related

to confidence in their beliefs (Sherif 1963). Less knowledgeable consumers have lower confidence levels in their beliefs than more knowledgeable consumers. Therefore, less knowledgeable consumers are more likely to have a strong reliance on any type of endorsement. Stated formally:

H3: For high technology–oriented products, there will be an interaction effect between type of endorser and consumer product knowledge on perceived risks. Specifically, for products with a high technology orientation, there will be lower perceived (a) performance risk and (b) financial risk for expert as opposed to celebrity endorsements, and this effect will be further magnified for high-knowledge consumers.

For low technology–oriented products, however, no such interaction effects between endorser type and consumer product knowledge on perceived risks are expected. This is because when consumers do not have much difficulty in evaluating the attributes of such products, as is likely to be the case with high-knowledge consumers, they may exhibit the same level of dependence (or nondependence) on the type of endorser. Since the product is low technology–oriented, the high-knowledge consumers most likely will exhibit nondependence even on the expert endorser in assessing perceived risk. On the other hand, low-knowledge consumers may demonstrate equally strong reliance on any form of endorsement due to the lack of confidence in their beliefs (Sherif 1963). Stated formally:

H4: For low technology–oriented products, there will be no interaction effect between type of endorser and consumer product knowledge on perceived risks. Specifically, high- and low-knowledge consumers will have the same levels of perceived (a) performance risk and (b) financial risk for both celebrity and expert endorsements of low technology–oriented products.

In the next two sections, Study 1 tests H1 and H3, while Study 2 tests H2 and H4. The hypotheses are tested in two separate studies instead of one composite three-factorial study due to the need for different expert endorser manipulations for product type (Friedman and Friedman 1979; Kamins 1990).

STUDY 1

Method

Pretest and Stimulus Development

Product Selection. A computer was chosen as a product for Study 1 since it is high technology–oriented, and also because the target subject group is highly familiar with it. Moreover, prior studies (e.g., Park, Jun, and MacInnis 2000) have used this product with student respondents.

Pretest. A pretest asked participants (*n* = 31) to rate the reputation, popularity, and credibility of seven randomly chosen celebrities. Based on the results of the pretest, Jerry Seinfeld was chosen as the celebrity endorser (CE) for the study, as he ranked highly on all three parameters (reputation, popularity, and credibility). It might be noted that Jerry Seinfeld has been chosen for experimental manipulations of a celebrity endorser in prior studies in the literature (e.g., Sengupta, Goodstein, and Boninger 1997). For the stimulus condition of the expert endorser (EE), two types of qualification scenarios were presented and the participants were asked to rate the expertise for each person. In the first scenario, the person was presented as a professor of computer engineering at a reputed university with strong academic credentials. In the second scenario, he was presented as a top executive with a reputed software-consulting firm and strong academic credentials. The respondents in the pretest indicated a relatively higher level of perceived expertise for the first scenario. These perceptions are consistent with the FTC guidelines, which suggest that a person must have sufficient qualifications to be considered expert in the field. For the noncelebrity non-expert (NCNE) control condition, the endorser was presented as the owner of "Spectrum Computers" (the fictitious brand name used in the experiments).[4]

Design and Participants

Hypotheses 1 and 3 were tested in an experiment using a 3 (endorser type: CE versus EE versus NCNE) × 2 (consumer product knowledge: high versus low) between-subjects design. The endorser type was manipulated and consumer product knowledge was measured (with the "high" and "low" conditions determined by a median split). One hundred seventeen students from a major university participated in the study for extra course credit, and were randomly assigned to one of the three endorser conditions. After the median split, the number of respondents in each of the 6 cells ranged from 15 to 21. The average age of the participants was 23, 45% of whom were female.

Independent Variables and Procedure

Participants were asked to respond to the questionnaire by placing themselves in a described scenario and reviewing an advertisement. They were told that a fictitious brand name was being used and the real name had been concealed for technical purposes. Appendix A outlines a sample scenario used in Study 1.

Participants were asked to rate themselves on seven-point Likert-type scales with four items: (1) How would you rate your knowledge about computers? (1 = very low, 7 = very high); (2) Do you consider yourself an expert regarding computers? (1 = not at all, 7 = highly); (3) What is your level of familiarity with computers? (1 = very low, 7 = very high); (4) What is your experience level with computers? (1 = very low, 7 = very high). Although there have been concerns regarding the correspondence between subjective and objective knowledge (see, for example, Alba and Hutchinson 2000; Park, Jun, and MacInnis 1994), the use of subjective measures of consumer knowledge is consistent with prior literature (e.g., Srivastava and Mitra 1998). Coefficient α for these four items was .93, indicating a high level of reliability. Inter-item correlation was also very high, ranging from .66 to .89 (all *p* < .01). A factor analysis revealed that all the items loaded on one component (with loading coefficients ranging from .85 to .93).

The median of the average of these four items was obtained as 4.0. Similar to the approach adopted in other studies (e.g., Roehm and Sternthal 2001), a median split was used to classify subjects as high-knowledge versus low-knowledge.

Dependent Measures

The dependent variables of interest—perceived performance (α = .85) and financial risks (α = .90)—were operationalized by using four, seven-point Likert scales for each construct, which are slightly modified versions of prior-used measures (e.g., Grewal, Gotlieb, and Marmorstein 1994; Shimp and Bearden 1982). Appendix B outlines the items used for these two dependent variables.

Results

Manipulation Check

Participants were asked who the endorser was and whether he was a celebrity, an expert or otherwise, to ensure that respondents processed the advertisement properly. Regarding the name of the endorser, 106 (90.6%) respondents answered correctly, 10 (8.6%) answered incorrectly, and 1 (.9%) did not answer. Regarding the background of the endorser, 115 (98.3%) respondents answered correctly, 1 (.9%) answered incorrectly, and 1 (.9%) did not answer. All the responses were kept in the analysis, since taking out respondents failing the manipulation check did not make any significant difference in the result patterns.

Hypothesis Tests

A 3 × 2 ANOVA (analysis of variance) (see Table 1) was used to test the hypotheses. As can be seen from Table 1, the interaction between endorser type and consumer knowledge was significant for both perceived performance risk, $F(2, 106)$ = 5.51, *p* < .01, and financial risk, $F(2, 106)$ = 5.48, *p* < .01. Since the interactions were ordinal, the main effect of endorser type (H1) was examined first, followed by the interaction of endorser type and consumer knowledge (H3).

TABLE 1
Study 1 ANOVA Results

Dependent variable	Endorser main effect	Consumer knowledge main effect	Endorser × knowledge
Perceived performance risk	F = 12.38* (df = 2,106)	F = 3.75** (df = 1,106)	F = 5.51* (df = 2,106)
Perceived financial risk	F = 6.89* (df = 2,106)	F = 9.17* (df = 1,106)	F = 5.48* (df = 2,106)

Notes: ANOVA = analysis of variance.

Study 1 involved a high-technology product. Type III SS for performance risk: 2,115.69. Type III SS for financial risk: 2,709.12.

* Significant at $p < .01$.

** Significant at $p < .05$.

TABLE 2
Study 1 Pair-wise Comparison of Means (t Statistics)

Dependent variable	EE vs. CE	EE vs. NCNE	CE vs. NCNE
Performance risk	3.49 vs. 4.47 (3.47)*	3.49 vs. 4.47 (–3.78)*	4.47 vs. 4.47 (–.02)
Financial risk	4.21 vs. 5.09 (3.19)*	4.21 vs. 4.86 (–2.22)**	5.09 vs. 4.86 (.79)

Notes: CE = celebrity endorser; EE = expert endorser; NCNE = non-celebrity, non-expert endorser.

* Significant at $p < .01$.

** Significant at $p < .05$.

Hypothesis 1 predicts main effects of endorser type on perceived performance and financial risks. Specifically, perceived performance and financial risks of the respondents were expected to be lower when they were exposed to endorsement by EE than by CE endorsers for high technology–oriented products. As can be seen in Table 1, the main effects of endorser type were significant for both perceived performance risk, $F(2, 106) = 12.38, p < .01$, and financial risk, $F(2, 106) = 6.89, p < .01$. To determine the effects of endorser type, pair-wise t test comparisons were undertaken (see Table 2). As can be seen from the second column of Table 2, both perceived performance risk and financial risk were lower when the endorsement was by an expert than when it was by a celebrity (performance risk: means = 3.49 versus 4.47, $t = 3.47$, $p < .01$; financial risk: means = 4.21 versus 5.09, $t = 3.19, p < .01$). The follow-up t tests show that the main effects of EE over CE were significant for both high-knowledge and low-knowledge consumers for performance risk ($t = 19.19, p < .01; t = 7.98, p < .01$, respectively), and for financial risk ($t = 12.56, p < .01; t = 9.6, p < .01$, respectively). Hence, H1a and H1b were both supported.

Although not formally hypothesized, perceived performance risk ($t = 3.78, p < .01$) and financial risk ($t = -2.22$, $p < .05$) of the respondents were significantly lower when they were exposed to an endorsement by EE than in the control condition of NCNE for high technology–oriented prod-

ucts (see third column of Table 2). However, there were no differences between the effects of CE and NCNE on perceived performance risk ($t = .02, p > .1$) and financial risk ($t = .79, p > .1$) (see column 4 of Table 2). This result is surprising since CE was expected to have some positive effect compared with an anonymous NCNE. It is possible that some of the respondents made assumptions regarding the expertise of NCNE, since he was presented as the owner of Spectrum Computers. This could have contributed to neutralizing any potential stronger effects of CE.

Hypothesis 3 predicts an interaction effect between endorser type and consumer knowledge on perceived (a) performance risk and (b) financial risk, for high-technology products. Specifically, H3 predicts that EE will lead to lower perceived performance and financial risks than CE, and this effect will be further magnified for high-knowledge consumers. As can be seen from the ANOVA results in Table 1, the interaction between endorser type and consumer knowledge was significant for both perceived performance risk ($F = 5.51, p < .01$) and financial risk ($F = 5.48, p < .01$). However, only EE resulted in significantly lower perceived risks for high-knowledge consumers (versus low-knowledge consumers) for both performance risk, means = 2.83 versus 4.07, $t(38) = 3.43, p < .01$, and financial risk, means = 3.45 versus 4.87, $t(38) = 4.12, p < .01$. In contrast, perceived performance risk and financial risk did not differ between the high- and low-knowl-

edge consumers in the CE/NCNE conditions (all $p > .2$). Hence, H3a and H3b were supported.

Discussion

Study 1 provides some interesting results related to main effects, as well as interaction effects. Consistent with our hypotheses, EE is more effective than CE for high technology–oriented products, and this becomes even more effective when the consumer is highly knowledgeable about the product.

STUDY 2

Boundary Conditions of Endorsement Effects

As mentioned above, Study 1 found empirical support for stronger effects of expert over celebrity endorsements for high technology–oriented products, and these effects are magnified for consumers with high product knowledge. Study 2 tests the boundary conditions for the stronger effects of expert versus celebrity endorsers. Specifically, the objective of Study 2 is to test H2 and H4, which predict the lack of stronger effects of EE over CE for low technology–oriented products, and the corresponding interaction effects with consumer knowledge. Although it is not very common to test null hypotheses, there have been clear instances in past research where such an approach was adopted (e.g., Childers and Rao 1992).

Method

Pretest and Stimulus Development

Product Selection. A treadmill was chosen as a product for this study because it is a product with a lower technological orientation than a computer, and because the target subject group was highly familiar with it. Also, prior studies with student participants have used a treadmill as a product (e.g., Park, Jun, and MacInnis 2000).

Pretest. To determine the EE manipulation, two types of qualification scenarios were presented to the participants ($n = 42$), who were asked to rate the expertise for each person. In the first scenario, the manipulation was based on the endorser's educational background with strong qualifications in health education from leading universities. In the second scenario, the endorser was presented as having won major national athletic championships and as being associated with major fitness training camps. Respondents indicated a relatively higher level of perceived expertise for the first scenario. The endorsers for the CE and NCNE conditions were presented as Jerry Seinfeld and the owner of "Spectrum Treadmill" (a fictitious company), respectively, similar to the endorsers used in Study 1.

Design and Participants

Similar to Study 1, H2 and H4 were tested in an experiment using a 3 (endorser type: CE, EE, NCNE) × 2 (consumer product knowledge: high and low) between-subjects design. Students ($n = 166$) from a major university participated in the study for extra course credit, and were randomly assigned to one of the three treatment conditions. A median split was performed to create the six experimental conditions. After the median split, the cell sample sizes ranged from 16 to 24. The average age of the respondents was 23.5 years, and 54% were females.

Independent Variables, Dependent Variables, and Procedure

The independent and dependent variables and the procedure were similar to Study 1, with the only differences being in the type of product (treadmill versus computer) and the expert endorser manipulations. For product knowledge, participants rated themselves on the same four items that were used in Study 1, with only the product wording changed to "treadmills." The median of the average of the four items was obtained as four. As in Study 1, a median split was used to classify respondents as high-knowledge versus low-knowledge. The same set of items for the dependent variables as in Study 1 was used. For the dependent variables, coefficient α estimates of internal consistency were .71 and .94 for performance risk and financial risk, respectively.

Results

Manipulation Check

Participants were asked who the endorser was and whether he was a celebrity, an expert or otherwise, to ensure that the respondents properly processed the manipulations. One hundred fourteen (94.2%) respondents correctly identified the endorser. Six (5%) respondents gave incorrect responses and one (.8%) did not answer. All the responses were kept in the analysis since the elimination of respondents failing the manipulation checks did not alter the result patterns.

Hypothesis Tests

Similar to the approach adopted in Study 1, a 3 × 2 ANOVA was used for testing H2 and H4 (see Table 3). Hypothesis 2 predicts that for low technology–oriented products, consumers' perceptions of performance risk and financial risk will be similar for endorsements by EE and CE. As can be seen in Table 3, the main effect of endorser type was not significant for either perceived performance risk ($F = 2.47, p = .10$) or financial risk ($F = .96, p = .52$). Hence, H2a and H2b were both supported.

TABLE 3
Study 2 ANOVA Results

Dependent variable	Endorser main effect	Consumer knowledge main effect	Endorser × knowledge
Perceived performance risk	F = 2.478 (df = 2,165)	F = 2.53 (df = 1,165)	F = 2.10 (df = 2,165)
Perceived financial risk	F = .96 (df = 2,165)	F = .27 (df = 1,165)	F = .28 (df = 2,165)

Notes: ANOVA = analysis of variance. Study 2 involved a low-technology product. All F statistics were nonsignificant ($p > .05$).

Hypothesis 4 predicts the lack of any interaction between endorser type and consumer product knowledge on perceived performance risk and financial risk for products with a low technology orientation. As can be seen in Table 3, the ANOVAs for performance risk (F = 2.10, p = .13) and financial risk (F = .28, p = .75) were not significant. Therefore, both H4a and H4b were supported.

Discussion

Combined, the first two studies support our proposed hypotheses. Respondents had higher perceived risks for CE versus EE only for high technology–oriented products, and this effect was magnified for more knowledgeable consumers. For low technology–oriented products, there was no effect of endorser type or an interaction effect with consumer knowledge. It is possible, however, that there may be alternative explanations for the results obtained in Studies 1 and 2. Study 3 attempts to determine the underlying processes and examine the role of other potential factors driving these results.

STUDY 3

The Endorsement Process and Congruency Effects

Although the results of the first two studies are interesting, one can argue that the effects were driven by the perceived congruency between the celebrity endorser and the products rather than by the technology orientation of the products. For example, it can be argued that Jerry Seinfeld might have been perceived as being more congruent in endorsing a treadmill than he was for a computer. Study 3 attempts to rule out this alternative explanation. More important, Study 3 empirically examines the underlying theoretical processes for the differential effects of celebrity and expert endorsements being driven by identification and internalization, respectively.

Celebrity Endorser–Product Congruency

There is an extant literature on the role of endorser–product congruency (e.g., Kamins and Gupta 1994; Misra and Beatty

1990; Till and Busler 2000). The congruency or "matchup" hypothesis literature suggests that "endorsers are more effective when there is a fit between the endorser and the endorsed product" (Lynch and Schuler 1994; Till and Busler 2000). Building on this research foundation, it can be argued that the effects obtained in Studies 1 and 2 regarding the differential effects of endorsements can perhaps be attributed to the potential congruency (or lack thereof) between the endorser and the product. For example, it is possible that the stronger effects of expert endorsements (in Study 1) for computers are due to the perceived lack of congruence between the celebrity endorser (Seinfeld) and computers. In contrast, in Study 2, there might have been a stronger perceived congruence between Seinfeld and treadmills (since Seinfeld is in show business, and is in good physical shape). Hence, the endorser–product congruency (or lack thereof) could have contributed to the stronger effects of expert endorsements in Study 1, and nonsignificant differences in Study 2. It might be noted that the congruency issue is relevant only for celebrity endorsement conditions. For expert endorsements, by definition, the manipulations undertaken would automatically lead to a congruency with the endorsed product. In that context, Study 3 attempts to examine whether the congruency hypothesis nullifies the obtained effects attributed to the technology orientation of the endorsed products.

Underlying Processes: Internalization Versus Identification

We have claimed that the differential effects between CE and EE are due to the different underlying processes. Specifically, for expert endorsements, the dominant underlying process is internalization, whereas celebrity endorsement effects are dominantly driven by identification (Kelman 1961). In Study 3, we explore the processes underlying the effects of expert versus celebrity endorsements by examining the differences between identification and internalization measures in the two endorsement conditions, and also through a covariate analysis. Although prior literature has theoretically examined this issue (e.g., Kamins and Gupta 1994), this is perhaps the first attempt to empirically test this phenomenon.

Method

Design and Participants

Study 3 uses a 2 (type of endorser: CE versus EE) × 2 (product's congruency with CE: high versus low) × 2 (technology orientation of product: high versus low) between-subjects experiment (see Table 4 for the study design and results). Two hundred ten students from three major universities participated in the study for extra course credit and were randomly assigned to one of the eight treatment conditions. The cell sample sizes ranged from 20 to 30. The average age of the participants was 22.4 years, and 51.7% were females.

Independent Variables, Dependent Variables, and Procedure

The procedures for the independent variables were similar to Studies 1 and 2, with the only differences being in the range of products: HD TV (high-definition television) for CE—high congruency (HC)/high technology–oriented product (HT); computer for CE—low congruency (LC)/HT; treadmill for CE—HC/low technology–oriented product (LT); mattress for CE—LC/LT and the corresponding expert endorser manipulations. To ensure ecological validity, the prices of all four products (HD TV, computer, treadmill, and mattress) were set at $629, which were the approximate prices at local retail outlets. Also, the pictures and product descriptions used in the manipulations were obtained from the Web sites of these retailers for these particular products. Similar to the approaches used in Studies 1 and 2, Jerry Seinfeld was used as the celebrity endorser, and a highly educated professor by the name of "Charles Steinfeld" was used as the expert endorsement manipulation. The same measures for the dependent variables (perceived performance and financial risks) used in Studies 1 and 2 were also used in Study 3. The coefficient α's were .71 for performance risk and .91 for financial risk.

Results

Manipulation Checks

Perceived Congruency. To test for perceived congruency between the celebrity endorser and the product,[5] respondents were asked a one-item question (which is a slightly modified version of the one used by Kamins and Gupta 1994): How congruent is the image of Seinfeld with that of [TV/ computer/ treadmill/ mattress]? (1 = incongruent; 7 = congruent). As expected, respondents perceived a higher congruency between the celebrity endorser and the product in the high-congruency conditions than in the low-congruency conditions, means = 2.96 versus 2.32, $t(102) = 2$, $p < .05$.

Endorsement. Almost all the respondents correctly recalled the endorser at the end of the survey. All respondents were retained for the final analyses because removing respondents who failed to recall the endorser did not change the pattern of results.

Assumption Check: Role of Involvement

In this paper, it is claimed that respondents are likely to have higher involvement for high technology–oriented products. Such a theoretical assumption is also consistent with the hypothesis for the stronger effects of EE for high technology–oriented products. Respondents' involvement was measured by two items: (1) "How would you rate your level of involvement with [computers]?" (1 = very low involvement; 7 = very high involvement), and (2) "How much interest do you have for [computers]?" (1 = very little interest; 7 = high level of interest). As expected, respondents had a higher level of involvement for high-technology products than for low-technology products, means = 4.73 versus 3.55, $t(207) = 6.16$, $p < .01$.

Replication of Results of Studies 1 and 2

A series of independent sample t tests were undertaken to test the relevant hypotheses and the underlying processes. Hypothesis 1 predicts that for high technology–oriented (HT) products, EE will be more effective than CE in reducing consumers' risk perceptions. Study 3 attempts to examine whether this relationship holds for both high- and low-congruency conditions. Table 4 outlines the cell means across the eight treatment conditions. Consistent with H1, the results of the t tests show that in the conditions of HT products with high congruency (HC) between CE and the product, perceived performance risk was lower for EE than for CE, means = 3.96 versus 4.59, $t(49) = 2.35$, $p < .05$. Contrary to H1, however, there was no significant difference in perceived financial risk for EE versus CE, means = 4.51 versus 4.76, $t(49) = .69$, $p = .50$, although the means were in expected directions. This shows that the effects predicted by H1, that is, EE being more effective than CE for high technology–oriented products, is somewhat neutralized for perceived financial risks when there is high congruency between the CE and the product.

In the HT condition for low congruency (LC) between CE and product, the findings replicate the results obtained in Study 1. Specifically, in the HT/LC conditions, respondents had lower perceived performance risks, means = 4.00 versus 4.48, $t(57) = 2.16$, $p < .05$, and financial risks, means = 3.81 versus 4.70, $t(57) = 3.05$, $p < .01$, for EE than for CE, as can be seen in Table 4.

For low technology–oriented (LT) products, the findings of Study 3 replicated the results obtained in Study 2, in both the HC and LC conditions. In the HC condition, there were similar effects of EE versus CE on respondents' perceived performance risks, means = 4.56 versus 4.47, $t(52) = .34$, $p = .73$,

TABLE 4
Study 3 Cell Means and Standard Deviations

	High technology–oriented products				Low technology–oriented products			
	CE–product congruency: high		CE–product congruency: low		CE–product congruency: high		CE–product congruency: low	
Dependent variable	CE (n = 25)	EE (n = 26)	CE (n = 29)	EE (n = 30)	CE (n = 26)	EE (n = 28)	CE (n = 24)	EE (n = 20)
Perceived performance risk	4.59**	3.96**	4.48**	4.00**	4.49	4.47	4.02	4.13
	(1.21)	(.62)	(.74)	(.93)	(.96)	(.95)	(.84)	(.85)
Perceived financial risk	4.76	4.51	4.70*	3.81*	5.05	5.00	4.67	5.02
	(1.33)	(1.28)	(1.00)	(1.24)	(.98)	(1.11)	(1.27)	(2.42)

Notes: CE = celebrity endorser; EE = expert endorser.

Asterisks denote a difference between the corresponding CE and EE conditions at *$p < .01$ or **$p < .05$. The standard deviations are in parentheses.

and financial risks, means = 5.16 versus 4.93, $t(53) = .77$, $p = .44$. Similarly, in the LC condition, there were no differences in perceived performance risks, means = 4.39 versus 4.19, $t(42) = .86$, $p = .39$, or financial risks, means = 4.43 versus 4.78, $t(43) = .93$, $p = .36$, across the CE and EE treatments.

Test of Underlying Theoretical Processes: Internalization Versus Identification

As has been mentioned above, the differential effects of EE versus CE have been attributed to the different underlying processes of internalization versus identification (Kamins and Gupta 1994; Kelman 1961). Specifically, celebrity endorsements are effective because respondents experience "identification" with the endorser. In contrast, expert endorsements work by the process of "internalization" of the beliefs portrayed by the endorser.

In Study 3, internalization and identification were measured by using a five-item scale and a three-item scale, respectively, which are modified versions of those used by O'Reilly and Chatman (1986). The items for internalization were: (1) If the endorser were of a different background, I would not be that influenced by him; (2) My personal views and those of [this endorser] are likely to be similar; (3) I prefer a product recommended by [this endorser] because of his background; (4) My attitude toward this Spectrum HD TV is primarily based on the similarities of my values and those of the endorser; (5) What this endorser stands for is important to me. The items for identification were: (1) I would have been proud to tell others if I were personally associated with [this endorser]; (2) If I were personally associated with [this endorser], I would have talked positively about him to my friends; (3) If I owned a Spectrum HD TV and the company's products were being endorsed by [this endorser], I would have been proud to tell others that I owned a Spectrum HD TV.

All the measures were seven-point Likert-type scales anchored by "strongly disagree" and "strongly agree."

Consistent with our theoretical claims, respondents' internalization levels were higher for expert (mean = 3.38) than for celebrity (mean = 2.68) endorsers, $t(208) = 4.77$, $p < .001$. In contrast, respondents had higher identification with celebrity (mean = 3.77) than with expert (mean = 3.42) endorsers, $t(208) = 1.98$, $p < .05$. These results provide empirical support to our claim regarding the attributions of the differential effects of expert versus celebrity endorsers.

Next, analyses for tests of mediation (Baron and Kenny 1986) were conducted to examine the role of internalization in explaining the stronger effects of EE over CE. The analyses were restricted to the high-technology condition since the differential effects between the two endorser types were observed in this condition only. A univariate ANOVA showed a significant main effect of endorser on both performance risk, $F(1, 108) = 10.34$, $p < .01$, and financial risk, $F(1, 108) = 6.45$, $p < .01$. An ANCOVA (analysis of covariance) with "identification" as a covariate still reflected a significant main effect of endorser on both performance risk, $F(1, 107) = 9.07$, $p < .01$, and financial risk, $F(1, 107) = 5.82$, $p < .05$. As predicted by our theoretical model, however, the main effects of endorser were attenuated or became nonsignificant when the ANCOVA was conducted with "internalization" as the covariate. For financial risk, there was complete mediation since the previously obtained significant effects became nonsignificant when "internalization" was used as a covariate in the model, $F(1, 107) = 2.73$, $p > .10$. For performance risk, the mediating effect was partial, $F(1, 107) = 4.36$, $p = .04$.

Discussion

Study 3 replicates some of the findings obtained in Studies 1 and 2, within the additional context of celebrity endorser–prod-

uct congruency, and empirically examines identification versus internalization as possible theoretical mechanisms underlying our claims of EE versus CE. The results of Study 3 show that endorser–product congruency can play a strong role in neutralizing the differential effects of expert versus celebrity endorsers for certain types of risks. For example, the stronger effect of EE (versus CE) obtained in Study 1 was neutralized for perceived financial risks when there was a strong congruency between the CE and the endorsed product. For perceived performance risk, however, the congruency factor was not strong enough to nullify the differential effects of EE versus CE. It can be speculated that for financial risk, the presence of a celebrity endorser acted as a signal of the firm's financial resources. This speculation is also supported by empirical findings of some current research streams that suggest that signals tend to influence respondents' perceived financial risk more strongly than performance risk (Biswas and Biswas 2004).

GENERAL DISCUSSION

Summary and Theoretical Contributions

Since almost all purchase scenarios involve perceived risks, it should be an important focus of marketers to try to reduce the level of such risks. The findings of the present set of studies are an important step in that direction. Combined, the three studies provide interesting findings. Theory suggests that endorsements processed through internalization (expert endorsements) will work better in reducing risks for high technology–oriented products, and the results of the studies are consistent with this premise. First, for high technology–oriented products, an endorsement by a person perceived to be an expert for that product is more effective in reducing perceived risk than an endorsement by a celebrity or by a non-celebrity non-expert. It is interesting to note that this effect is further magnified when the consumer is highly knowledgeable about the product. For low technology–oriented products, however, these differential effects are nonexistent. The source model theories predict the effectiveness of both celebrity and expert endorsements, though by different influence processes. This paper's theoretical contribution lies in the direct comparison of the two types of endorsement processes, along with its empirical examination of the underlying causes, which was lacking in the marketing literature. In addition, as empirically shown with the help of the studies, the differential effects of the two types of endorsements are contingent on the type of product, as well as on the knowledge level of the consumer.

However, the differential effects of expert versus celebrity endorsers are also dependent on perceived congruency between the endorser and the product. For certain types of risks (e.g., financial risk), EE and CE are likely to be equally effective

even for high technology–oriented products if there is a high perceived congruency between the endorser and the product. On the other hand, the perceived congruency might not significantly impact the stronger effects of EE (versus CE) for perceived performance risk in the case of high technology–oriented products.

In summary, while the finding that EE is more effective than CE for high technology–oriented products might not be that surprising, the contribution of the present set of studies lies in identifying the boundary conditions for stronger effects of EE versus CE, and in empirically testing the underlying causes. In fact, contrary to expectations, EE is not always more effective than CE, even for high technology–oriented products. The perceived congruency between the endorser and the product can play an influential role in neutralizing potentially stronger effects of EE in some instances.

Managerial and Public Policy Implications

The results of this study provide support for the managerial attractiveness of expert endorsements, especially for products with a high technology orientation and for targeting consumers with high product knowledge. Moreover, since perceived risks for high technology–oriented products are likely to be especially high, expert endorsements can play a strong role in reducing these risk perceptions. Expert endorsements can also be managerially more attractive because they are likely to cost much less than celebrity endorsements.

Since expert endorsements are more effective than celebrity endorsers for certain product types, it is natural for firms to use this form of endorsement in their ads. In fact, it is not at all surprising that there has been a steady increase in the use of expert endorsements in recent years. In contrast to celebrity endorsements, however, consumers can be easily mislead about the expertise of the endorser, because in almost all such endorsement scenarios, the endorser is presented with a certain educational or vocational background (e.g., doctor, psychologist, fitness expert, etc.), which might be difficult for a consumer to verify. Hence, not surprisingly, the FTC has guidelines to regulate and monitor the use of expert endorsements that can potentially mislead consumers. In addition, the FTC is keen on strictly enforcing its guidelines regarding expert endorsements for certain product categories such as diet and health products.

Finally, as mentioned previously, prior literature has focused more on attitudes toward the endorser. In contrast, we focus on consumers' risk perceptions toward the endorsed product. From a managerial standpoint, perceptions toward the product might carry more relevance than just attitudes toward the endorser. Hence, the focus on risk perceptions is likely to be an important extension of prior findings, especially from managerial or regulatory perspectives.

Limitations and Future Research

Like any experimental study, this paper has the limitation of introducing an artificial scenario in a lab setting, and using a convenient student sample as participants. However, this disadvantage has been addressed by the use of products for which the respondents have a fairly high degree of familiarity. Moreover, the use of student samples in a classroom setting allowed greater control over the experimental conditions. Finally, although a treadmill has a lower technological orientation when compared to personal computers, questions may be raised as to whether it may be viewed as such in isolation.

This paper attempts to examine the differential effects of celebrity and expert endorsements on perceived risks, within the contexts of the product's technology orientation, consumer knowledge, and congruency between the endorser and the product. Future research should examine these issues with other types of products and endorsers. For example, it is possible that some of the results might be different if a lower priced product is used in the studies. The products used in the first two studies were priced at $999, and in Study 3, the prices were set at $629. A lower priced product is likely to induce lower involvement with the product purchase, and hence might have lead to a different pattern of results for the differential effects of celebrity versus expert endorsements.

NOTES

1. The authors thank an anonymous *JA* reviewer for highlighting this issue.

2. Consistent with prior studies, high technology–oriented products are defined as artificial and modern machines that require a high level of engineering for design and production, and *"perform large amounts of operations by themselves"* (Joerges 1988, p. 221; Mick and Fournier 1998).

3. While involvement may be defined by the product class, it could also be situational in nature.

4. While it is possible that the owner of a computer store/brand is likely to be perceived as an expert, such a potential confounding effect is not of much concern since the NCNE condition is a control group, and not the primary focus of the present study.

5. It might be noted that the endorser–product congruency is relevant only for CE, because for EE, by definition there is always a match between the endorser and the product.

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APPENDIX A

Sample Scenario Used in Study 1:

Spectrum Computers

> *"This is the best computer for students.*
> I personally endorse this product."
>
> ## —Jerry Seinfeld
>
> (*famous television personality*)

Technical Details
- ❑ PC 300PL P3-550 6.4GB 64MB 4MB SGRAM 10/100 WIN 95

Product Types
- ❑ Computers/Desktops & Towers/Pentium III

Product Description
- ❑ PC 300PL P3-550 6.4GB 64MB 4MB SGRAM 10/100 WIN 95

Product Weight
- ❑ 38.00 lbs.
- ❑ Price: $999

APPENDIX B

Dependent Measures Used in Study 1

Perceived Performance Risk

1. How confident are you of the advertised computer's ability to perform as expected?
   (1 = not confident at all, 7 = very confident)

2. How sure are you about the advertised computer's ability to perform satisfactorily?
   (1 = not sure at all, 7 = very sure)

3. Considering the possible problems associated with computer's performance, how much risk would you say would be involved with purchasing this new computer from the advertiser?
   (1 = very little risk, 7 = a great deal of risk)

4. How much uncertainty is involved in terms of performance of the advertised computer?
   (1 = very little uncertainty, 7 = a great deal of uncertainty)

Perceived Financial Risk

1. How risky (financially) do you feel it would be to purchase this new computer from the advertiser?
    (1 = not risky at all, 7 = very risky)

2. Given the expense involved with purchasing this computer, how much is the risk involved in purchasing this computer from the advertiser?
    (1 = not much risk, 7 = very high risk)

3. Considering the amount of money associated with purchasing a new computer, how risky is the purchase from this advertiser?
    (1 = not risky at all, 7 = very risky)

4. How much financial risk is involved while purchasing this computer from the advertiser?
    (1 = very little risk, 7 = a great deal of risk)