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Celebrity endorsement using different types of new media and advertising formats

**Purpose** – This study aims to examine the effectiveness (ad attitude, brand attitude and purchase intention) of celebrity endorsement in the form of explicit vs embedded advertising in the context of different new media (digital and social media).

**Design/methodology/approach** – An online experiment was conducted using a 2 (digital media vs social media) x 2 (explicit vs embedded celebrity endorsement) between-subjects design. Participants (n = 137) were exposed to a fictitious piece of online branded content using celebrity endorsement. Four experimental treatments were generated as the authors manipulated the new media and the explicitness of the celebrity endorsement in the ad piece.

**Findings** – The main result highlights that using social media (vs digital media) enhances celebrity endorsement’s indirect influence on purchase intention via the serial mediating role of ad attitude and brand attitude, regardless of the explicitness of the message. In terms of the message format, no differences were observed.

**Research limitations/implications** – The differential power of using celebrities across different new media to promote brands suggests the importance of interactivity in the context of celebrity endorsement. Additionally, the absence of differences in terms of message formats would show that the presence of the celebrity per se has a powerful effect.

**Practical implications** – Firms using new media to deliver their brand communication, including celebrity endorsements, can better understand the different capabilities of social media and digital media.

**Originality/value** – In the context in which empirical research equates new media with social media, this study provides an examination of celebrity endorsement assuming the complexity of the celebrity endorsement in the current scenario: different types of new media and different types of message formats.

**Keywords** Social media, Celebrity endorsement, Explicit commercial intent, Embedded advertising

**Paper type** Research paper
Celebrity endorsement utilizando diferentes tipos de nuevos medios y formatos publicitarios

**Objetivo** – Este estudio tiene como objetivo examinar la efectividad (en términos de actitud a la pieza publicitaria, actitud hacia la marca e intención de compra) del celebrity endorsement en la forma de publicidad explícita versus incrustada en el contexto de diferentes tipos de nuevos medios (medios digitales y redes sociales).

**Diseño/metodología/enfoque** – Se llevó a cabo un experimento en línea utilizando un diseño between-subjects de 2 (medios digitales vs. redes sociales) x 2 (apoyo explícito vs. incrustado de celebridades). Los participantes (n = 137) fueron expuestos a una pieza online ficticia de contenido de marca en línea que utilizaba celebrity endorsement. Se generaron cuatro tratamientos experimentales, en los cuales los autores manipularon el uso de nuevos medios y el nivel de explicitación del celebrity endorsement en la pieza publicitaria.

**Resultados** – Los resultados principales ponen de manifiesto que el uso de las redes sociales (vs. medios digitales) mejora la influencia indirecta del celebrity endorsement en la intención de compra a través del rol de mediación en serie de la actitud hacia la pieza publicitaria y la actitud hacia la marca, independientemente del nivel de explicitación del mensaje. En cuanto al formato del mensaje, no se observaron diferencias.

**Limitaciones/implicaciones de la investigación** – El poder diferencial del uso de celebridades en diferentes tipos de medios nuevos para promocionar marcas sugiere la importancia de la interactividad en el contexto del celebrity endorsement. Además, la ausencia de diferencias a nivel del formato del mensaje muestra que la presencia de la celebridad per se tiene un efecto relevante.

**Implicaciones prácticas** – Según los resultados de los autores, las empresas que utilizan nuevos medios para su comunicación de marca, incluyendo celebrity endorsements, pueden comprender mejor las diferentes capacidades de las redes sociales y los medios digitales.

**Originalidad/valor** – En un contexto donde la investigación empírica equipara los nuevos medios con las redes sociales, este estudio proporciona un examen del celebrity endorsement considerando la complejidad de la técnica en el actual escenario: diferentes tipos de nuevos medios y diferentes tipos de formatos de mensajes.

**Palabras clave** Redes sociales, Celebrity endorsement, Intento comercial explícito, Publicidad incrustada
1. INTRODUCTION

The use of celebrities in advertising represents one of the most common marketing tactics employed in about 25 to 30 percent of the marketing campaigns across the world (Agrawal and Kamakura 1995, Knoll and Matthes 2017, Schimmelpfennig 2018). The underlying assumption behind this massive use of celebrities in advertising is related to marketers’ conviction that celebrities would attract consumer attention, transfer positive attributes to the promoted brand, and influence consumers’ purchase intention (Chung and Cho 2017). This assumption about the effectiveness of celebrity endorsement remains strongly valid in the current offline and online advertising contexts (Knoll and Matthes 2017, Rundin and Colliander 2021), as celebrity endorsers are influential in both old and new media (Kusumasondjaja and Tjiptono 2019).

In the last fifty years, many studies have examined the nature and effects of celebrity endorsement on consumers in terms of either the psychological processes or the effect on audience’s brand awareness, brand attitude, and purchase intention (Atkin and Block 1983, Miller and Laczniak 2011, Chung and Cho 2014, Schimmelpfennig 2018, Knoll and Matthes 2017, Chung and Cho 2017, Bergkvist and Zhou 2016, Djafarova and Rushworth 2017, McCormick 2016, Brison et al. 2016, Nguyen et al. 2011). Moreover, studies have also examined the elements that may mediate or moderate those effects on consumers’ brand responses, including intervening variables such as the characteristics of the celebrity (e.g., credibility, attractiveness, liking), situational elements (e.g., fit between the celebrity and the sponsored brand), and attributes of the audience (e.g., age, sex, level of involvement) (see Bergkvist et al. 2016, Knoll and Matthes 2017). Overall, this long research tradition provides strong evidence on the effectiveness of celebrity endorsement in improving consumer brand responses, with positive effects in consumer responses that include ad attitude, brand attitude, and purchase intention.

Despite this vast amount of research on celebrity endorsement, the interest in understanding its critical factors and effectiveness remains relatively intact, partially explained by a significant change in the media environment. This shift results from the development of new media and the emergence and consolidation of non-traditional advertising formats in which celebrity endorsement may be carried out (Jin 2018). On the one hand, brands currently use celebrities in both diverse online environments and across different forms of advertising (Hackley et al. 2018, Rocha et al. 2020) and platforms (Kim and Kim 2021). On the other, celebrities can nowadays promote
themselves and enhance their fame via their own channels, independently of traditional media (Carrillat and Ilicic 2019), enhancing their effects on the brands they endorse. Moreover, calls have been made to stress the need for more research studying how effective celebrity endorsement should evolve on these new digital platforms (Taylor and Carlson 2021).

In this regard, several studies have focused on exploring the mechanism of the relationship between fans and celebrities in social media -emphasizing the role of parasocial interaction- and its effects on brand responses (Aw and Labrecque 2020, Gong 2021, Gupta and Nair 2021). Also, other studies have examined the nature and effects of new forms of celebrity endorsement on social media, labeled as influencers (Monge-Benito et al. 2020, Cocker et al. 2021, Rundin and Colliander 2021). While these research streams had advanced the literature on celebrity endorsement in digital media, it is interesting that both lines of research have equated the “new media” term with the “social media” concept. This oversimplification surprises, given the fact that the notion of new media encompasses a broader group of media platforms that employ digital technologies, including at least two main types: digital media (e.g., search engines, online newspapers, digital replicas) and social media (e.g., Instagram, YouTube, TripAdvisor) (Dewdney and Ride 2014, Valentini and Kruckeberg 2012). According to Valentini and Kruckeberg (2012), digital and social media share, to some extent, common characteristics in terms of content production, entertainment functions, and the possibility of viral effects. Nevertheless, both kinds of new media hold particular affordances (i.e., actionable properties), thus shaping users’ experience with the media and, consequently, their interaction within the medium (Sundar and Limperos 2013). As they represent significantly different media contexts, we aim to study the potential differences stemming from celebrity endorsement actions on these two different types of new media (see Buzeta 2021).

Concerning the use of non-traditional message formats in this context, a substantial number of pieces of research have focused on the effects on consumer responses to embedded (vs. explicit) commercial messages by celebrities in different media (such as TV movies, social media) as well as on the consequences of the disclosures of these actions enforced in most countries by their national authorities in the last decade (Boerman 2020, Kishiya 2018, Dekker and van Reijmersdal 2013). In addition, some isolated research efforts have been made to comparatively examine the effectiveness of celebrity endorsement across diverse advertising formats, including traditional ads or product placements (Russell and Rasolofoarison 2017). This lack of comparative studies is
surprising, considering the rise of new media advertisements on websites or social media that are complemented by non-traditional forms of advertising such as advertorials/PR actions, brand placements (on video, print, or videogames), brand- and user-generated content, and so on, which represent a ‘more natural’ (and embedded) way to present brands (Tutaj and van Reijmersdal 2012, Dahlén and Edenius 2007). As a result, advertisers that plan a celebrity-based campaign to promote their brands on the web have to choose among a diverse range of executions from traditional forms of promotion (e.g., conventional advertisements, public relations actions) displayed on online media websites (such as msn.com or nytimes.com) to brand-related content or ads placed on Instagram or Facebook (Rosenkrans 2009, Burns and Lutz 2006). Therefore, we also aim to study how different message formats alter celebrity endorsement’s effectiveness in the context of different new media.

Consequently, this paper seeks to fill these gaps in the research by examining the effect of online celebrity endorsement across different new media and ad formats on consumers’ brand responses. In particular, this piece of research evaluates the differences between (a) using celebrities on a social media platform (i.e., Instagram) compared to using them on a digital media (i.e., digital edition of a print media on the web); and (b) using explicit (i.e., traditional advertising) and embedded formats of celebrity endorsement (i.e., celebrity post, PR action), in which the latter encompasses one of the main characteristics of contemporary campaigns (van Reijmersdal and Rozendaal 2020, Naderer et al. 2021, Kim et al. 2019). Thus, this paper contributes to the literature by providing evidence on the effect of different new media as a context in which celebrity endorsements are developed. Our findings show the differential effect of using social media over digital media to deliver celebrity endorsements on the attitudes toward the ad. More importantly, we also show that using social media (vs. digital media) enhances celebrity endorsement’s indirect influence on purchase intention via the serial mediating role of ad and brand attitude. This work helps bridge the knowledge gap on how the evolution of new media can affect advertising effectiveness in the celebrity endorsement context.

2. LITERATURE REVIEW

a) Persuasion via celebrity endorsement on the Internet
There is a long tradition of research providing evidence about the effectiveness of celebrity endorsement in improving consumer brand responses (Bergkvist et al. 2016). With a few exceptions (e.g., Costanzo and Goodnight 2005), prior studies have confirmed that celebrity endorsement has a positive effect on consumers responses such as ad attitude, brand attitude, and purchase intention across different formats of advertising (Knoll and Matthes 2017, Rundin and Colliander 2021, Kusumasondjaja and Tjiptono 2019, Till et al. 2008, Pornpitakpan 2004, Till and Busler 2000, Erdogan 1999, Erdogan et al. 2001, Kamins and Gupta 1994, Kamins 1990, Lynch and Schuler 1994, Misra and Beatty 1990).

These consumer responses have been the most widely used dependent variables in marketing communication research in general (Bergkvist and Langner 2017), and celebrity endorsement research in particular (Choi and Rifon 2012, Lee et al. 2014, Paul and Bhakar 2017, Russell and Rasolofoarison 2017). They are based on the research developed by MacKenzie et al. (1986) that tested different alternative models about how the attitude towards the ad mediates two consumer responses: attitude towards the brand and purchase intention. They observed that the Dual Mediation Hypothesis (DMH) was the model that best explained ad effectiveness. DMH proposes an indirect flow of causation from ad attitude to purchase intention in that ad attitude positively influences brand attitude, which, in turn, has a positive effect on purchase intention. This hypothesis is still considered one of the most widely accepted models of communication effects to date after it has been reevaluated in the context of online media, such as websites, mobile apps, and interactive advertising (Karson and Fisher 2005, Yoon et al. 1995, Ahmed et al. 2016).

The effectiveness of the celebrity endorsements has been explained based on the source credibility model (Erdogan 1999, Amos et al. 2008). Source credibility is defined as a communicator's positive characteristics that affect the receiver’s acceptance of a message (Ohanian 1990). In the celebrity endorsement context, source credibility is usually conceptualized as composed of three constituents: expertise, trustworthiness, and attractiveness (Russell and Rasolofoarison 2017, Ohanian 1990, Amos et al. 2008). According to this model, the celebrity endorser’s credibility is critical to effective communication and any positive impact on consumers’ attitudes toward the endorsed products/brands (Tran et al. 2019). Thus, the effectiveness of celebrity endorsements relies on using sources with higher degrees of credibility. Indeed, prior
research posit that high credibility sources are more effective than low credibility sources (see Eisend and Küster 2011).

Studies examining the specific case of persuasion via celebrity endorsement on new media have mainly focused on social media (rather than on digital media), confirming that the use of celebrities is effective in improving consumer responses toward the advertised brand (Yang 2018). One of the few exceptions exploring the case of digital media is the piece of work reported by Lee et al. (2017). These scholars examined advertising actions using celebrity endorsers in ad banners, observing that participants exposed to banners using celebrities responded with a more positive ad attitude than those exposed to banners without celebrities. Nevertheless, they did not detect a direct effect of using celebrity endorsers on brand attitude and purchase intention. Similarly, studies using social media also corroborated the significant effect of celebrity endorsement on improving consumer responses. For example, Ahmad et al. (2019) examined the impact of celebrity endorsements on social media advertisements and brand image on the brand responses of young consumers. Their results showed a significant positive influence of celebrity promotional actions on brand image, which was also an antecedent for the purchase intentions. These results are consistent with findings related to several social media platforms, including celebrity endorsement on Facebook and Instagram, in which a significant mediation effect of ad attitude on brand attitude has also been reported (e.g., Herjanto et al. 2020, Loureiro and Sarmento 2019, Chung and Cho 2017, Um 2016).

b) Persuasion via endorsement across different new media

The study of the interaction between media channels and endorsement has provided evidence of the changes in persuasion effects when using the same source across different media. Original studies in this field were carried out in the context of offline media, demonstrating that TV (a richer media) is more effective than the radio or print media. For instance, Andreoli and Worchel (1978) reported that when using high-trustworthiness sources of endorsement (such as celebrities or experts), messages via television were more effective than messages via the radio or the print medium (Chaiken and Eagly 1976, Worchel et al. 1975, Chao et al. 2012).

Concerning the specific case of research incorporating new media, no studies have compared the effect of endorsement on different types of them. Instead, available evidence comes
from research focusing on either comparing the use of interactive vs. traditional media (in general advertising) or examining how audiences process celebrity endorsement only in the case of social media. Regarding the first group of studies, they have tended to show the superiority of new media over traditional ones (see, for example, Kimelfeld and Watt 2001, Lister et al. 2009, Ha 2008). These results have been explained as highly-interactive and rich media environments should increase the level of customer engagement and then improve brand responses (Tankosic et al. 2016, Lilleker et al. 2011). In other words, there is a positive relationship between the degree of interactivity and media richness of new media and consumer experience, which positively impact the attitudes toward the ad and the brand, as well as purchase intention of the promoted product (Kiss and Esch 2006, Fortin and Dholakia 2005). Studies on social media have demonstrated that consumers’ interactions with celebrities significantly improve consumer responses. This positive effect is mainly explained by the parasocial relationship experience resulting in the fans’ perceived interaction with the celebrities in the context of social media (see Chung and Cho 2017, Aw and Labrecque 2020, Su et al. 2021).

Despite the absence of direct evidence comparing endorsement across different new media, the two lines mentioned above of research allow one to postulate social media’s superiority over digital media platforms in terms of consumer responses. This increased performance proposition is based on the idea that endorsement on social media depicts higher levels of interactivity and media richness than digital media. Celebrity endorsements in social media are expected to also develop a more personalized experience via parasocial relationships developed with the celebrity, improving the consumer responses in terms of ad attitude, brand attitude, and purchase intention (Hollebeek et al. 2014). Thus, based on the DMH, the first set of hypotheses are posited:

\[H1: \text{Celebrity endorsement on social media (vs. digital media) leads to a more favorable ad attitude than endorsement on digital media.}\]

\[H2: \text{Celebrity endorsement on social media (vs. digital media) indirectly leads to a more favorable brand attitude than endorsement on digital media through ad attitude.}\]

\[H3: \text{Celebrity endorsement on social media (vs. digital media) indirectly leads to a higher purchase intention than endorsement on digital media, through ad attitude and brand attitude.}\]
c) **Explicit and subtle celebrity endorsement**

Advertising messages may be executed in different ad formats, including advertising with an explicit persuasive intent (traditional advertising) and others with an embedded or subtle commercial message (non-traditional advertising). The latter forms of advertising depict persuasive content in a hidden way, using more ‘real-life’ (meaning less-forced) formats that include advergames, product placements, advertorial, and paid-celebrity posts on social media. It has been reported that these ‘more natural’ executions tend to increase the message's effectiveness on consumers (Davtyan and Cunningham 2017, Uribe 2016). In the particular case of celebrity endorsement, Russell and Rasolofoarison (2017) evidence a superior effect of these embedded actions on consumer responses, which include ad attitude, brand attitude, and purchase intention; as well as other celebrity measures, including overall credibility (trustworthiness, attractiveness, and expertise) and attitude toward the celebrity.

The literature has pointed out that the increased persuasiveness of these embedded advertising executions is mainly due to the difficulty of audiences to develop critical processing strategies to cope with the persuasive intent of ads when the commercial attempt of the message is not explicit (Buijzen et al. 2010, Panic et al. 2013). As a result, embedded forms of endorsement, in general, should produce greater involvement between the audience and the celebrity, improving consumer brand responses (van Reijmersdal et al. 2005). Then, it is expected that embedded celebrity endorsement increases the brand responses of consumers, which is expressed in the following hypothesis:

**H4:** Embedded formats (non-traditional ads) of celebrity endorsement lead to a more favorable ad attitude than explicit forms (traditional ads) of celebrity endorsement.

**H5:** Embedded formats (non-traditional ads) of celebrity endorsement indirectly lead to a more favorable brand attitude than explicit forms of celebrity endorsement through ad attitude.

**H6:** Embedded formats (non-traditional ads) endorsement indirectly lead to a higher purchase intention than explicit forms (traditional ads) of celebrity endorsement, through ad attitude and brand attitude.

[INSERT FIGURE 1 ABOUT HERE]
3. METHODS

a) Experiment design and sample

We conducted a 2 (digital media vs. social media) x 2 (explicit vs. embedded celebrity endorsement) between-subjects online experiment. After a pre-test, four experimental treatments were generated. We manipulated the channel, with ‘digital media’ vs. ‘social media’ as conditions, and the explicitness of the celebrity endorsement ad piece, with ‘explicit’ message and ‘embedded’ message as conditions.

b) Pre-test

To select the celebrity (e.g., athletes, actors/actresses, entertainers, supermodels; see Belch and Belch 2013) for the main study, we started pre-selecting the three local celebrities with more social media followers on Instagram. They all were football players: Alexis Sánchez¹, Claudio Bravo², and Arturo Vidal³ (4.8, 4.6, and 2.6 million followers, respectively, during the first semester of 2019). Then, their attractiveness, trustworthiness, and expertise were examined to evaluate their source credibility using Ohanian’s scale (1990) with a sample of 20 people with the same socio-demographic characteristics as the final sample. Also, participants were inquired about the expertise of these celebrities related to two product categories (i.e., sports equipment and telecom) to determine the most suitable category for the study. In addition, respondents were asked about the brands they associate with these celebrities to avoid prior associations that biased the result of the study. Based on the results of this pre-test, Claudio Bravo was finally selected as the celebrity for the main study, as he obtained the highest score in all the scales of source credibility. Also, he was the only evaluated celebrity not associated with any sports equipment brand (in the telecom category, all the celebrities were matched with a brand). Four experimental stimuli were developed, having Claudio Bravo as the focal celebrity. The posts were designed to mimic an actual newspaper “digital replica” and real Instagram posts.

Finally, the main study’s questionnaire and stimuli were pilot-tested in 15 respondents from a group with the same socio-demographic characteristics as the final sample to guarantee an

¹ https://en.wikipedia.org/wiki/Alexis_S%C3%A1nchez
² https://en.wikipedia.org/wiki/Claudio_Bravo
³ https://en.wikipedia.org/wiki/Arturo_Vidal
accurate understanding of the questions, to correct any confusion regarding the wording or other formal aspect of the study, and to detect difficulties that participants may encounter with instrument items or stimuli (Presser et al. 2004).

c) Main study sample and procedure

The main study used a sample of graduate business students from a large public Chilean university via e-mail invitations containing a link to the online questionnaire. After removing participants whose response duration and patterns suggested a focus on filling out the survey rather than answering questions thoughtfully (i.e., respondents answering too consistently to items measuring theoretically different constructs and/or in a very short time), participants \( n = 137 \) ranged in age from 18 to 31 years old \( (M_{\text{age}} = 23.37, \text{SD} = 2.16) \) and 46.7% were females. Table 1 shows the respondent allocation to each experimental condition. The study was conducted in this age group because they are considered the heaviest users of online platforms, including social media (Statista 2017).

![Insert Table 1 About Here]

The self-administered questionnaire containing the stimuli was applied online using the Qualtrics® platform. Participants were randomly assigned to one of the four experimental conditions. The survey started with a welcome screen, with directions on how to fill out the questionnaire and informed consent. Next, participants were exposed to a single stimulus, depending on the allocated experimental condition (see Figure 2). A timer allowed respondents to continue only after exposure to the stimulus for at least 5 seconds. Following, they were asked about personal preferences and socio-demographic information to avoid priming effects in measuring dependent variables. Finally, they were required to answer the items of the research scales. Each participant’s gender, age, and main occupation were also collected at the end of the survey.

d) Variables and materials

The first independent variable channel was operationalized as a dichotomic measure with two levels: digital media (a digital replica or ‘magazine digital edition’) and social media (an Instagram account). These two channels allow visual stimulus, including still images and text. In other words,
comparable stimuli can be created using them as the context for the ad pieces. Instagram was selected to serve as the social media context as it is one of the most popular social media platforms among young adults between 18 and 24, while 90% of their users are under 35 years old (Pew Research Center 2018). Also, over 70% of companies use Instagram in the US, and more than 1 million brands employ this social media platform around the globe (Lister 2017).

The second independent variable was the message format. We used the explicitness of the celebrity endorsement ad piece as the central feature represented in a dichotomic measure (explicit vs. embedded). Consequently, for the digital media, we operationalized the ‘explicit celebrity endorsement’ level as using a traditional piece of advertising with a celebrity endorsement. For the social media condition, the ‘explicit celebrity endorsement’ level was operationalized using an Instagram ad including the celebrity posted in the brand’s social media account. This post included an advertising cue. Both conditions used the same main picture depicting the celebrity. On the other hand, the ‘embedded celebrity endorsement’ level was operationalized employing ad formats in which the persuasive intent was not explicit. In this case, brand-sponsored content was incorporated as either a news article featuring the celebrity (digital media) or a celebrity post on his own Instagram account (social media). A similar appeal, call to action, and main pictures were used to ensure comparability in all the conditions (we can provide these stimuli upon request).

The dependent variables were (1) ad attitude, (2) brand attitude, and (3) purchase intention. While ad attitude and brand attitude represent affective responses to advertising, purchase intention relates to a behavioral response as an expected indirect effect of marketing communication actions (Rauwers et al. 2018). As mentioned in the literature review, ad attitude, brand attitude, and purchase intention are the most frequently studied constructs in advertising research (Eisend and Küster 2011, Bergkvist and Langner 2017). To measure ad attitude, we used five items from the scale proposed by Madden et al. (1988). Brand attitude and purchase intention were measured using five items each from the scales proposed by Spears and Singh (2004). These three sets of indicators comprise semantic differential scales and are measured using 7-point.

e) Data analysis

We used partial least squares structural equation modeling (PLS-SEM) techniques to test the proposed serial mediation model using SmartPLS 3.3.5 software (Ringle et al. 2015). PLS-SEM is
a composite-based SEM method that simultaneously allows the assessment of the reliability and validity of the theoretical constructs’ measures (measurement model) and the estimation of the relationships between these constructs (structural model) (Castro and Roldán 2013). PLS-SEM has been argued to be a superior approach when estimating mediation models (Nitzl et al. 2016, Sarstedt et al. 2020). Also, considering the nature of the two independent variables, it affords using dichotomic variables as construct indicators as long they only play the role of exogenous variables (Henseler et al. 2016). Importantly, when dichotomic variables are used as nonmetric independent variables in this kind of model, their significant paths represent significant differences between the variable’s levels on their effects (Hair et al. 2019). Furthermore, PLS-SEM does not rely on distributional assumptions on the indicator variables. At the same time, it also does not have identification issues and generally achieves high levels of statistical power in the presence of small samples sizes (Hair et al. 2017). We used 5,000 subsamples for a bias-corrected and accelerated bootstrap procedure, path weighting, a maximum of 1000 iterations, and a stop criterion of $10^{-7}$ in the PLS-SEM algorithm settings.

Overall, our study’s data analysis for hypothesis testing occurred via the following key stages. First, we run preliminary checks, assessing differences across the treatment groups. We also checked our indicators for the possibility of common method bias. Besides, we studied the potential interaction between the two independent variables. Next, we checked the measurement model of the proposed serial mediation model to ensure that all construct indicators were reliable and valid. Following, we assessed the PLS-SEM structural model, ruling out collinearity issues among the latent constructs and ensuring sufficient explanatory and predictive power levels. Finally, we performed the mediation analysis.

4. RESULTS

a) Preliminary checks

In the first phase of our data analysis process, we ran a preliminary check that evaluated possible differences across the treatment groups. ANOVA and $\chi^2$ analyses showed no significant differences across the treatments in terms of age [$F(3, 133) = 6.899, p = 0.219$] and gender ($\chi^2(3) = 4.195, p = 0.241$). Next, we assessed our indicators for common method bias (Podsakoff et al. 2003). A PLS-based full collinearity test shows variance inflation factors (VIFs) ranging from 1.285 to 2.234,
below the reference value of 3.3 (Kock 2017). We thus conclude that common method variance does not represent a problem in this study.

Next, before conducting the serial mediation analysis, we performed a two-way analysis of variance to explore the potential interaction effects of the channel (digital media = 0, social media = 1) and message format (embedded = 0; explicit = 1) on ad attitude, brand attitude, and purchase intentions. We computed their mean values based on their measured indicators to generate an estimate for each construct. We found that the interaction effect between the channel and message format was not statistically significant neither on ad attitude \[ F(1, 133) = .319, p = .573 \], brand attitude \[ F(1, 133) = .011, p = .915 \] nor purchase intention \[ F(1, 133) = .287, p = .593 \]. Thus, we tested the proposed serial mediation model by specifying channel and message format as dichotomic independent variables without including any interaction terms between these two predictors.

b) Measurement model

We first assessed the measurement model by examining the indicators’ outer loadings (λ) and constructs’ internal reliability, composite reliability (CR), and average variance extracted (AVE). Table 2 shows that all items’ λ were above the minimum recommended value of 0.70, except for one item linked to ad attitude (i.e., artless/artful with a value of 0.659). Still, we decided to retain this indicator based on its contribution to its construct’s content validity. Besides, all the constructs exhibited excellent psychometric properties, with their corresponding internal reliability (Cronbach’s alpha), composite reliability (CR), and average variance extracted (AVE) estimates exceeding the minimum recommended thresholds (Hair et al. 2017).

[INSERT TABLE 2 ABOUT HERE]

To assess the constructs’ discriminant validity, we employed the heterotrait–monotrait (HTMT) approach, which represents an estimate of the true correlation between two constructs if they were perfectly measured (Hair et al. 2017). As Table 3 shows, all ratios of item correlations across all construct pairs were below the conventional .85 benchmark. Furthermore, none of the bootstrapped confidence intervals include the value 1, thus showing sufficient discriminant validity among the constructs (Hair et al. 2017).
c) Structural model

The first group of hypotheses compares digital and social media in terms of consumer responses (based on the DMH). Results in Table 4 show a significant influence of the type of new media used for celebrity endorsement on ad attitude ($\beta=.193, p=.021, CI [.026, .351]$). It means that the use of social media depicted a significantly stronger effect than digital media on ad attitude, which supports the H1 of this study. We also found support for our second hypothesis that predicted the superiority of using celebrity endorsement in social media (vs. digital media) in brand attitude mediated by ad attitude ($\beta=.115, p=.029, CI [.017, .220]$). Finally, H3 proposed that social media performed better than digital media in the serial mediation between ad attitude and purchase intention. Results supported this hypothesis, showing the serial influence on purchase intention via the dual mediation of ad attitude and brand attitude ($\beta=.083, p=.039, CI [.012, .167]$).

Further analyses showed, again, differences between both new media types, as the direct effect of using digital media (vs. social media) on brand attitude was stronger ($\beta=-.185, p=.007, CI [-.319, -.051]$), despite the mediating role of ad attitude. The same situation was observed related to the effects of using digital media (vs. social media) on purchase intention. While the direct effect of digital media (vs. social media) on purchase intention was negligible ($\beta=-.018, p=.758, CI [-.128, .102]$), its indirect effect on purchase intention via brand attitude ($\beta=-.133, p=.006, CI [-.228, -.041]$) was superior. In other words, digital media performed better acting directly over brand attitude, which, in turn, significantly affected purchase intention, regardless of the perception of the ad piece.

The second set of hypotheses explored the existence of potential differences between message formats. In this line, H4 postulated that embedded formats of celebrity endorsement produced a more favorable ad attitude than their explicit forms. Results did not provide evidence to confirm this hypothesis, as we did not detect any differences ($\beta=.018, p=.843, CI [-.156, .192]$). Similarly, H5 predicting a stronger effect of the embedded format of celebrity endorsement on brand attitude via ad attitude was also rejected ($\beta=.010, p=.844, CI [.092, -.120]$). Lastly, H6 predicting a stronger effect of embedded forms of celebrity endorsement on purchase intention did not find support: both formats showed similar effects ($\beta=.007, p=.845, CI [-.069, .085]$).
Supplementary analyses confirmed the absence of differences between both formats of celebrity endorsement, considering their insignificant direct effect on brand attitude ($\beta$=-.055, $p$=.430, CI [-.193, .078]) and purchase intention ($\beta$=.012, $p$=.851, CI [-.123, .124]). Similarly, differences between explicit and embedded forms of advertising were also absent in the case of their indirect effects on purchase intention via brand attitude ($\beta$=-.039, $p$=.436, CI [-.141, .055]).

Finally, Table 4 also shows that, as proposed by the DMH, there is a significant positive relation between ad attitude and brand attitude ($\beta$=.596, $p$=.000, CI [.424, .733]), and between brand attitude and purchase intention ($\beta$=.718, $p$=.000, CI [.567, .823]). In addition, we found a significant positive indirect effect of ad attitude on purchase intention via brand attitude($\beta$=.428, $p$=.000, CI [.288, .563]), thus confirming their serial relationship.

5. DISCUSSION

a) Theoretical implications

When designing web campaigns, advertisers and marketing practitioners usually face complex decisions when selecting among various channels and message formats to develop ads that include celebrities. These marketing actions range from traditional ads to brand-related content endorsed by consumers’ favorite celebrities. Moreover, advertisers also have to decide between delivering explicit commercial messages or embedded presentations of them. For that reason, this study comparatively examined the use of celebrity endorsement in the formats of explicit and embedded advertising in the context of two new media platforms, namely digital and social media.

The most important result of this study is the differential effect between the new media types on consumer responses. Our results indicate the superiority of social media (vs. digital media) in the context of celebrity endorsement, as it produces a direct positive effect on ad attitude. Also, the use of social media has indirect positive effects on brand attitude (via ad attitude) and purchase intention (via the serial mediating role of ad and brand attitude), as the DMH purposes. These findings may be explained in terms of two complementary branches of research that include the contextual effects of richer media and social media users’ parasocial interaction. The media literature has repeatedly asserted that those channels characterized by a richer media environment
tend to increase the effectiveness of advertising actions (Boateng and Okoe 2015). The use of advertising media in which consumers may interact can improve the consumer experience and involvement, providing better ad effectiveness in terms of recall, attitude, and subsequent behaviors (Shareef et al. 2019, Alalwan et al. 2017, Pavlou and Stewart 2000).

In addition, the endorsement literature has highlighted the critical role of consumers’ parasocial interaction as a mechanism behind the persuasion of celebrities across different media spaces and practices. The effects of this celebrity-fan parasocial relationship can be augmented on social media as amplifiers of the consumers’ illusion of close relationships and intimacy with celebrities which allows consumers to perceive celebrities as being real friends (Chung and Cho 2017). In social media, consumers may learn a lot about their favorite celebrities and get familiar with them through social media postings, creating a sense of knowing celebrities deeply (Aw and Labrecque 2020). Consequently, the combined use of an enriched media environment in which perceptions of intimacy and close relationships with celebrities can arise seems to enhance the evaluation of these executions that include endorsers, which in turn positively influence their persuasive effect (Chung and Cho 2017, Yuan et al. 2016, Kim and Song 2016, Kim et al. 2015).

In addition, our findings show that celebrity endorsement on digital media performs better than social media in terms of a direct effect on brand attitude and purchase intention via brand attitude (without passing through ad attitude). This result seems surprising at first sight, as it provides some degree of nuance to the superiority of social media as described in the previous paragraph. Nevertheless, in the specific context of digital media, this finding shows that celebrity endorsements can directly influence brand attitude, which indirectly affects purchase intention, without depending on the actual evaluation of how the advertisement piece was executed. These results align with other authors that have also proposed this kind of effect (Liu et al. 2007, Pradhan et al. 2014, Singh and Banerjee 2018, Vien et al. 2017).

Concerning the message formats, this study does not observe the hypothesized superiority of subtle (e.g., embedded) over explicit forms of celebrity-endorsed messages as prior literature had proposed (Evans et al. 2017, Knoll and Matthes 2017). Instead, our results show that celebrity endorsements using subtle persuasive messages demonstrated to be as effective as explicit ones in enhancing consumer behavioral responses. This result contradicts prior research that indicates a better performance of subtle (vs. explicit) forms of advertising. Past studies had posited that ads
characterized by subtle commercial intents increase the cognitive and affective behavioral effects of commercial messages, thus decreasing the probability of consumers’ activation of self-defense mechanisms compared to explicit forms of advertising (Panic et al. 2013, Buijzen et al. 2010). Differently, our results provide nuance to those findings. At least in the context of new media, and considering the significant level of involvement and enjoyment among audiences produced by the presence of celebrities as popular and credible as the ones we used in this study, the effects of message explicitness on consumers would not be significant. In addition, it is essential to notice that celebrity endorsement across its different formats is one of the earliest-understood tactics by children, which could also limit the effect of embedded messages (Bergkvist and Zhou 2016, Rozendaal et al. 2011).

All in all, our findings show the relevance and the differential power of using celebrity endorsement in different new media, which tend to produce effective results regardless of the message explicitness. In the case of social media, results are in line with the assumption that the richest and most interactive media allow consumers (particularly among young people) to be more active in their usage of the medium (Ha and McCann 2008, Bergemann and Bonatti 2011, Rodgers and Thorson 2000). In that context, online users could involve themselves in experiences correlated to personal and social-interactive engagement behaviors, as specific activities in particular media contexts result in increased advertising effectiveness (Calder et al. 2009, Chung and Cho 2017, McCormick 2016). In the case of digital media, it is shown that celebrity endorsement in these less interactive types of new media can also positively impact brand responses. However, using digital media (vs. social media) acts directly over brand attitudes and, subsequently, on purchase intention. This indirect effect shows that regardless of the evaluation of a certain ad piece, the tactic of using powerful and credible celebrity endorsements has a *per se* value in terms of consumer responses (Dwivedi et al., 2014).

b) Managerial implications

Based on our results, firms using new media to deliver their brand communication, including celebrity endorsements, can better understand the different capabilities of social media and digital media. Our findings suggest that advertisements including a celebrity endorsement distributed via social media can improve their attitudinal evaluation than those distributed via
digital media. In this regard, celebrity endorsement ads on social media can crucially determine any potential for positive brand building and, consequently, conversion.

On the other hand, this dependence on the effects derived from ad pieces that include celebrity endorsements is less relevant in the case of brands reaching their customers by using digital media. In this scenario, firms will benefit from positive direct effects on brand attitude derived from using digital media (vs. social media) while also indirectly increasing purchase intention. Therefore, the use of digital media represents a better channel for brand-building. Here, firms depend less on the attitudes that a particular advertisement generates to develop a better brand positioning. This function of digital media is similar to the role that more traditional media (e.g., television, radio, newspapers) currently have in contexts of hybrid offline/online brand communication.

c) Limitations and Further Research Directions

The limitations of this research are related to the particular formats and platforms used in this study. As mentioned by some authors, social media represent a group of platforms with diverse nature, particularly regarding what they allow users to do (Zhu and Chen 2015). Thus, Instagram (a platform in which users share their interest, creativity, and their hobbies) may have different commercial performance as another like Facebook (more centered in communication and developing relationships), and consequently, they might be associated with dissimilar uses and gratifications (Alhabash and Ma 2017, Buzeta et al. 2020).

Also, other mediating or moderating variables, like persuasion knowledge, parasocial relationship, or social media use intensity, were not included in the structural model. Their inclusion may help to provide potential explanations to the effects of formats and media. Therefore, the potential explanations are tentative in the absence of additional constructs that could be involved in the effects reported in this study. Further studies should extend our model by including some of these variables as additional mediating variables to refine the documented mechanism and expand the generalizability of these results.

In addition, it is important to notice that this study uses athletes (i.e., football players) as the endorsers included in the stimuli. While the particular athletes included in this study are global
celebrities, they can be incidentally perceived as highly local by the studied target group. Indeed, when global celebrities are perceived as highly local, they can also be more familiar to the target groups. So, we believe that any potential bias in this particular study does not come from using local vs. global athletes. Instead, it relates to the level of perceived familiarity with the endorser. We understand familiarity as knowledge of the source (in this case, the celebrity) through exposure (Erdogan 1999). The level of familiarity with the endorser usually is signaled as a variable included in the celebrity attractiveness dimension in the source credibility model (Amos et al. 2008). Attractive celebrities are familiar to the target audience and likable (Miciak and Shanklin 1994, Bergkvist and Zhou 2016). Often, brands select celebrities that are also familiar to their intended target audience, assuming they are recognizable (Ohanian 1990, Miciak and Shanklin 1994, Belch and Belch 2013). Therefore, familiarity represents a necessary condition for selecting a celebrity as an endorser, as it is presumed that the more familiar they are, the more persuasive they will be (Miciak and Shanklin 1994, Bush et al. 2004). Nevertheless, prior research (e.g., Roy and Bagdare 2015, Mishra and Mishra 2014) suggests that more global vs. more local celebrities can affect marketing communications effectiveness. In this regard, future research replicating our study may consider using more global and more local endorsers in their stimuli to control these effects.

It is also interesting to comment that the effectiveness of celebrities as endorsers is explained not only due to their intrinsic attributes. Prior research (e.g., Belch and Belch 2013, Miciak and Shanklin 1994) suggests that celebrity endorsers are more effective when the fit between them and the product they are endorsing is high. Therefore, we designed our stimuli to present a clear fit between the celebrity endorser (i.e., football player) and the endorsed product (i.e., sports equipment). Arguably, we can obtain lower effects when this fit is less powerful. We thus hypothesize that in situations where the match between the celebrity and the product is weak, different results could be expected compared to the situation in which the celebrity-product fit is strong.

Finally, this study used a sample with a limited age range (undergraduate and postgraduate university students). Although they represent a group of native digital users, the influence of the Internet in general and Instagram, in particular, is more pervasive in our society. Thus, results mainly reflect the perception and habits of young adults and no other segments of the adult population, in which the effects of social media and new formats may significantly vary.
References


