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Storytelling in initial coin offerings: Attracting investment or gaining referrals?

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ABSTRACT

Given the scarce insights around the effectiveness of different brand communication strategies in Initial Coin Offerings (ICOs), this work, through four experimental studies, investigates the role of storytelling in affecting consumer responses to ICOs. Drawing on Elaboration Likelihood Model, study 1 uncovers the differential effect of two storytelling modes (i.e. factual vs emotional) on consumers' amount of investment and online brand advocacy in ICOs. Study 2 examines the moderating effect of endorser expertise (i.e. high vs low) on consumer responses to ICOs. Study 3 investigates the framing of the storytelling message (i.e. loss- vs gain-framed) whereas study 4 explores whether the cryptocurrency purpose (i.e. altruistic vs profit-oriented) affects consumer responses to ICOs. Our findings uncover the differential benefits (e.g. financial vs reputational) that storytelling modes bestow to consumers and provide directions on how issuers should strategize their brand communication during ICOs.

1. Introduction

The rise of blockchain-based products, such as cryptos, during the past decade has disrupted several industries and resulted in the emergence of a \$1.6 trillion global market that attracted massive interest among consumers and entrepreneurs (Coinmarketcap.com, 2022). As part of this new landscape, new forms of crowdfunding emerged (e.g. Initial Coin Offerings - ICOs) that democratize access to new crypto-based ventures by enabling issuers to raise capital via offering tokens to consumers (Domingo et al., 2020; Bellavitis et al., 2021). ICOs have become one of the most attractive fundraising models enabling crypto issuers to eliminate intermediaries, without giving equity in exchange for capital and without being subject to strict regulations (Chod & Lyandres, 2021; Fisch et al., 2021). However, the lack of a strict regulatory framework around ICOs, the rise of other more secure and protected funding models (e.g. Initial Exchange Offerings) as well as the increased failure rates of ICOs (with almost 25% of them failing in less than two years) have exacerbated risk for consumers and resulted in issuers struggling to raise capital through ICO calls (Davydiuk et al., 2023).

The nascent ICO literature has begun to investigate the short- and long-term benefits of ICOs for start-ups and firms (Thies et al., 2021; Campino et al., 2022) as well as explore various factors that drive funding levels during ICOs, including various evaluative cues that could reduce consumers' perceived risk in such decisions (Chitsazan et al., 2022). Despite these insights, issuers still have limited insights as to which communication strategies they should leverage to increase

financial support and referrals among consumers during ICOs (Xiang et al., 2019; Bellavitis et al., 2021). The storytelling literature has long highlighted the persuasive effects of sharing stories with consumers in terms of building awareness and strengthening brand-consumer relationships for new products (Truong et al., 2017; Dessart, 2018). However, scholars have yet to investigate the persuasiveness of different storytelling modes in enhancing investment levels and social media advocacy during ICOs. Issuers also lack insights on how various communication-related factors shape the effectiveness of storytelling campaigns in an ICO context, such as the framing of the brand message or the use of endorsers, so that they can increase the chances to achieve their ICO goals (Bellavitis et al., 2021; Chitsazan et al., 2022; Chod & Lyandres, 2021). These voids of knowledge make it hard for issuers to survive the fierce competition from over 6000 cryptos currently in circulation.

To fill in these gaps, this work bridges research in storytelling and the nascent ICO stream (Chitsazan et al., 2022; Robiady et al., 2021) to provide insights on how issuers should strategize their brand communication during ICOs. Through four scenario-based, experimental studies, we draw on 840 crypto users to investigate the impact of two storytelling modes (i.e. factual vs emotional mode) on consumer responses to ICOs (i.e. amount of investment and online brand advocacy) and supply insights about the moderating role of three important contextual conditions of brand communication during ICOs (i.e. endorser expertise, message framing, crypto purpose).

Drawing on Elaboration Likelihood Model (ELM) (Petty & Cacioppo, 1986), our findings extend knowledge about the effectiveness of two

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storytelling modes in a novel, high-risk, financial context (i.e. ICOs) and identify the different benefits (i.e. financial vs reputational ones) that each mode bestows to consumers. Second, we shed light on how endorser's expertise shapes storytelling effectiveness in ICOs and uncover that consumers' investment behaviour is dependent on the source expertise of the storytelling message (Zhang et al., 2014). Third, we explore the persuasiveness of different message framing approaches and reveal that gain-framed messages remain a more effective communication strategy for capital raising in ICOs (than loss-framed ones). Fourth, we highlight the importance of brand identity design for the ICO literature (Manning & Bejarano, 2017) in revealing that a profit-oriented crypto purpose is more likely to result in reduced consumer investment and online advocacy during ICOs.

The rest of the manuscript is organized as follows. The following section presents existing knowledge on ICOs and the conceptual framework of the current research, whereas sections three to seven present the four empirical studies. Then, the results are discussed and the implications of the current research for theory and practitioners are presented, before the limitations and recommendations for future research.

2. Literature review and conceptual framework

2.1. Nature of ICOs and drivers of ICO success

ICOs constitute one form of equity crowdfunding campaigns and their distinctive feature is that they rely on blockchain for issuing tokens. ICOs differ from traditional types of crowdfunding in that they raise capital by offering tokens, which represent blockchain-based digital assets, to investors worldwide (Bellavitis et al., 2021; Chod & Lyandres, 2021). In the past decade, ICOs became particularly attractive for raising funds as they enabled new ventures to raise capital quicker and at a lower cost, without giving equity in exchange for capital (Fisch, 2019; Bellavitis et al., 2021). At the same time, ICOs remain less regulated and subject to less strict control by regulatory bodies (compared to Security Token Offerings (STOs) and IEOs). These features exacerbate uncertainty for prospective investors, as ICOs provide a promise of future reward for a token at an early stage, for which, limited information is often disclosed to potential investors (Fisch & Momtaz, 2020; Chod & Lyandres, 2021).

A growing body of work has begun to investigate ICOs, drawing on a plethora of disciplines, ranging from entrepreneurial finance to technology adoption. From an issuer perspective, this stream establishes the different elements and purposes of ICOs as well as the key stakeholders involved in them; it also explores the potential short- and long-term benefits and risks of ICOs for start-ups and firms (Perez et al., 2020; Howell et al., 2020; Thies et al., 2021; Campino et al., 2022). However, the majority of work in the area takes an investor/consumer perspective, as consumers face an informational disadvantage during ICOs in that the presented facts for the new crypto cannot be easily validated (Fisch, 2019; Kher et al., 2021). This results in consumers' higher risk and increased information asymmetries as to how the project will develop and in search of other signals and evaluative cues to alleviate the increased information asymmetry they face (Howell et al., 2020; Bellavitis et al., 2021).

Pertinent work uncovers various evaluative cues and signals that affect the amount of capital raised in ICOs, which is considered the main proxy of ICO success (Wehnert et al., 2019; Perez et al., 2020; Thies et al., 2021). Chitsazan et al. (2022) uncover six main groups of determinants of ICO success: the profile and behavior of the founders (e.g. team characteristics), ICO features (e.g. white paper structure), venture-related factors (e.g. industry of interest), market conditions (e.g. crypto market performance), investor-related factors (e.g. motivations), and contextual antecedents (e.g. regulation). Relevant work also uncovers some communication-related factors of ICO success such as founders' social media presence, the daily number of tweets for the project, use of

positive language and a high level of interaction with the community, which seem to result in positive market returns for ICOs (Domingo et al., 2020; Albrecht et al., 2020; Chod & Lyandres, 2021; Fisch et al., 2021; Moro et al., 2022).

Despite these insights, little research scrutiny is attracted to how issuers should design their brand communication in ICOs so to become more relatable to consumers and encourage them for positive advocacy on social media (Xiang et al., 2019). At the same time, no evidence exists on what type of brand messages are more persuasive for prospective investors or what type of endorsers remain more appealing during pre-launch ICO communications (Boukis, 2019; Fisch & Momtaz, 2020). These issues become of utmost importance, given the limited resources that such projects tend to have in their early life stages. Moreover, extant work mostly advocates financial proxies of ICO success (e.g. investment amount), ignoring insights from the marketing literature that stresses the reputational benefits that issuers can reap from storytelling modes (i.e. sharing stories with consumers) in terms of higher recommendation intentions and higher chances for virality of new products (Solja et al., 2018; Van Laer et al., 2019).

2.2. Storytelling in ICOs

Storytelling is a form of narrative advertising that communicates information about a brand, a product, or a service in a story-like format and presents a sequence of events, leading to the audience's transition from an initial to a later state (Van Laer et al., 2019; Robiady et al., 2021). A story can enhance persuasion by eliciting strong affective reactions (Wang & Calder, 2006) or by encouraging consumers to connect the brand to themselves (Escalas, 2004). Prior work uncovers brand stories' strong influence on consumer cognitive evaluations, brand judgements and brand attachment (Berger & Milkman, 2012). Scholars acknowledge different elements and contextual factors that shape consumer responses to storytelling messages, such as the mode/strategy (i.e. emotional vs cognitive); the structure (e.g. emplotment) and communication style of the story (White et al., 2011); consumers' identification with the main story character (Dessart, 2018); different types of story narratives (e.g. underdog vs top dog); the objectives and the origin of the brand (Megehee & Spake, 2012); and, the source of the story, among others (Solja et al., 2018).

Although the effects of different storytelling modes are well-established in advertising research, only recently researchers have begun to examine their impact on consumer evaluations in crowdfunding activities (Wehnert et al., 2019; Xiang et al., 2019; Anglin et al., 2022). Different storytelling modes during crowdfunding ventures result in consumers responding differently depending on how venture narratives are framed (Allison et al., 2015) and affect consumers' value and funding behavior (e.g., Manning & Bejarano, 2017; Li et al., 2017; Bitterl & Schreier, 2018). As the effectiveness of different storytelling messages is affected by user-generated content, crowdfunding campaigns should not only aim at stimulating investment but also at sharing their stories with consumers so to bolster investment passion among their networks and peers (Allison et al., 2017; Xiang et al., 2019).

To date, scarce, if any, studies explore the persuasiveness of different storytelling modes in pre-launch communication activities or their impact on consumer evaluations during ICOs (Chitsazan et al., 2022). Despite that the advertising literature points towards various contextual factors that shape the effectiveness of storytelling campaigns, such as the type of the endorser and the framing of the message, no empirical evidence exists on whether such factors affect brand communication in an ICO context (Solja et al., 2018; Chod & Lyandres, 2021).

2.3. Storytelling modes and elaboration Likelihood model (ELM)

Given the dominant role that emotions and cognition play in persuasive message communication, two types of appeals are widely used in message appeal literature (i.e. informational and emotional

appeals) (Yoo & MacInnis, 2005). The effectiveness of these appeals is associated with the different info processing routes that individuals tend to adopt when formulating their perceptions (Bi et al., 2017; Xiang et al., 2019). ELM proposes two predominant info processing routes (i.e. central and peripheral one) for individuals' information credibility perception that lead to distinct behaviors during attitude formulation and judgments (Petty & Cacioppo, 1986; Petty et al., 1983). Whereas the central route involves carefully scrutinizing the content of the information with extensive cognitive processing, the peripheral route often relies on the environmental characteristics associated with the information without any extensive elaboration or thought (MacInnis et al., 2002). Echoing these different info processing routes, this work focuses on two storytelling modes (i.e. factual vs emotional mode) that activate these routes among consumers (MacInnis et al., 2002; Wentzel et al., 2010). On the one hand, factual storytelling makes informational appeals by emphasizing factual content and product-related knowledge; it involves more extensive scrutinizing of the information and makes consumers more likely to engage in analytical (central) processing (Wentzel et al., 2010; Xiang et al., 2019). On the other, emotional storytelling induces heightened emotions for consumers and communicates the message through emotion-laden narratives, which are more similar to peripheral cues (Wentzel et al., 2010; Allison et al., 2017). Emotional storytelling requires fewer cognitive resources and results in stories being processed in a narrative and peripheral way, enabling consumers to be unconsciously carried away (Yoo & MacInnis, 2005; Kim et al., 2017).

Research in storytelling concurs that emotional and factual storytelling lead to different types of info processing and credibility perceptions among consumers (Van Laer et al., 2014; 2019). These diverse effects of storytelling modes are highly relevant to financial decision-making, where there is a growing recognition of the impact of narrative processing and message framing on consumers' choice over the premises of rational choice theory and of the analytical system of thinking (Kahneman & Tversky, 1979; Kahneman, 2003). The extent to which recipients engage in the central or peripheral route also depends on the importance of various contextual evaluative cues and the context. For instance, the source of the message (e.g. endorser features) and the language (e.g. framing) of the storytelling message to which consumers are exposed could strongly affect the persuasiveness of the message (Yoo & MacInnis, 2005; Cheng & Ho, 2015). The relative persuasiveness of these two modes also varies between low- and high-risk settings (Allison et al., 2017).

2.4. Conceptual framework

Drawing on ELM, study 1 argues that the use of different storytelling modes (i.e. factual vs emotional) during ICOs will activate different information processing routes and generate different consumer responses, with regards to the amount of investment and online brand advocacy for a new crypto. Echoing that consumers' engagement with different storytelling modes is context-specific (Yoo & MacInnis, 2005), studies 2–4 look into three important contextual factors that might determine the effectiveness of storytelling modes in an ICO context. In specific, study 2

(2x2) examines the moderating effect of endorser expertise (i.e. high vs low) on how storytelling modes affect consumer responses to ICOs. Study 3 (2x2) investigates the moderating effect of storytelling message framing and whether it is orientated towards avoiding losses (loss-framed) or reaping gains (gain-framed). Study 4 (2x2) examines the moderating effect of the crypto purpose (i.e. altruistic vs profit-oriented) on consumer responses to ICOs (see Fig. 1 below).

3. Study 1 – The impact of storytelling modes on consumer responses to ICOs

Study 1 investigates the effect of two storytelling modes (i.e. factual vs emotional) on consumers' online brand advocacy and amount of investment towards an ICO of a new (fictitious) crypto (i.e. PerfCoin). The rationale behind these outcomes lies in the pertinent literature, which emphasizes them as the two main objectives of communication during ICOs (i.e. to increase the per capita investment and generate favourable referrals among consumers and increase awareness) (Domingo et al., 2020; Bellavitis et al., 2021).

3.1. Background and hypotheses

The *amount of investment* reflects the amount of financial support for a new crypto and is considered a key indicator of ICOs' success (Xiang et al., 2019; Liang et al., 2019). The financial decision-making literature widely confirms that consumers tend to adopt more analytical and rational info processing styles in high-risk financial decisions (Greenberg & Hershfield, 2019). As crypto markets remain high-risk, unregulated and with limited evaluative cues available for consumers (Wehnert et al., 2019), we argue that consumers are more likely to follow the central processing route when exposed to factual messages in ICOs. As factual storytelling messaging communicates information about the features of a brand in a fact-based and logical way (Wentzel et al., 2010), it will facilitate consumers' need for extensive info processing and risk-reduction in this context. In this case, factual storytelling will allow consumers to scrutinize more carefully the available information for the ICO (Chod & Lyandres, 2021; Perez et al., 2020) and process it in a more analytical and rational way, resulting this way in more thorough cognitive assessments (Escalas, 2007). Hence, we posit that factual storytelling mode during ICOs will result in higher amount of investment among consumers. Therefore,

Factual storytelling messages will result in higher consumer investment in an ICO, compared to emotional storytelling ones (H1a).

As scholars stress the importance of user-generated content in investment decisions during crowdfunding ventures (Bi et al., 2017), we also focus on *online brand advocacy*. Online brand advocacy refers to consumers' intention to share brand-related material for the new crypto (Villarroel-Ordenes et al., 2019; Xie et al., 2019). The crowdfunding literature suggests that positive referrals among consumers increase the chances of new venture success (Wehnert et al., 2019).

As emotional storytelling relies on emotion-led narratives, it could easier activate consumers' imagination (Kim et al., 2017). When consumers are immersed in a story, narrative processing predominates over

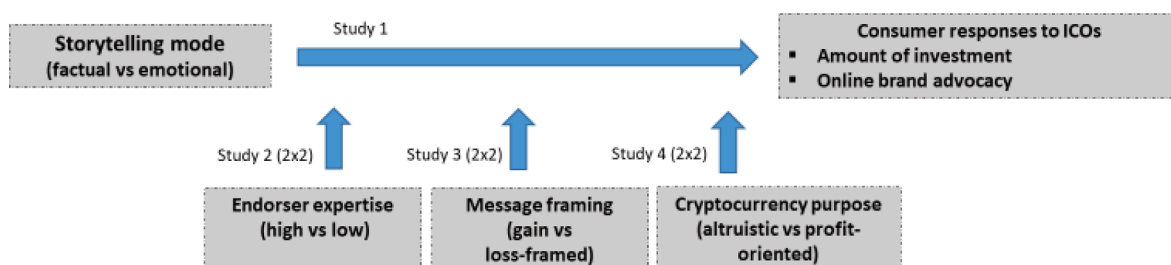


Fig. 1. Conceptual Framework.

central processing and decreases critical thinking (Escalas, 2007; Desart, 2018). This type of peripheral processing involves higher empathy, transportation and relational connection as well as promotes less critical analysis of arguments and more positive affective responses than factual processing (van Laer et al., 2014; De Angelis et al., 2012). In line with narrative transportation theory, immersing into a story conveys heightened emotions for consumers who then ascribe positive associations to brands (Escalas, 2007), and become more likely to be carried away, reducing the chances for central processing (Escalas, 2004; Pham et al., 2013). Moreover, compared to factual appeals, emotional ones are more likely to be shared (Berger & Milkman, 2012), as emotional arousal increases social transmission intentions, and individuals may share surprising or interesting content because it makes them look good to others (Berger & Schwartz, 2011; De Angelis et al., 2012). Therefore, we expect that emotional storytelling messages will render consumers more prone to share online info for the new crypto than when fact-based messages are presented to them. Therefore,

Emotional storytelling messages will result in higher consumer online brand advocacy for an ICO, compared to factual storytelling ones (H1b).

3.2. Methodology

3.2.1. Participants, pretesting and scenario design

Study 1 scenarios present a press release that informed the public about the forthcoming ICO of a new (fictitious) crypto, namely PerfCoin, on CoinDesk (i.e. a leading media outlet for cryptos). The scenarios were designed in line with the content used for crowdfunding campaign launches (Manning & Bejarano, 2017) and their visual format was adjusted to CoinDesk's one to increase external validity. The linguistic manipulation for each storytelling mode relies on prior work that identifies the linguistic patterns of emotional and factual narrative styles in crowdfunding campaigns (Manning & Bejarano, 2017; Majumdar & Bose, 2018). Participants were informed that they would be participating in a survey regarding a new crypto, namely PerfCoin, which is about to go public (see Appendix, section 1).

A total of 86 students were first recruited for pretesting, and they were randomly exposed to one of the two hypothetical scenarios (see Appendix, section 2). Study 1 was then conducted, drawing on participants from an online survey panel (i.e. Prolific). Participation was gained from 174 UK-based respondents (for participants' background see Appendix, section A) who were instructed to read the scenario and fill out the survey following it. For eligibility, two criteria were set. First, respondents should have invested in cryptos (at least once, with a minimum investment over £500) as well as in any crowdfunding project in the past (e.g. Kickstarter).

3.2.2. Measures and construct validity

To capture consumer responses to storytelling modes, we used one item asking participants to indicate the amount of money they were willing to invest in the ICO (up to £1,000)¹; also, online brand advocacy was measured with a Likert-type, seven-point scale with three items from Xie et al. (2019). Table 1 presents descriptive statistics and reliability of study 1 DVs.

3.3. Results and discussion

Adopting a single factor design, storytelling mode (factual vs emotional) was the IV whereas the amount of investment and online brand advocacy the DVs. Participants were asked to rate the scenarios on a seven-point scale (1-Strongly informational to 7-Strongly emotional); the emotion-based scenario was viewed as more emotional [$Story_{EMOT}(SD) = 5.37(1.17)$] whereas the factual one as more informational

Table 1

Reliability and descriptive statistics of Study 1–4 outcomes.

	Mean (SD)	Cronbach α	CR	AVE
Study 1				
Amount of investment	400.91(176.16)	n/a	n/a	n/a
Online brand advocacy	4.06(1.45)	0.819	0.82	0.60
Study 2				
Amount of investment	378.76(172.71)	n/a	n/a	n/a
Online brand advocacy	4.18(1.35)	0.799	0.80	0.57
Study 3				
Amount of investment	372.63(136.30)	n/a	n/a	n/a
Online brand advocacy	4.03(1.05)	0.758	0.75	0.51
Study 4				
Amount of investment	403.17 (131.04)	n/a	n/a	n/a
Online brand advocacy	4.02(1.23)	0.779	0.77	0.54

CR = Composite Reliability; AVE = Average Variance Extracted; Study 1 group sizes ($N_{FACT}=85$; $N_{EMOT}=89$); Study 2 group sizes ($N_{FACT}=121$; $N_{EMOT}=119$; $N_{HIGH_EXP}=119$; $N_{LOW_EXP}=121$); Study 3 group sizes ($N_{FACT}=111$; $N_{EMOT}=109$; $N_{GAIN}=109$; $N_{LOSS}=111$); Study 4 group sizes ($N_{FACT}=103$; $N_{EMOT}=103$; $N_{GAIN}=103$; $N_{LOSS}=103$).

among participants [$Story_{FACT}(SD) = 2.16(1.44)$, $df(172)$, $t = -16.10$, $p < .001$]. Results suggest a significant effect of the type of storytelling mode on the amount of investment [$Story_{FACT}(SD) = 523.98(139.41)$, $Story_{EMOT}(SD) = 283.37(117.71)$, $F = 151.79$, $p < .001$]; factual storytelling results in significantly higher amount of investment for PerfCoin, compared to emotional storytelling, confirming H1a. Results also indicate that a significant effect of storytelling mode on online advocacy is evident [$Story_{FACT}(SD) = 2.83(0.92)$, $Story_{EMOT}(SD) = 5.22(0.73)$, $F = 356.92$, $p < .001$]; emotional storytelling results in significantly higher online advocacy for PerfCoin, compared to factual storytelling, confirming H1b. To enhance the robustness of our results, we used an ANCOVA to test for two additional controls: perceived self-control (i.e. "I am good at resisting temptations" ($p_{INVEST} = 0.619$; $p_{ADV} = 0.771$); and for financial risk-taking by asking participants to complete a relevant task ($p_{INVEST} = 0.163$; $p_{ADV} = 0.414$) (see He et al., 2008). Likewise, we controlled for participants' processing time and no significant changes on both main effects were found.

Results indicate that when issuers adopt factual storytelling messages, they are more likely to increase consumers' amount of investment in an ICO than when adopting emotional ones. On the contrary, emotional storytelling messages are more likely to result in higher consumer intention to share brand-related info for the new crypto on social media than its factual counterpart.

4. Study 2 – The moderating effect of endorser expertise

As ICO success depends on gaining attention among consumers, a number of issuers have sought endorsement from experts in the field (e.g. Kevin Ting) or public personas including celebrities and athletes (e.g. Floyd Mayweather) (CNBC, 2021). Study 2 looks into the moderating effect of endorser expertise [i.e. low- (i.e. celebrity-led) vs high (i.e. expert-led)] on consumer responses to ICOs.

4.1. Background and hypotheses

The endorsement effectiveness literature advocates that the persuasiveness of endorsers' messages is a function of three key criteria (i.e. attractiveness, credibility, congruency) (Erdogan, 1999). Endorsers who are perceived as credible, attractive, and likeable help consumers form more favourable evaluations and stronger behavioural intentions towards the brand (Halder et al., 2021). Endorsers' credibility is largely dependent on two features (i.e., expertise and trustworthiness) (Schimmelpenninck & Hunt, 2020). Prior research emphasizes the dominant role of endorsers' expertise over their trustworthiness in high-risk contexts (e.g. financial decisions) and in credence products (Biswas et al., 2006).

¹ The amount of investment was capped at £1000, in line with current practice in ICOs that sets a cap in the participation of retail investors.

Expertise reflects endorsers' deeper knowledge and experience in the field of interest and their perceived ability to make valid assertions (Erdogan, 1999; Wang & Scheinbaum, 2018). Previous studies highlight the role of source expertise in affecting information adoption and consumer intention to buy (Berger, 2014). As cryptos are highly intangible assets for which limited informational cues are available (White et al., 2020), endorser expertise becomes vital when consumers evaluate their performance, in line with the premises of the credence product literature (Wang & Scheinbaum, 2018).

We posit that factual storytelling endorsed from crypto experts (high-expertise endorsers) would have a stronger effect on consumers' amount of investment than celebrity-based one (low-expertise endorsers). Evidence shows that rational messages in credence settings generate higher purchase intentions among consumers (Zhang et al., 2014). Due to the scarce pre-purchase knowledge, the difficulties associated with evaluating credence assets, like cryptos, will prompt consumers in more central information elaboration and a tendency to rely more on experts' opinions (Halder et al., 2021). As a result of this increased information asymmetry, consumers will be more encouraged by expert-driven messages, as the latter constitute a source of more objective assertions and have greater effectiveness for informational (than celebrity-led) communication strategies (Bergkvist & Zhou, 2016).

Consumers view endorsers' expertise as a more suitable attribute than physical attractiveness (that celebrities often possess) for high-tech and credence assets, such as cryptos (Zhang et al., 2014; Schimmelpfennig & Hunt, 2020). Scholars also concur that consumers perceive experts as less likely to purposefully distort information for personal gains, compared to celebrities (Winterich et al., 2018). When celebrity expertise is high, third-party endorsements have a stronger persuasion effect on brand sales (Bergkvist & Zhou, 2016) and the expertise of an endorser in technology products is more influential in reducing perceived financial risk than their perceived trustworthiness (Biswas et al., 2006; Knoll & Matthes, 2017). Based on this evidence, we argue that the rational basis of expert-led factual storytelling will allow consumers to more extensively scrutinize the ICO. As consumers feel like that they possess increased product (crypto) knowledge, the risk associated with the investment decision is more likely to be reduced (Stafford & Day, 1995). This would make them feel more confident to invest in the ICO. Hence,

Expert-based factual storytelling messages will result in higher consumer investment in an ICO than celebrity-based ones (H2a).

Petty, Cacioppo, and Schuman (1983) argue that source-expertise inferences can also be based on peripheral processing rather than central processing of arguments. Research around consumer motivation to share content shows that consumers are more willing to share content if it appeals to their emotions (Berger & Milkman, 2012; Pham et al., 2013). Moreover, the endorser attractiveness model advocates that celebrities could make it easier for consumers to identify with their personality and this could enhance their levels of arousal and referrals towards the brand (Knoll & Matthes, 2017). When consumers believe that they share certain values or characteristics with an endorser, they are more likely to align with brand messages (due to their wishful identification, or their aspiration to be like that celebrity) without logically processing the advertisement message, especially in attractiveness-driven product categories (e.g. cosmetics) (Knoll & Matthes, 2017). However, for technology products, like cryptos, with no logical connection to attractiveness, an attractive celebrity might not necessarily trigger higher purchase intentions (Kang & Herr, 2006). Despite mixed evidence on the effectiveness of celebrity-based appeals in different product categories, we argue that celebrity-driven emotional storytelling will result in more positive emotional reactions, which are likely to generate higher intentions of positive advocacy among consumers (Albert et al., 2017; Botha & Reyneke, 2013). Hence,

Celebrity-based emotional storytelling messages will result in higher consumer online brand advocacy for an ICO than expert-based ones (H2b).

4.2. Methodology

4.2.1. Participants and design

Through a two-phase pretesting, we first assessed different endorsers' perceived expertise in the crypto market (see Appendix, section 3). Based on the pretesting results, one of the earliest adopters of cryptos (i.e. Erik Voorhees) was identified as the highest expertise endorser and a popular athlete (i.e. Tyson Fury) was identified as the lowest one among participants. In both storytelling scenarios, the corresponding endorsement post on Facebook was presented at the end of the press announcement. Study 2 participants were sought through Prolific and the same eligibility criteria (as in study 1) were used. A total of 240 UK-based participants were recruited (71.3% males, 33.3 average age, see Appendix Table A for participants' background). Participants were randomly exposed in one of the four scenarios (2 (emotional vs factual storytelling) \times 2 (low vs high endorser expertise)). The same guidelines, as in study 1, were given to participants, who were instructed to read the scenario along with the endorsement made and then complete the survey. The same manipulation (as in study 1) was used and it was successful. The emotion-led scenario was considered more emotional [$Story_{EMOT}$ (SD) = 5.59(1.59)] whereas the factual one as more informational among participants [$Story_{FACT}$ (SD) = 1.52(0.95), $df(238)$, $t = -24.03$, $p < .001$].

4.2.2. Measures and construct validity

The same measurement scales as in study 1 were used. Table 1 presents the descriptives, reliability and validity for the DVs (see study 2, Table 1).

4.3. Results and discussion

Study 2 adopts a 2x2 factorial design, with one factor representing the storytelling mode (factual vs emotional) and the other one endorser expertise (high vs low). With regards to the moderation of endorser expertise, a significant interaction effect on the amount of investment was found [$Story_{EXP_AGG}$ (SD) = 412.84(218.47), $Story_{CEL_AGG}$ (SD) = 345.24(100.95); $F = 388.37$, $p < .001$]. Expert-led factual storytelling results in significantly higher amount of investment for PerfCoin, compared to celebrity-led factual storytelling [$Story_{EXP}$ (SD) = 611.11 (99.71), $Story_{CEL}$ (SD) = 313.00(101.94)], confirming H2a (see Fig. 2).

Results also indicate a significant interaction effect of storytelling mode and endorser expertise on online brand advocacy [$Story_{CEL}$ (SD) = 5.64(0.069), $Story_{EXP}$ (SD) = 3.16(0.071); $F = 356.46$, $p < .001$]; Celebrity-led emotional storytelling results in significantly higher online brand advocacy for PerfCoin, compared to expert-led emotional storytelling, confirming H2b (see Fig. 3). As studies 2–4 were conducted during the Covid-19 pandemic period, its impact was assessed through one item (i.e. "How worried are you currently about COVID-19?"; $p_{INVEST} = 0.955$; $p_{ADV} = 0.764$). As in study 1, we controlled for perceived self-control ($p_{INVEST} = 0.447$; $p_{ADV} = 0.697$) and financial risk-taking ($p_{INVEST} = 0.147$; $p_{ADV} = 0.657$) in both main effects and no significant changes were found.

Results indicate that using factual, expert-driven storytelling messages during ICOs results in consumers investing significantly more than when celebrity-led factual messages are used. On the contrary, when an emotional storytelling mode is deployed during ICOs, celebrity endorsement produces higher intention to share brand-related content online among consumers than an expert-based one.

5. Study 3 – The moderating effect of message framing

Individuals react differently to objectively same information depending on how messages are framed (Meyers-Levy & Maheswaran, 2004). Two of the most dominant types of message framing in consumer choice relate to stressing the positive benefits of taking actions versus emphasizing the negative consequences of failing to take action (White

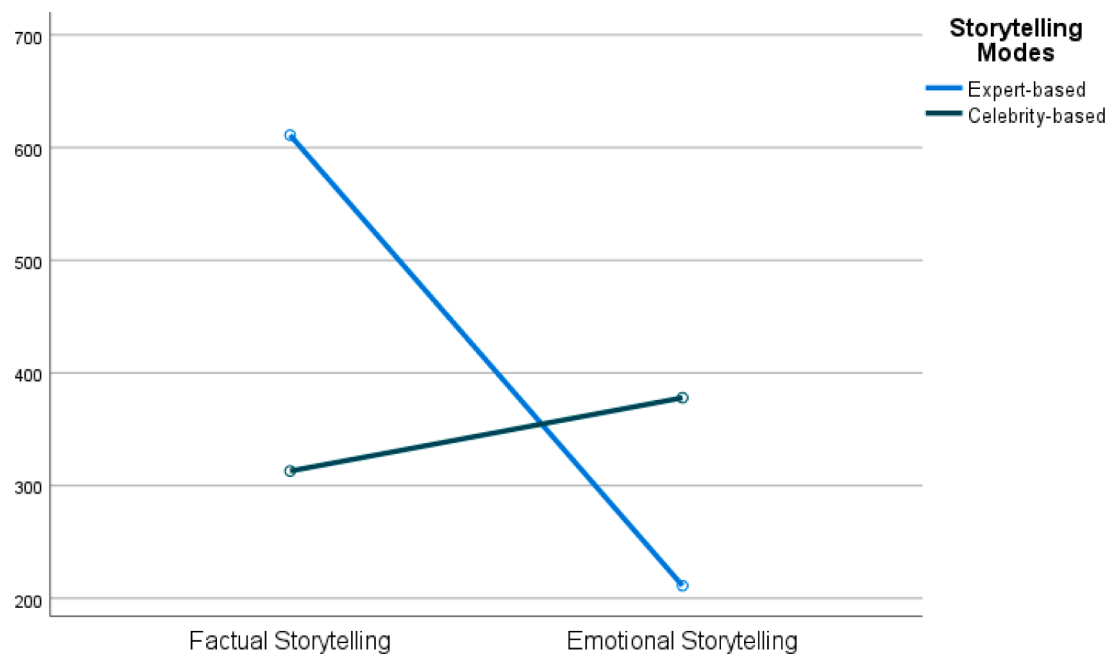


Fig. 2. Study 2 – Amount of investment.

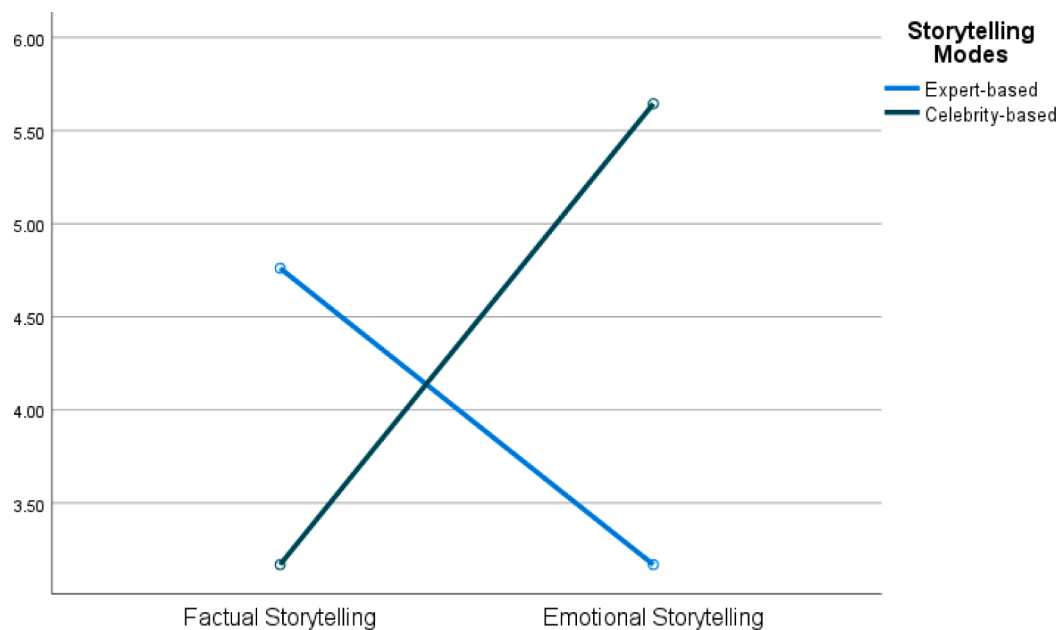


Fig. 3. Study 2 – Online brand advocacy.

et al., 2011). Prior work provides mixed evidence on the effectiveness of these message framing strategies and suggests that they are highly context-specific and dependent on processing motivation and the capacity of the receiver (O'Keefe & Jensen, 2008; Putrevu, 2014). Therefore, study 3 investigates the moderating effect of message framing on storytelling modes during ICOs and whether the message is orientated towards avoiding losses (i.e. loss-framed) or emphasizing gains (i.e. gain-framed).

5.1. Background and hypotheses

Prospect theory suggests that consumers tend to be more risk-prone when facing a decision framed as a loss and more risk-averse when faced with a decision framed as a gain (Kahneman & Tversky, 1979; Buda &

Zhang, 2000). Unlike gain framing that is more effective when an action involves limited risk, loss framing is viewed as more persuasive when a situation involves increased risk or loss (Meyers-Levy & Maheswaran, 2004) or under conditions of high involvement (Meyers-Levy & Maheswaran 2004; Eberhardt et al., 2021). Such conditions are widely present when consumers are about to invest in ICOs.

The mood as information hypothesis proposes that cognitive elaboration becomes more analytical when loss framing dominates, as negative emotions cause consumers to process information in a more effortful and systematic way (Keller et al., 2002; Putrevu, 2014). For instance, loss-framed messages produce increased fear arousal during information processing and result in consumers engaging in more extensive message processing (O'Keefe & Jensen, 2008). Due to negativity bias, loss-framed appeals are also more likely to result in central processing. As negative

information has a disproportionate impact on evaluations compared to equivalent positive information, this results in negative appeals evoking more cognitive and analytical processing than do positive ones, making individuals more risk averse in their choices (Peeters & Czapinski, 1990; Keller et al., 2002). Applying the premises of prospect theory to an ICO context suggests that communicating factual information via loss-framed appeals would be more likely to enhance further consumers' central (over peripheral) processing. This is also expected to increase consumer levels of persuasiveness and confidence in their decision (Putrevu, 2014) and render them more apt to invest in the ICO. Hence, we hypothesize:

Loss-framed factual storytelling messages will result in higher amount of consumer investment in the ICO than gain-framed ones (H3a).

The adoption of emotional messages makes it easier for consumers to share emotionally charged content so that others make sense of their experiences (Berger & Milkman, 2012). Prior work shows that gain framing has a stronger impact (than loss framing) on consumers who engage in peripheral processing, which is in line with the lower need for extensive info scrutiny that emotional storytelling advances (Meyers-Levy & Maheswaran, 2004). This could be further enhanced from a gain-framed appeal that engenders higher message engagement from the recipients (than loss-framed messages), facilitating this way their display of advocacy towards a brand (De Angelis et al., 2012). Also, as the majority of ICO communications tend to adopt benefit-related messages, a gain-framed message will receive less cognitive scrutiny because it aligns with prior consumer expectations in this market (Buda & Zhang, 2000). As consumers tend to share more gain-framed content on social media in their attempt to look good to others (Berger & Schwartz, 2011; Botha & Reyneke, 2013), we argue that:

Gain-framed emotional storytelling messages will result in higher consumer online brand advocacy for the ICO than loss-framed ones (H3b).

5.2. Methodology

5.2.1. Participants, pretesting and scenario design

Study 3 participants were identified using the same screening criteria as in previous studies. A total of 220 UK-based participants were recruited (64.5% males, 34.9 mean age) and were randomly allocated to each of the four scenarios (2x2) (emotional vs factual mode X gain vs loss framing). Then, they were instructed to read the announcement made and complete the survey. The following phrases were added in study 1 scenarios that emphasized either avoiding losses (i.e. "Don't miss out on the opportunity to buy PerfCoin!", "If you invest in our ICO, you won't put your capital at risk!") or reaping gains (i.e. "Take the opportunity to buy PerfCoin!", "If you invest in our ICO, you will see your capital grow several times!"). As a manipulation check, participants rated the new condition (i.e. Extent to which scenarios lean towards: 1 – "Avoiding losses" to 6 – "Emphasizing gains") and results showed that gain-framed scenarios were considered strongly emphasizing gains among participants [$Story_{gain}(SD) = 5.15(1.38)$] whereas loss-framed ones more orientated towards avoiding losses [$Story_{loss}(SD) = 1.85(0.49)$, $t = 23.72$, $p < .001$]. The same manipulation for the storytelling mode was used (as in study 1), which worked well; the emotion-led scenario was considered more emotional [$Story_{EMOT}(SD) = 5.08(1.83)$] whereas the factual one as more informational among participants [$Story_{FACT}(SD) = 1.66(0.96)$, $t = -17.34$, $p < .001$].

5.2.2. Measures and construct validity

The same measures as in previous studies were used and Table 1 presents the relevant statistics (Cronbach α , CR, AVE) for the DVs (see study 3, Table 1).

5.3. Results and discussion

Study 3 adopts a 2x2 factorial design, with one factor representing the storytelling mode (factual vs emotional) and the other the framing of

storytelling message (gain- vs loss- framing). With regards to the moderation of message framing, results suggest a significant interaction effect on the amount of investment [$Story_{gain}(SD) = 521.37(117.64)$, $Story_{loss}(SD) = 342.54(106.94)$; $F = 4.44$, $p = .036$]. Against our initial assumption, loss-framed factual storytelling messages do not result in a significantly higher amount of investment in PerfCoin than gain-framed ones, rejecting H3a (see Fig. 4). Interestingly, a t -test analysis shows that emotional gain-framed storytelling messages result in higher amount of investment in PerfCoin than loss-framed ones [$Story_{gain}(SD) = 375.87(81.02)$, $Story_{loss}(SD) = 252.33(76.71)$; $F = 8.17$; $p < .001$].

Also, results indicate a non-significant interaction effect on online brand advocacy [$Story_{gain}(SD) = 4.39(0.91)$, $Story_{loss}(SD) = 4.09(0.90)$; $F = 0.126$, $p > .05$]. Gain-framed emotional storytelling does not result in significantly higher online brand advocacy for PerfCoin, compared to loss-framed emotional storytelling, rejecting H3b (see Fig. 5). As in study 2, the effect of the Covid pandemic (i.e. $p_{invest} = 0.163$; $p_{adv} = 0.402$) and of perceived self-control ($p_{invest} = 0.113$; $p_{adv} = 0.265$) were not significant on both outcomes. As the regulatory focus literature stresses that the effectiveness of message framing depends on its fit with individual goal orientation (Lee et al., 2010), an additional control was imposed measuring participants' individual regulatory focus (i.e. "To what extent to which you think about: 1 - Hopes and aspirations to 7- Duties and obligations, in your personal life?"). A non-significant effect was found on both DVs ($p_{invest} = 0.067$; $p_{adv} = 0.251$).

Overall, results indicate that the framing of storytelling messages affects consumer responses to ICOs. Against our expectations, when factual storytelling messages are adopted, loss-framed messages result in lower amount of investment among consumers, compared to gain-framed ones. Moreover, adopting a gain-framed message appears to result in a significantly higher amount of investment among participants exposed to both factual and emotional storytelling messages. Regarding online brand advocacy, gain-framed messages remain marginally more effective than loss-framed messages across both conditions. When emotion-based storytelling strategies are used, it appears that gain-framed messages do not result in consumers sharing significantly more brand-related content online for PerfCoin.

6. Study 4 – The moderating effect of crypto purpose

Scholars uncover various motivations behind consumer participation in crowdfunding ventures (Bitterl & Schreier, 2018). Backers of crowdfunding ventures could be motivated to invest both by the prospect of profiting financially or due to psychological gains (e.g. connect with others, communal belonging) garnered from the process of investing itself (e.g. Alison et al., 2015; Li et al., 2017). These motivations are often driven from the purpose of the new venture, which signals consumers the problem it aspires to solve and naturally shapes persuasiveness in capital raising (e.g. Manning & Bejarano, 2017; Li et al., 2017). In line with this evidence, study 4 investigates whether the nature of the purpose of the new crypto (i.e. altruistic vs profit-oriented) will instigate different consumer responses to ICOs.

6.1. Background and hypotheses

Study 1 findings show that factual and objective info evokes logical judgments and could make consumer more prone to financially support an ICO. Building on this, we argue that factual storytelling messages emphasizing profit as their purpose will attract a higher amount of investment than ones presented with an altruistic purpose.

The crowdfunding literature suggests that the use of money-related and objective language in crowdfunding campaigns signals higher effort and preparedness from the founder's side (Chen et al., 2009) and enhances backers' new product evaluations (Majumdar & Bose, 2018) via reducing their perceived investment risk. Likewise, crowdfunding investors tend to process arguments centrally when more extensive financial details are included in the venture description (Allison et al.,

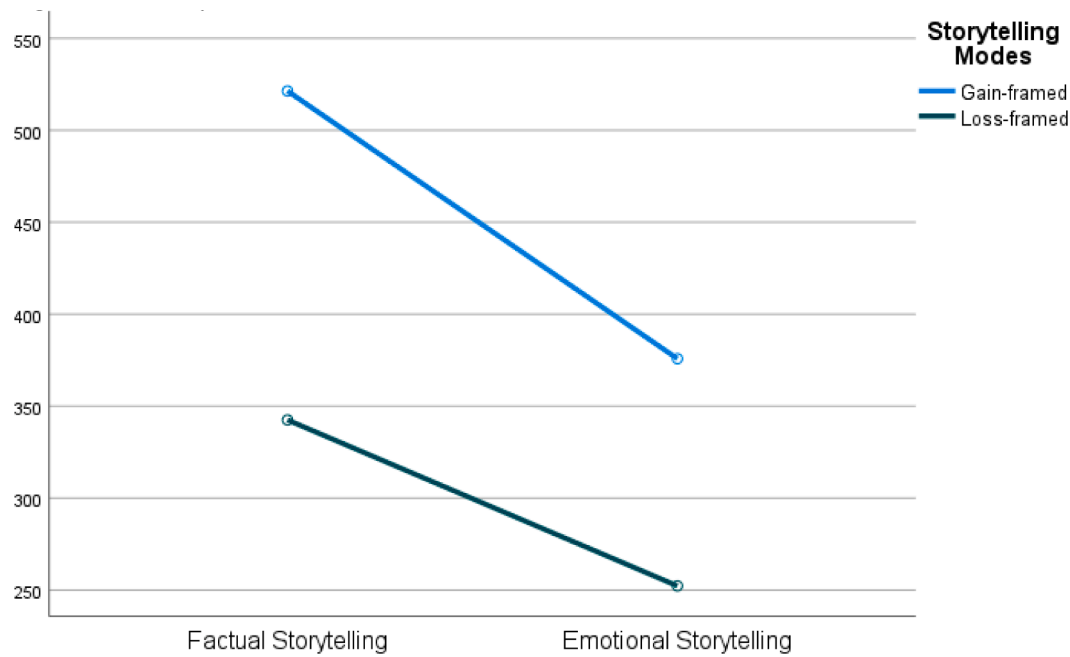


Fig. 4. Study 3 – Amount of investment.

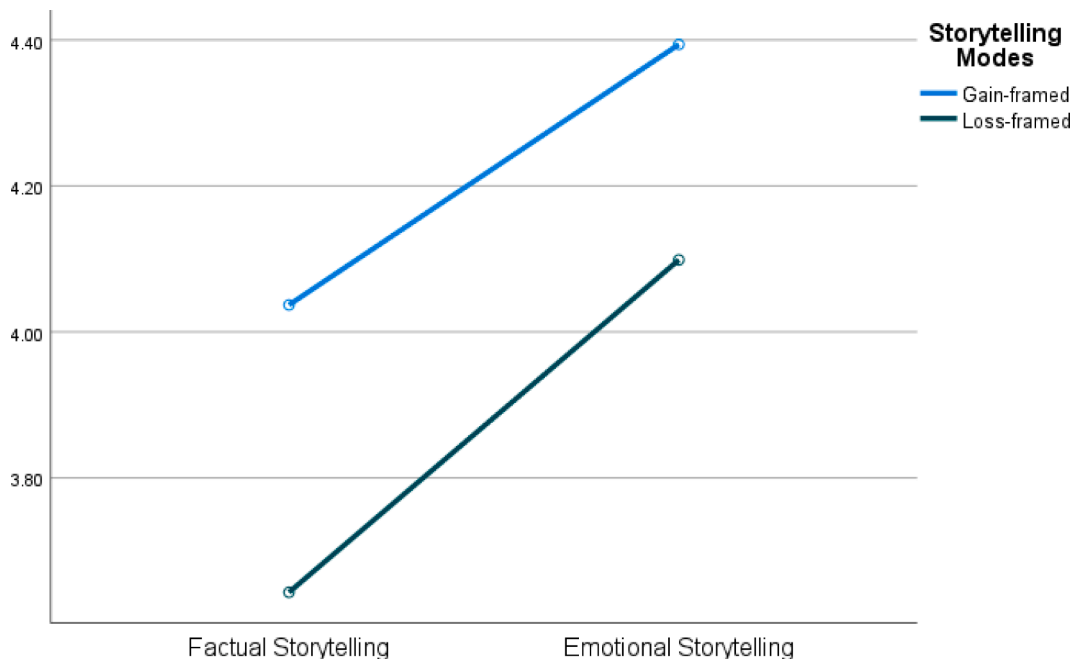


Fig. 5. Study 3 – Online brand advocacy.

2017). Studies uncover financial motivation as the predominant driver of retail investors' participation in ICOs along with lower levels of prosocial orientation among crypto investors (compared to backers of crowdfunding ventures) (Bellavitis et al., 2021; Chod & Lyandres, 2021). Hence, communicating a profit-making purpose for an ICO is more likely to be facilitated from the provision of factual information, as it will be more likely to be aligned with predominant consumers' motivation to participate in ICOs. This leads us to hypothesize that:

When the purpose of the new crypto is profit-oriented, factual storytelling messages will result in higher consumer investment than when its purpose is altruistic (H4a).

On the other hand, sharing emotion-led stories results in activating emotional arousal and making consumers easier to feel as the

protagonist of the story (Megehee & Spake, 2012; Dessart, 2018). Research in advertising establishes an association between emotional appeals and increased prosocial behaviours (Small & Verrochi, 2009; Eisend, 2006). In the context of social crowdfunding, building emotional ties with consumers is more effective due to a strong correlation between emotion and motivation for altruistic behaviour (Robiady et al., 2021). When the purpose of a new product is associated with increasing the welfare of others than oneself (i.e. altruism), consumers will be more motivated to share this information online, as altruism is an important driver of WOM-spreading behaviour (White & Peloza, 2009). Moreover, evidence shows that altruistic appeals are more effective when people's responses are public (White & Peloza, 2009). In our case, this is likely to make consumers more prone to share altruistic ICO-related content with

their online networks. Hence, we argue that when an altruistic purpose is attached to an ICO, consumers' positive advocacy for it will be higher.

When the purpose of the new crypto is altruistic, emotional storytelling messages will result in higher online brand advocacy than when its purpose is profit-oriented (H4b).

6.2. Methodology

6.2.1. Participants, pretesting and scenario design

The same screening criteria as in previous studies were set for study 4. A total of 206 UK-based participants were recruited (64.6% males, 34.7 mean age) and were randomly allocated to each of the four scenarios [2 - emotional (vs factual) mode X 2 - profit (vs altruistic) purpose]. Participants were instructed to read the announcement made and then complete the survey. To manipulate the altruistic purpose the following phrases were added in study 1 scenarios ("Since its beginning, the ultimate purpose of PerfCoin is to make the crypto market more accessible and open for the benefit of the society", "(...) and eventually help disadvantaged crypto users across the globe to manage their portfolio. "). For the profit-oriented purpose, the following phrases were added: (i.e. "Since its beginning, the ultimate purpose of PerfCoin is to create a profitable platform for the benefit of its investors", "(...) and eventually monetize crypto adoption across the globe and expand its customer base. "). The manipulation for the new condition (i.e. Extent to which the purpose of new crypto is: 1 – "Altruistic" to 6 – "Profit-oriented") showed that the profit-oriented scenarios was considered strongly emphasizing profit [Story_{profit} (SD) = 5.10(1.11)] whereas the altruistic one strongly emphasized altruism among participants [Story_{altr} (SD) = 1.66 (0.72), $t = -26.24$, $p < .001$]. The same manipulation for the storytelling mode was used as before, which worked well; the emotion-led scenario was considered more emotional [Story_{EMOT} (SD) = 5.32(1.35)] whereas the factual one as more informational among participants [Story_{FACT} (SD) = 1.88(0.92), $t = -21.32$, $p < .001$].

6.2.2. Measures and construct validity

The same measurement scales as in previous studies were used. Table 1 (study 4 results) presents the descriptives and reliability indices for the DVs and Table 2 presents the study items, which were used across four studies.

6.3. Results and discussion

Study 4 also adopts a 2x2 factorial design, with one factor representing the storytelling mode (factual vs emotional) and the second one the crypto purpose (profit-oriented vs altruistic). Their overall interaction effect on the amount of investment is not significant ($p = .416$). In the factual storytelling scenario, a t -test analysis reveals a statistically significant difference on the amount of investment between the two purposes (see Fig. 6) [Story_{PROF}(SD) = 407.12(94.90), Story_{ALT} (SD) = 523.90(117.12); $t = 5.56$, $p < .001$]; contrary to our expectations, profit-oriented factual storytelling messages result in significantly lower investment intentions among consumers than altruistic ones, rejecting H4a. The interaction effect on consumer online brand advocacy is also not significant ($p = .439$). Regarding H4b, a t -test analysis indicates that

in the emotional storytelling scenario Story_{ALT}(SD) = 4.03(1.28), Story_{PROF} (SD) = 3.41(1.03); $t = 2.69$, $p < .001$] consumers report significantly higher online brand advocacy than in the profit-oriented one, confirming H4b (see Fig. 7). As in previous studies, we controlled for the impact of the Covid-19 pandemic (i.e. $p_{INVEST} = 0.726$; $p_{ADV} = 0.839$), perceived self-control ($p_{INVEST} = 0.781$; $p_{ADV} = 0.066$) and financial risk-taking ($p_{INVEST} = 0.209$; $p_{ADV} = 0.341$); none of them had a significant effect on the two DVs.

Against our initial expectations, results show that when a factual storytelling mode is adopted, consumers tend to invest less when the purpose of a new crypto is profit-oriented. Interestingly, the same applies to the emotional storytelling scenario, clearly suggesting that consumers are willing to invest more in ICOs when an altruistic purpose is attached to them. Similarly, consumers appear to have higher online brand advocacy when the purpose of the new crypto is altruistic, regardless of the storytelling mode.

7. Discussion

To our knowledge, this is one of the first empirical efforts that attempts to bridge the nascent ICO stream with the storytelling literature and offer issuers some valuable insights as to how they should strategize their brand communication in ICOs. Our findings extend the ICO stream in delineating the effectiveness of different storytelling modes during the launch of new cryptos and investigate an additional group of communication-related factors (i.e. endorser expertise, message framing, crypto purpose), whose importance for ICO success has yet to be addressed (Domingo et al., 2020; Chod & Lyandres, 2021).

Our findings add to the emerging ICO literature in several ways. First, we advance extant work on contextual/communication drivers of ICO success (Bellavitis et al., 2021; Chitsazan et al., 2022; Moro et al., 2022) by uncovering the different benefits that two different storytelling modes deliver to consumers during pre-ICO communications. On the one hand, the use of factual storytelling messages results in higher per capita amount of investment among consumers in an ICO (compared to emotional ones). This in line with prior work in message persuasiveness, which prioritizes the use of fact-based, objective information (over emotional one) for brand communication in high-risk or financial contexts (Wang & Scheinbaum, 2018). On the other, emotional storytelling messages make consumers more prone to share ICO-related content on social media (than its factual counterpart). These benefits, however, are not mutually exclusive and prioritizing between different storytelling modes should also depend on other situational factors like the amount of capital needed or the urgency of accessing capital (Stephen & Lehmann, 2016).

From a theoretical perspective, our findings extend the relevance of ELM in an ICO context (Petty et al., 1983). When it comes to investing in ICOs, the different processing routes that ELM proposes (i.e. central vs peripheral processing) are facilitated by factual (vs emotional) storytelling messages resulting in distinct attitudinal responses among consumers. In line with prior work in crowdfunding (Xiang et al., 2019; Anglin et al., 2022), when consumers process factual messages, analytical cognitive assessments tend to dominate the level of consumer investment. On the other hand, when consumers receive emotional messages, peripheral processing results in increased consumer advocacy on social media for a new crypto.

Second, our results further inform the ICO communication literature regarding the effectiveness of different message framing approaches, which also remain under researched in the wider crowdfunding literature (Xiang et al., 2019; Robiady et al., 2021). Apart from the fact- or emotion-driven messages that issuers need to consider, emphasizing the gains that consumers expect from the new crypto remains a far more effective communication strategy for capital raising in ICOs, regardless of whether a factual or an emotional appeal is used. This challenges the premises of prospect theory and prior evidence indicating that gain-framed messages remain less effective in high-risk contexts (Meyers-

Table 2
Study items.

Construct	Study items
Online brand advocacy (Xie et al., 2019)	I intend to say positive things online about PerfCoin I intend to recommend PerfCoin on social media I intend to speak well of PerfCoin to friends on social media
Amount of investment (£) (Xie et al., 2019)	How much would you be willing to invest in PerfCoin?

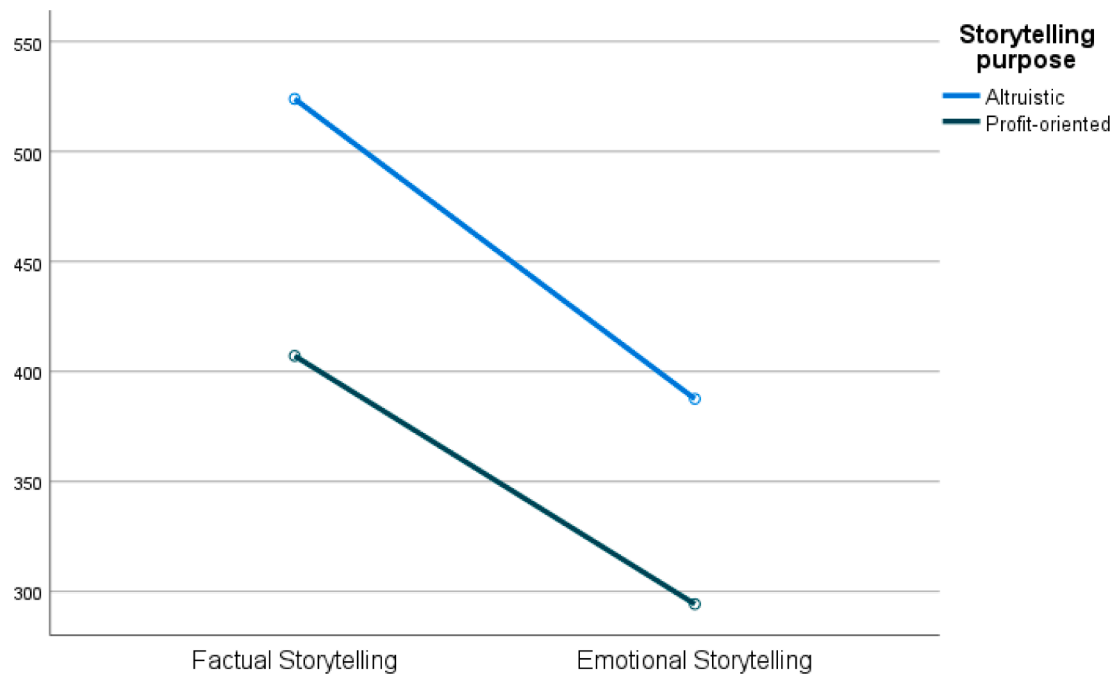


Fig. 6. Study 4 – Amount of investment.

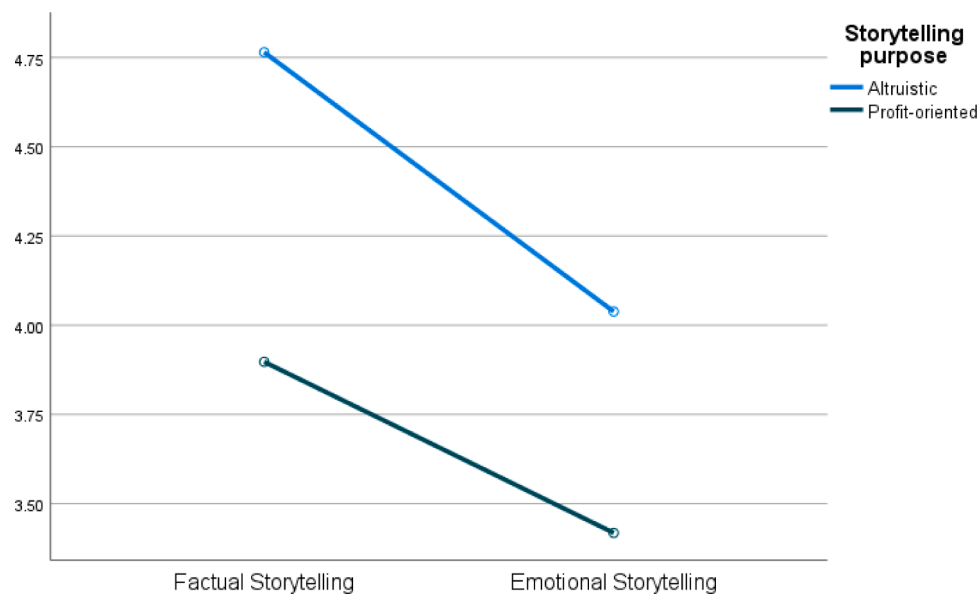


Fig. 7. Study 4 – Online brand advocacy.

Levy & Maheswaran, 2004). Practically speaking, when factual storytelling emphasizes the potential benefits for consumers, the latter tend to invest more in ICOs. This could be attributed to the predominant motivations (e.g. desire for short-term financial gains) of consumers joining the crypto market that makes their investment behaviour more sensitive to benefit-driven messages. Also, consumers' online advocacy for ICOs does not appear to be strongly affected from the framing of the message, departing from prior work that confirms (positive) message framing as a driver of e-WOM for consumers (Lacan et al., 2022). This might be attributed to the fact that the social benefits (e.g. signalling expertise, reinforcing social ties) that consumers expect in return for their online advocacy are not associated with the framing of the message (Lacan et al., 2022).

A third contribution lies in delineating further the role of endorsers'

effectiveness (i.e. expertise) for ICO activities. Consumers' investment behaviour varies depending on the source of the storytelling message (Zhang et al., 2014). Consumers are willing to invest more when exposed to fact-based messages from experts (i.e. crypto-influencers). Interestingly, this is not the case in emotional storytelling, where celebrity-led advertising results in higher amount of investment (than when crypto-experts are used). When it comes to sharing brand-related content on social media, celebrity-led storytelling is more appealing to consumers, which confirms prior work that connects emotional storytelling with enhanced prosocial consumer behavior (Robiady et al., 2021). Surprisingly, when factual storytelling messages are adopted, expert-based messages result in higher online advocacy. This implies that issuers who rely on fact-based messages should bring experts to promote their ICOs (instead of celebrities). This contradicts prior evidence showing

that emotion-driven messages result in higher consumer engagement and stronger referrals than fact-based ones in other high-involvement product categories (Villaruel-Ordenes et al., 2019).

Our findings also offer some preliminary insights around how issuers should design the brand identity of new cryptos (Hofstetter et al., 2022). Surprisingly, communicating a profit-oriented purpose for an ICO results in reduced consumer investment and online advocacy. This counterintuitive finding extends work in the crowdfunding literature, which suggests that the framing of the venture purpose affects backers' investing behaviour (e.g. Allison et al., 2015; Manning & Bejarano, 2017). Consumers appear more willing to invest in an ICO and display higher online advocacy when an altruistic purpose is attached to it, compared to the profit-making orientation that several ICOs adopt, regardless of the storytelling mode adopted (factual or emotional). This finding goes against the current communication approach that several ICOs have adopted in the past and it could potentially signal consumers' shift towards speaking out and supporting social and altruistic causes as part of their effort to enhance their digital social image and status (Sibai et al., 2021).

8. Managerial implications

Our findings offer some important practical implications for crypto issuers. First, issuers need to carefully consider their strategic priorities when designing their ICO communications. Using a more fact-based approach is likely to increase the per capita amount of investment among consumers, whereas an emotional one would make consumers more prone to instigate discussions about the ICO on social media. Hence, a fact-based approach might be effective to apply when issuers have already built a strong community around the new project, or they can easier reach prospective investors (e.g. through their networks or due to their strong reputation in the field). On the contrary, an emotional message might be more appealing for issuers who seek to establish awareness in crypto communities. When issuers use celebrities, they should aim for a more relational/ emotion-based communication campaigns (not a fact-based one). Second, issuers need to be aware that the selection of the storytelling mode for an ICO has some implications for the selection of the relevant endorser. In practice, when issuers seek to build strong brand awareness, factual messages should be delivered from sources with high expertise whereas emotional messages should be communicated mostly from celebrities.

Third, crypto issuers should clearly avoid risk-averse messages that emphasize uncertainty reduction (or avoiding financial losses) during ICOs. Rather, issuers should communicate the potential benefits for respondents from the ICO combined with either factual or emotional storytelling messages. Issuers should also be aware that the emphasis on gains- or loss-related info in their ICO messages does not strongly affect consumer sharing on social media. Fourth, issuers should be cognizant of the importance of the brand purpose attached to the new crypto. As consumers are willing to invest more in ICOs with an altruistic purpose attached to them, issuers should accommodate this in the design of the white paper as well as in the language of the mission of the new crypto. Based on this, the framing of the purpose of the new project should focus more on world, real-life problems that people might be facing (e.g. sustainability) and less on achieving financial returns for prospective investors so that they encourage consumers to discuss it more on social media.

9. Conclusions, limitations and future research

This is one of the first effort towards bridging the marketing and ICO literatures and, as such, our work also has some limitations. First, we draw on a UK-based sample and there might be differences among consumers based in different cultural contexts or consumers with stronger investment expertise. Also, participants were exposed to a storytelling message, without having access to the white paper of the

project. Moreover, we do not account for various contextual, project- and environmental (e.g. social pressure) factors that could affect this investment decision such as: the founders' background, the novelty of the venture, the outlook of the crypto market, etc. Last, we do not account for the effect of different decision-making/processing models (e.g. dual process theory) or personality traits (e.g. psychological reactance) that could affect individual investment choices (Martin et al., 2022), with the exception of the controls tested.

Future research should investigate the impact of other storytelling strategies and tactics (e.g. distal vs proximal framing) on consumer responses to the launch/minting of NFTs (Boukis, 2022). Also, our two model outcomes are not mutually exclusive (i.e. brand advocacy vs investment amount) and researchers should attempt to identify under which conditions ICO communication could enhance both of them. Future research could also examine consumer behavioural responses to storytelling in ICOs in comparison to other more sophisticated fundraising models, such as STOs or IEOs. Moreover, scholars should factor the impact of other contextual factors (e.g. construal levels, scarcity perceptions, digital ownership perceptions) and of individuals' psychological state (e.g. emotions such as pride, need for belonging, relational bonds) in consumer responses to ICOs. Given the dominance of influencers in social media advertising, the role of different types of influencers (e.g. personal finance influencers) for message persuasiveness in ICOs also needs further attention. Last, researchers should investigate how community-based advocacy or user-generated content (e.g. community discussions) could affect consumer trust and render consumers more (or less) likely to invest in ICOs.

CRedit authorship contribution statement

Achilleas Boukis: Writing – review & editing, Writing – original draft, Validation, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jbusres.2023.113796>.

References

- Albrecht, S., Lutz, B., & Neumann, D. (2020). The behavior of blockchain ventures on Twitter as a determinant for funding success. *Electronic Markets*, 30(2), 241–257.
- Allison, T. H., Davis, B. C., Short, J. C., & Webb, J. W. (2015). Crowdfunding in a prosocial microlending environment: Examining the role of intrinsic versus extrinsic cues. *Entrepreneurship Theory and Practice*, 39(1), 53–73.
- Allison, T. H., Davis, B. C., Webb, J. W., & Short, J. C. (2017). Persuasion in crowdfunding: An elaboration likelihood model of crowdfunding performance. *Journal of Business Venturing*, 32(6), 707–725.
- Albert, N., Ambroise, L., & Valette-Florence, P. (2017). Consumer, brand, celebrity: Which congruency produces effective celebrity endorsements? *Journal of Business Research*, 81(4), 96–106.
- Anglin, A. H., Reid, S. W., & Short, J. C. (2022). More Than One Way to Tell a Story: A Configurational Approach to Storytelling in Crowdfunding. *Entrepreneurship Theory and Practice*, 1–34.
- Bellavitis, C., Fisch, C., & Wiklund, J. (2021). A comprehensive review of the global development of initial coin offerings (ICOs) and their regulation. *Journal of Business Venturing Insights*, 15, e00213.
- Berger, J. (2014). Word of mouth and interpersonal communication: A review and directions for future research. *Journal of Consumer Psychology*, 24(4), 586–607.
- Berger, J., & Milkman, K. L. (2012). What makes online content viral? *Journal of Marketing Research*, 49(2), 192–205.
- Berger, J., & Schwartz, E. M. (2011). What drives immediate and ongoing word of mouth? *Journal of Marketing Research*, 48(5), 869–880.
- Bergkvist, L., & Zhou, K. Q. (2016). Celebrity endorsements: A literature review and research agenda. *International Journal of Advertising*, 35(4), 642–663.

- Bi, S., Liu, Z., & Usman, K. (2017). The influence of online information on investing decisions of reward-based crowdfunding. *Journal of Business Research*, 71(2), 10–18.
- Biswas, D., Biswas, A., & Das, N. (2006). The differential effects of celebrity and expert endorsements on consumer risk perceptions. The role of consumer knowledge, perceived congruency, and product technology orientation. *Journal of Advertising*, 35(2), 17–31.
- Bitterli, S., & Schreier, M. (2018). When consumers become project backers: The psychological consequences of participation in crowdfunding. *International Journal of Research in Marketing*, 35(4), 673–685.
- Botha, E., & Reyneke, M. (2013). To share or not to share: The role of content and emotion in viral marketing. *Journal of Public Affairs*, 13(2), 160–171.
- Boukis, A. (2019). Exploring the implications of blockchain technology for brand–consumer relationships: A future research agenda. *Journal of Product & Brand Management*, 29(3), 307–320.
- Boukis, (2022). NFTs: How top brands like Nike and Prada are using them – and what could go wrong. *The Conversation*. <https://theconversation.com/nfts-how-top-brands-like-nike-and-prada-are-using-them-and-what-could-go-wrong-182446>.
- Buda, R., & Zhang, Y. (2000). Consumer product evaluation: The interactive effect of message framing, presentation order, and source credibility. *Journal of Product & Brand Management*, 9(4), 229–242.
- Campino, J., Brochado, A., & Rosa, Á. (2022). Initial coin offerings (ICOs): Why do they succeed? *Financial Innovation*, 8(1), 1–35.
- Chen, X. P., Yao, X., & Kotha, S. (2009). Entrepreneur passion and preparedness in business plan presentations: A persuasion analysis of venture capitalists' funding decisions. *Academy of Management Journal*, 52(1), 199–214.
- Cheng, Y. H., & Ho, H. Y. (2015). Social influence's impact on reader perceptions of online reviews. *Journal of Business Research*, 68(4), 883–887.
- Chitsazan, H., Bagheri, A., & Tajeddin, M. (2022). Initial coin offerings (ICOs) success: Conceptualization, theories and systematic analysis of empirical studies. *Technological Forecasting and Social Change*, 180, Article 121729.
- Chod, J., & Lyandres, E. (2021). A theory of ICOs: Diversification, agency, and information asymmetry. *Management Science*, 67(10), 5969–5989.
- CNBC, (2021) - <https://www.cnbc.com/2021/06/15/kim-kardashian-west-charli-damel-io-jake-paul-posting-paid-crypto-ads.html>.
- Coinmarketcap (2022), <https://coinmarketcap.com>.
- Davydiuk, T., Gupta, D., & Rosen, S. (2023). De-crypto-ing signals in initial coin offerings: Evidence of rational token retention. *Management Science*, 2(1), 1–41.
- De Angelis, M., Bonezzi, A., Peluso, A. M., Rucker, D. D., & Costabile, M. (2012). On braggarts and gossips: A self-enhancement account of word-of-mouth generation and transmission. *Journal of Marketing Research*, 49(4), 551–563.
- Dessart, L. (2018). Do ads that tell a story always perform better? The role of character identification and character type in storytelling ads. *International Journal of Research in Marketing*, 35(2), 289–304.
- Domingo, R. S., Piñeiro-Chousa, J., & López-Cabarcos, M.Á. (2020). What factors drive returns on initial coin offerings? *Technological Forecasting and Social Change*, 153, 119915.
- Eberhardt, W., Brüggem, E., Post, T., & Hoet, C. (2021). Engagement behavior and financial well-being: The effect of message framing in online pension communication. *International Journal of Research in Marketing*, 38(2), 448–471.
- Eisend, M. (2006). Two-sided advertising: A meta-analysis. *International Journal of Research in Marketing*, 23(2), 187–198.
- Erdogan, B. Z. (1999). Celebrity endorsement: A literature review. *Journal of Marketing Management*, 15(4), 291–314.
- Escalas, J. E. (2004). Narrative processing: Building consumer connections to brands. *Journal of Consumer Psychology*, 14(1–2), 168–180.
- Escalas, J. E. (2007). Self-referencing and persuasion: Narrative transportation versus analytical elaboration. *Journal of Consumer Research*, 33(4), 421–429.
- Fisch, C. (2019). Initial coin offerings (ICOs) to finance new ventures. *Journal of Business Venturing*, 34(1), 1–22.
- Fisch, C., Masiak, C., Vismara, S., & Block, J. (2021). Motives and profiles of ICO investors. *Journal of Business Research*, 125(2), 564–576.
- Fisch, C., & Momtaz, P. P. (2020). Institutional investors and post-ICO performance: An empirical analysis of investor returns in initial coin offerings (ICOs). *Journal of Corporate Finance*, 64, 101679.
- Greenberg, A. E., & Hershfield, H. E. (2019). Financial decision making. *Consumer Psychology Review*, 2(1), 17–29.
- Halder, D., Pradhan, D., & Chaudhuri, H. R. (2021). Forty-five years of celebrity credibility and endorsement literature: Review and learnings. *Journal of Business Research*, 125(3), 397–415.
- He, X., Inman, J. J., & Mittal, V. (2008). Gender jeopardy in financial risk taking. *Journal of Marketing Research*, 45(4), 414–424.
- Hofstetter, R., de Bellis, E., Brandes, L., Clegg, M., Lamberton, C., Reibstein, D., ... Zhang, J. Z. (2022). Crypto-marketing: How non-fungible tokens (NFTs) challenge traditional marketing. *Marketing Letters*, 1–7.
- Howell, S. T., Niessner, M., & Yermack, D. (2020). Initial coin offerings: Financing growth with cryptocurrency token sales. *The Review of Financial Studies*, 33(9), 3925–3974.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263–291.
- Kahneman, D. (2003). Maps of bounded rationality: Psychology for behavioral economics. *American Economic Review*, 93(5), 1449–1475.
- Kang, Y. S., & Herr, P. M. (2006). Beauty and the beholder: Toward an integrative model of communication source effects. *Journal of Consumer Research*, 33(1), 123–130.
- Keller, P. A., Lipkus, I. M., & Rimer, B. K. (2002). Depressive realism and health risk accuracy: The negative consequences of positive mood. *Journal of Consumer Research*, 29(1), 57–69.
- Kher, R., Terjesen, S., & Liu, C. (2021). Blockchain, Bitcoin, and ICOs: A review and research agenda. *Small Business Economics*, 56(4), 1699–1720.
- Kim, E., Ratneshwar, S., & Thorson, E. (2017). Why narrative ads work: An integrated process explanation. *Journal of Advertising*, 46(2), 283–296.
- Knoll, J., & Matthes, J. (2017). The effectiveness of celebrity endorsements: A meta-analysis. *Journal of the Academy of Marketing Science*, 45(1), 55–75.
- Lacan, C., Le Nagard, E., & Desmet, P. (2022). Drivers of Consumers' Willingness to Answer an eWOM Solicitation for a Time-Limited Offer. *Journal of Interactive Marketing*, 57(2), 343–355.
- Lee, A. Y., Keller, P. A., & Sternthal, B. (2010). Value from regulatory construal fit: The persuasive impact of fit between consumer goals and message concreteness. *Journal of Consumer Research*, 36(5), 735–747.
- Li, J. J., Chen, X. P., Kotha, S., & Fisher, G. (2017). Catching fire and spreading it: A glimpse into displayed entrepreneurial passion in crowdfunding campaigns. *Journal of Applied Psychology*, 102(7), 1075.
- Liang, T. P., Wu, S. P. J., & Huang, C. C. (2019). Why funders invest in crowdfunding projects: Role of trust from the dual-process perspective. *Information & Management*, 56(1), 70–84.
- MacInnis, D. J., Rao, A. G., & Weiss, A. M. (2002). Assessing when increased media weight of real-world advertisements helps sales. *Journal of Marketing Research*, 39(4), 391–407.
- Majumdar, A., & Bose, I. (2018). My words for your pizza: An analysis of persuasive narratives in online crowdfunding. *Information & Management*, 55(6), 781–794.
- Manning, S., & Bejarano, T. A. (2017). Convincing the crowd: Entrepreneurial storytelling in crowdfunding campaigns. *Strategic Organization*, 15(2), 194–219.
- Martin, B. A., Chrysoschou, P., & Strong, C. (2022). Crypto freedom! Effects of trait reactance and regulation content on intention to buy cryptocurrency. *Personality and Individual Differences*, 194, 111659.
- Megehee, C. M., & Spake, D. F. (2012). Consumer enactments of archetypes using luxury brands. *Journal of Business Research*, 65(10), 1434–1442.
- Meyers-Levy, J., & Maheswaran, D. (2004). Exploring message framing outcomes when systematic, heuristic, or both types of processing occur. *Journal of Consumer Psychology*, 14(1–2), 159–167.
- Moro, A., Radic, N., & Truong, T. (2022). To Tweet or not to Tweet? The Determinants of Tweeting Activity in ICOs. In *Academy of Management Proceedings* (Vol. 2022, No. 1, p. 17116). Briarcliff Manor, NY 10510: Academy of Management.
- O'Keefe, D. J., & Jensen, J. D. (2008). Do loss-framed persuasive messages engender greater message processing than do gain-framed messages? A meta-analytic review. *Communication Studies*, 59(1), 51–67.
- Peeters, G., & Czapiński, J. (1990). Positive-negative asymmetry in evaluations: The distinction between affective and informational negativity effects. *European Review of Social Psychology*, 1(1), 33–60.
- Perez, C., Sokolova, K., & Konate, M. (2020). Digital social capital and performance of initial coin offerings. *Technological Forecasting and Social Change*, 152, 119888.
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In *Communication and persuasion* (pp. 1–24). New York, NY: Springer.
- Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research*, 10(2), 135–146.
- Pham, M. T., Geuens, M., & De Pelsmacker, P. (2013). The influence of ad-evoked feelings on brand evaluations: Empirical generalizations from consumer responses to more than 1000 TV commercials. *International Journal of Research in Marketing*, 30(4), 383–394.
- Putrevu, S. (2014). Effects of mood and elaboration on processing and evaluation of goal-framed appeals. *Psychology & Marketing*, 31(2), 134–146.
- Robiady, N. D., Windasari, N. A., & Nita, A. (2021). Customer engagement in online social crowdfunding: The influence of storytelling technique on donation performance. *International Journal of Research in Marketing*, 38(2), 492–500.
- Schimmelfennig, C., & Hunt, J. B. (2020). Fifty years of celebrity endorser research: Support for a comprehensive celebrity endorsement strategy framework. *Psychology & Marketing*, 37(3), 488–505.
- Sibai, O., Mimoun, L., & Boukis, A. (2021). Authenticating brand activism: Negotiating the boundaries of free speech to make a change. *Psychology & Marketing*, 38(10), 1651–1669.
- Small, D. A., & Verrochi, N. M. (2009). The face of need: Facial emotion expression on charity advertisements. *Journal of Marketing Research*, 46(6), 777–787.
- Solja, E., Liljander, V., & Söderlund, M. (2018). Short brand stories on packaging: An examination of consumer responses. *Psychology & Marketing*, 35(4), 294–306.
- Stafford, M. R., & Day, E. (1995). Retail services advertising: The effects of appeal, medium, and service. *Journal of Advertising*, 24(1), 57–71.
- Stephen, A. T., & Lehmann, D. R. (2016). How word-of-mouth transmission encouragement affects consumers' transmission decisions, receiver selection, and diffusion speed. *International Journal of Research in Marketing*, 33(4), 755–766.
- Thies, F., Wallbach, S., Wessel, M., Besler, M., & Benlian, A. (2021). Initial coin offerings and the cryptocurrency hype-the moderating role of exogenous and endogenous signals. *Electronic Markets*, 1–15.
- Truong, Y., Klink, R. R., Simmons, G., Grinstein, A., & Palmer, M. (2017). Branding strategies for high-technology products: The effects of consumer and product innovativeness. *Journal of Business Research*, 70(4), 85–91.
- Van Laer, T., De Ruyter, K., Visconti, L. M., & Wetzels, M. (2014). The extended transportation-imagery model: A meta-analysis of the antecedents and consequences of consumers' narrative transportation. *Journal of Consumer Research*, 40(5), 797–817.
- Van Laer, T., Feiereisen, S., & Visconti, L. M. (2019). Storytelling in the digital era: A meta-analysis of relevant moderators of the narrative transportation effect. *Journal of Business Research*, 96(2), 135–146.

- Villarroel-Ordenes, F., Grewal, D., Ludwig, S., Ruyter, K. D., Mahr, D., & Wetzels, M. (2019). Cutting through content clutter: How speech and image acts drive consumer sharing of social media brand messages. *Journal of Consumer Research*, 45(5), 988–1012.
- Wang, J., & Calder, B. J. (2006). Media transportation and advertising. *Journal of Consumer Research*, 33(2), 151–162.
- Wang, S. W., & Scheinbaum, A. C. (2018). Enhancing brand credibility via celebrity endorsement: Trustworthiness trumps attractiveness and expertise. *Journal of Advertising Research*, 58(1), 16–32.
- Wehnert, P., Baccarella, C. V., & Beckmann, M. (2019). In crowdfunding we trust? Investigating crowdfunding success as a signal for enhancing trust in sustainable product features. *Technological Forecasting and Social Change*, 141, 128–137.
- Wentzel, D., Tomczak, T., & Herrmann, A. (2010). The moderating effect of manipulative intent and cognitive resources on the evaluation of narrative ads. *Psychology & Marketing*, 27(5), 510–530.
- White, K., MacDonnell, R., & Dahl, D. W. (2011). It's the mind-set that matters: The role of construal level and message framing in influencing consumer efficacy and conservation behaviors. *Journal of Marketing Research*, 48(3), 472–485.
- White, R., Marinakis, Y., Islam, N., & Walsh, S. (2020). Is Bitcoin a currency, a technology-based product, or something else? *Technological Forecasting and Social Change*, 151, 119877.
- White, K., & Peloza, J. (2009). Self-benefit versus other-benefit marketing appeals: Their effectiveness in generating charitable support. *Journal of Marketing*, 73(4), 109–124.
- Winterich, K. P., Gangwar, M., & Grewal, R. (2018). When celebrities count: Power distance beliefs and celebrity endorsements. *Journal of Marketing*, 82(3), 70–86.
- Xiang, D., Zhang, L., Tao, Q., Wang, Y., & Ma, S. (2019). Informational or emotional appeals in crowdfunding message strategy: An empirical investigation of backers' support decisions. *Journal of the Academy of Marketing Science*, 47(6), 1046–1063.
- Xie, C., Bagozzi, R. P., & Grønhaug, K. (2019). The impact of corporate social responsibility on consumer brand advocacy: The role of moral emotions, attitudes, and individual differences. *Journal of Business Research*, 95(5), 514–530.
- Yoo, C., & MacInnis, D. (2005). The brand attitude formation process of emotional and informational ads. *Journal of Business Research*, 58(10), 1397–1406.
- Zhang, H., Sun, J., Liu, F., & Knight, J. G. (2014). Be rational or be emotional: Advertising appeals, service types and consumer responses. *European Journal of Marketing*, 48(11/12), 2105–2126.

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