

**SAFE BETS OR HOT HANDS? HOW STATUS AND CELEBRITY INFLUENCE
NEWLY PUBLIC FIRMS' STRATEGIC ALLIANCE FORMATIONS**

**Timothy D. Hubbard
University of Georgia**

**Timothy G. Pollock
Pennsylvania State University**

**Michael D. Pfarrer
University of Georgia**

**Violina P. Rindova
University of Southern California**

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ABSTRACT

Social approval assets are a class of intangible assets based on favorable stakeholder perceptions and evaluations. In this study we theorize how social approval assets with different socio-cognitive content serve as frames that influence the way equivocal information about a firm is interpreted. We argue that when assessing equivocal information cues, different frames will focus attention on the aspects of the information cue that are congruent with the frame. We also argue that since the assets present incongruent frames, possessing both leads to weaker effects than possessing each asset alone. Specifically, we examine how firm celebrity—an asset derived from perceived non-conformity that engenders high levels of attention and excitement—and status—an asset based on occupying a desirable position in a social hierarchy—influence the interpretation of a newly-public firm's underpricing, and thus its effect on the firm's strategic alliance formations. We also consider whether possessing both status and celebrity is associated with fewer strategic alliances than possessing one asset or the other. We test these theoretical ideas in the ambiguity-ridden context of Internet IPOs during the commercial dawn of the Internet between 1995 and 2000. Our findings generally support our arguments, providing new theory and evidence about the dynamics of information and frame (in)congruence, as well as about the framing effects of social approval assets with different socio-cognitive content.

The last fifteen years have seen an explosion of interest in social approval assets based on favorable stakeholder perceptions and evaluations (Pfarrer, Pollock, & Rindova, 2010), including status, reputation, legitimacy, and celebrity (e.g., Rindova, Pollock, & Hayward, 2006; Washington & Zajac, 2005; for reviews see Barnett & Pollock, 2012; Deephouse & Suchman, 2008; Sauder, Lynn, & Podolny, 2012). Scholars have found that social approval assets influence how stakeholders engage with the firm (Jensen & Roy, 2008; Rindova, Williamson, Petkova, & Sever, 2005), how they evaluate its actions and outcomes (Pfarrer et al., 2010), and whether they exchange resources with it (Pollock & Gulati, 2007; Rindova & Fombrun, 1999).

A sizable body of work has emphasized the role of social approval assets as signals. In this view, social approval assets signal private information that reduces information asymmetries about the firm's otherwise unobservable quality, thereby reducing others' perceived uncertainty about the firm (Benjamin & Podolny, 1999; Connelly, Certo, Ireland, & Reutzel, 2011; Stern, Dukerich & Zajac, 2014). More recently, scholars have begun to consider the effects of social approval assets on stakeholders' perceptions that extend beyond reducing information asymmetries. This perspective has argued that social approval assets also serve as frames that affect how other information cues are interpreted by focusing attention on particular aspects of the cue and deemphasizing others (Fiss & Hirsch, 2005; Pfarrer et al., 2010; Smith, 2011).

Thus, without disputing the direct signaling effects of social approval assets, we argue that social approval assets also influence market exchanges through a fundamentally different mechanism. That is, in addition to *directly* reducing perceived uncertainty by revealing "private" information about unobservable firm quality (Connelly et al., 2011), social approval assets filter *other* available information and modify its effects on market participants' choices and behaviors. Social approval assets can serve as interpretative frames because they involve different cognitive

appraisals and emotional responses to different types of organizational attributes and behaviors. For example, Pfarrer and colleagues (2010) argued that reputation is associated with appraisals of a firm's ability to consistently deliver value, leading to expectations of reliable performance, whereas celebrity is associated with appraisals of non-conformity, leading to expectations of unpredictability. We refer to such cognitive appraisals and expectations as social approval assets' *socio-cognitive content*.

We explore these ideas in the ambiguity-ridden context of newly-public "Dot-Com" firms during the commercial dawn of the Internet, and consider how their status and celebrity influence the effects of the underpricing they experience during their initial public offerings (IPOs) on their subsequent ability to form strategic alliances. We argue that an equivocal information cue such as underpricing will be assessed differently as a function of the interpretive frame through which it is viewed. A given frame will enhance those aspects of an equivocal information cue that are congruent with that frame. We also argue that possessing two social approval assets that generate incongruent frames will weaken the effects of possessing the other social approval asset, as well.

We focus on status and celebrity because the differences in their socio-cognitive content generate incongruent frames. Further, in an ambiguous context such as ours, high-status affiliations (Pollock, Chen, Jackson, & Hambrick, 2010) and the media coverage that created celebrities (Petkova, Rindova, & Gupta, 2013; Pollock & Rindova, 2003; Pollock, Rindova, & Maggitti, 2008) were critical to young start-ups. Other social approval assets, such as reputation, were unavailable to start-ups that had yet to establish significant records of performance (Demers & Lewellen, 2003) and other firm characteristics were unreliable indicators of firms' prospects (Trueman, Wong, & Zhang, 2000).

We focus on underpricing because it is a complex market outcome that combines uncertainty reduction and investor excitement. As such, it is an equivocal information cue that can be interpreted in different ways at different levels, and depending on the frame adopted by the observer. Equivocality refers to the “multiplicity of meaning conveyed by information” (Daft & Macintosh, 1981: 211) and captures the “potential for multiple meanings and interpretations of a message” (Rothman, Pratt, Rees, & Vogus, 2017: 37). Prior research has not considered how equivocal information might be interpreted differently as a function of differences in the social approval assets a firm possesses. This omission is important, because equivocal information is common in markets, and it is predominant in ambiguity-ridden contexts.

We focus on the commercial dawn of the Internet because ambiguous environments lack consensus regarding which information is important and how to interpret it (Santos & Eisenhardt, 2009; Rindova, Ferrier & Wiltbank, 2010). As Kaplan (2008: 729) noted, “Where the basic meaning of the situation is up for grabs, information from the environment cannot be comprehended as a set of easily recognizable signals.” In ambiguous situations, *information interpretation* rather than information acquisition is the central process that enables decision making (Rindova et al., 2010), and “interpretative uncertainty”¹ (Weber & Mayer, 2014: 1477)—the alignment of the frameworks used to interpret and make sense of information—becomes a central concern. The extreme ambiguity and “irrational exuberance” (Shiller, 2015) of the commercial Internet’s early days also enables us to examine equivocal information with both analytical and emotional components. This is important, as a growing body of research in management and finance has acknowledged the effects of emotions in markets (e.g., Haack,

¹ We use the term “ambiguity” to describe our research context because it was unclear what the range of relevant firm and industry characteristics necessary for success were, and “uncertainty” to describe actors’ concerns about unobservable quality that affect decisions whether to form strategic alliances.

Pfarrer & Scherer, 2014; Pfarrer et al., 2010; Seo, Goldfarb & Barrett, 2010), but the specific factors affecting how they shape market outcomes remain poorly understood.

Finally, we focus on strategic alliance formations because they are important resource providers for newly public firms, and require substantive and relative durable resource commitments (Pollock & Gulati, 2007; Rindova, Yeow, Martins, & Faraj, 2012; Stern, et al., 2014). Focusing on potential alliance partners' decisions therefore enables us to examine the effects of social approval assets as interpretive frames when the decisions involve significant commitments under high levels of ambiguity, and when the decision-making time frame is longer. Research focusing on short-term actions allows for the possibility that initial reactions can be reversed at little cost; longer-term and more consequential decisions demonstrate the magnitude and durability of interpretive frames' potential influence.

We extend the nascent body of research on the interpretative effects of social approval assets (i.e., Pfarrer et al., 2010; Plummer, Allison, & Connelly, 2016; Stern et al., 2014). For example, Pfarrer and colleagues (2010) examined how reputation and celebrity serve as frames, but they considered relatively unequivocal information cues—large firms' positive and negative earnings surprises—and how they affected investors' short-term responses. Plummer and colleagues (2016) showed how a nascent firm's affiliation with a venture development organization clarified the uncertain signaling value of other nascent firm characteristics and increased their effects on the likelihood that the nascent firm received outside funding. While they studied more substantive resource commitments in an ambiguous context, their analysis examined the interaction between one social approval asset and other firm characteristics without theorizing framing effects. Finally, Stern and colleagues (2014) examined the joint effects of status and reputation on alliance formations by newly-public firms, and found that they reinforced

each other, more so when both were low than when both were high. Thus, they examined the effects of two assets that both generate analytical frames, and only considered the congruence between high and low levels of these assets, and not incompatibilities in the frames themselves.

Our study contributes to this literature by theorizing that status and celebrity are interpretive frames that encompass very different cognitive appraisals and emotional responses, and therefore generate different and potentially incongruent interpretive frames. Their differences lead to equivocal information being interpreted differently, and their incongruence leads to less positive outcomes when a firm possesses both social approval assets than when it possesses only one or the other. We also show that these interpretative interactions affect decisions with long-term consequences for newly public firms.

THEORY AND HYPOTHESES

Status and Celebrity Defined

“Status, for organizations as well as individuals, is broadly understood as the position in a social hierarchy that results from accumulated acts of deference” (Sauder et al., 2012: 268). Sauder and colleagues also state that “a central thesis of organizational research is that a firm’s status (and implicitly the deference to that firm) is influenced by the status of the entities with whom the firm affiliates.” Thus, status’s socio-cognitive content is based on observers’ analytical perceptions that a firm is favored by other high-status actors—as deduced from its observable patterns of affiliation (Gould, 2002; Sauder et al., 2012). Within this broad definition, some scholars emphasize the importance of a firm’s network position as indicative of its status (Lynn, Podolny, & Tao, 2009; Podolny, 1993), while others stress high-profile relationships (Pollock et al., 2010; Stuart et al., 1999). For the newly public firms we study, affiliations with high-status

venture capitalists and underwriters are critical for gaining status and engendering perceptions of quality, value, and abilities (Higgins & Gulati, 2003; Pollock et al., 2010).²

Celebrity is defined as the command of high levels of public attention and positive emotional responses from stakeholder audiences (Rindova et al., 2006). It is generated by the media's dramatic representations of firms' strategies as bold, unconventional, and exciting. These positive representations of non-conformity excite and engage audiences but offer little understanding the firms' actual abilities to create value (Rindova et al., 2006). Celebrity's socio-cognitive content therefore involves positive emotional resonance driven by perceptions that a firm is engaged in non-conforming actions, often linked to visionary leaders and quirky cultures.

Status and Celebrity as Interpretive Frames

Interpretive frames are schemas that provide default assumptions and expectations about social phenomena (DiMaggio, 1997). They selectively increase the salience of certain aspects of perceived reality and promote particular patterns of interpretation by providing organizing structures and activating schemas through which information is interpreted (Cornelissen & Werner, 2014). Frames therefore do not reduce perceived information asymmetries as signals do; rather, they provide interpretive lenses that influence how stakeholders attend to and use *other* information (Fiss & Hirsch, 2005; Pfarrer et al., 2010; Smith, 2011; Weber & Mayer, 2014).

The interpretative frames perspective on social approval assets is in its early stages, and some of its theoretical aspects remain underdeveloped. Smith (2011: 62) offered the following analogy for understanding interpretative frames as "lenses," noting that "Just as two lenses that

² We do not attempt to empirically determine a specific IPO firm's standing among all other firms, or more generally, within a market. When we refer to an IPO firm as "high-status," we mean that it has established affiliations with other actors who are prominent within their own domains. In particular, we focus on their ties to venture capitalists and underwriters since these relationships are consistently reported and widely-observable, and status measures for these actors are generally available (Carter, Dark, & Singh, 1998; Lee, Pollock, & Jin, 2011).

vary in shape can receive identical beams of light and yet refract that light in markedly dissimilar ways, equivalent information may be differentially interpreted and reacted to” when viewed through different interpretive frames. Viewing status and celebrity as interpretive frames enables us to account for how the different socio-cognitive content of each social approval asset affects stakeholders’ interpretations of other information about a firm. It recognizes that the accumulated information associated with each asset is organized in collective schemas (Rindova & Fombrun, 1999) that filter information about the firm along particular dimensions. Further, these framing effects can be largely or wholly unconscious, and the subject may be unaware of, and even deny, that they are occurring (Kim & King, 2014). Indeed, Kim and King (2014) showed that major league baseball umpires tended to “expand” the strike zone for high-status pitchers—making them more likely to call pitches that were balls strikes, and less likely to call strikes balls—all while believing that they were showing the high-status pitchers no undue preference.

In addition to noting the differences in the cognitive appraisals between status and celebrity, we highlight the differences associated with their emotional versus analytical content. Prior research suggests that interpretive frames with more emotional content will direct attention to the affective aspects of the information cue³ and prime more “intuitive and associative” cognitive processes (Cornelissen & Werner, 2014: 193). Celebrity is an interpretative frame that directs receivers’ attention to the excitement and positive emotions that the firm stimulates among stakeholder audiences through its non-conforming behaviors (Rindova et al., 2006). Celebrity makes focal the broad scope of popularity and attention the firm enjoys, and the

³ Affect is defined as “goodness” or “badness” (1) experienced as a feeling state (with or without consciousness) and (2) demarcating a positive or negative quality of a specific stimulus” (Finucane, Peters & Slovic, 2003: 328). We prefer this term because as Finucane and colleagues note, like emotion and mood, affect can vary in valence and intensity, but unlike these other constructs, it can be subtle and does not require elaborate appraisal properties, while directly (rather than indirectly) affecting motivation.

associated perceptions that that it is interesting, popular, and doing new and different things that excite audiences, even if they do not fully understand what those things are. Celebrity can play a particularly important role in ambiguous contexts because “affect is a necessary bridge across the unexpected and the unknown” (Finucane et al., 2003: 341). As Finucane and colleagues (2003: 343) explained, “Readily available affective impressions can be easier and more effective [to use] than weighing the pros and cons of various reasons...especially when the required judgment or decision is complex.”

In contrast, status focuses attention on actors’ relationships and relative social standing, and leads audiences to draw inferences about the characteristics and behaviors that have led other actors of a particular social standing to affiliate with them. As such, status focuses attention on the more analytical aspects of the cue, and primes “reasoned processes of thinking and reflection” (Cornelissen & Werner, 2014: 193), because assessing the meaning of high-status affiliations requires ascertaining the level, nature, and implications of the affiliations (Azoulay, Stuart, & Wang, 2014). Status can shape how other information is assessed, for example, by heightening attention to the firm’s ability to maintain relationships that can provide valuable resources (Podolny, 2001). High-status affiliations, however, may also constrain the options available to a new firm (Rindova, Barry, & Ketchen, 2009). Discerning these varying implications is more analytical than the heuristic decision making stimulated by focusing on affective information. Again, these processes, like those involving affective information, generally take place at a subconscious level (Kim & King, 2014).

In summary, status and celebrity are interpretive frames whose socio-cognitive content focus attention differently. We therefore expect that they will vary in their influence on the ways stakeholder audiences interpret other information about firms. Extending the lens analogy,

anyone who has been confronted with the need for bifocal glasses recognizes the problem—near and distant stimuli are better seen through two different lenses. We focus on understanding whether different lenses—interpretive frames—work better for “seeing” different stimuli, and what happens if both corrections are used simultaneously rather than separately; that is, whether frame incongruence weakens the effects of both frames. Below we develop specific hypotheses about how status and celebrity affected the interpretive uncertainty that potential alliance partners experienced during the commercial dawn of the Internet.

Research Context

The emergence of the Internet as a commercial space in the mid-1990s created a highly ambiguous environment regarding which kinds of companies would ultimately be successful, but also great excitement about its disruptive potential (Hendershott, 2004; Pollock, Fund, & Baker, 2009; Rindova et al., 2010; Sine, Mitsuhashi, & Kirsch, 2006). Between 1995 and 2000, thousands of Internet start-ups raised billions of dollars to pursue opportunities in this sector (Hendershott, 2004). In contrast to prior eras, most of the companies that went public had limited revenues, significant losses, and untried business models (Trueman et al., 2000); however, they also had promising markets and exciting new ways of reaching consumers (Rindova, Petkova, & Kotha, 2007). The extreme ambiguity and opportunity of the era led to unprecedented numbers of initial public offerings (IPOs) with average first-day changes in stock price (i.e., underpricing) that were five times larger than the average change in prior periods (Aggarwal, Krigman, & Womack, 2002; Pollock & Gulati, 2007) attesting to the extreme level of market excitement.

Although IPOs brought legitimacy to Internet start-ups (Pollock & Rindova, 2003), substantial uncertainty remained about their future prospects (Pollock et al., 2009). Their short histories and poor conventional performance metrics prevented these new firms from developing

strong reputations (Demers & Lewellen, 2003). However, high-status affiliations played a significant role in helping them garner resources (Gulati & Higgins, 2003; Pollock & Gulati, 2007). The public's fascination with the commercial promise of the Internet also provided this highly ambiguous space with a massive influx of money and media attention (Hendershott, 2004; Zakon, 2004), facilitating the creation of celebrity firms. Thus, Internet start-ups during this time period (known as the "Dot-Com Era") offer a rare opportunity to isolate the effects of status and celebrity on newly public firms' access to resources.

Strategic Alliances

A strategic alliance is "any voluntarily initiated cooperative agreement between firms that involves exchange, sharing or co-development, and can include contributions by partners of capital, technology or firm-specific assets" (Pollock & Gulati, 2007: 341). Strategic alliances provide key resources that newly public firms need to continue growing (Lavie, 2007; Pollock & Gulati, 2007; Rindova et al., 2012; Stern et al., 2014). Alliance partners, in turn, see new firms as a source of access to technologies and markets that can provide a degree of nimbleness and adaptability in fast-changing environments (Santos & Eisenhardt, 2009).

Obtaining the benefits of alliances, however, involves resolving a wide range of uncertainties about the partners' resources, capabilities, and collaborative processes (Dyer & Singh, 1998). For example, Pollock and Gulati (2007: 341) argued that a newly-public firm's access to strategic alliances "is dependent in part on its visibility within the industry, the perception that it has something useful to offer partners, and the expectation that the firm will be able to deliver on its commitments in the future." Potential alliance partners resolve these uncertainties through prior experience, relationships with other firms that have formed alliances with the potential partner (Gulati & Gargiulo, 1999), and observed affiliations, especially with

high-status others (Stern et al., 2014). While the signaling effects of social approval assets therefore play a key role in reducing potential alliance partners' perceived uncertainty (Pollock & Gulati, 2007; Stern et al., 2014), below we consider the ways they also serve as interpretive frames—that is, how they influence how *other* information is interpreted.

The Effects of Status and Celebrity on Interpreting Underpricing

To the degree that status and celebrity evoke different interpretative frames, they are likely to influence how stakeholders use other available information in different ways (Graffin, Bundy, Porac, Wade, & Quinn, 2013; Pfarrer et al., 2010; Zavyalova, Pfarrer, Reger, & Shapiro, 2012). In the context of IPO firms, the amount of underpricing an IPO firm experiences represents salient information that significantly affects stakeholders' perceptions of the firm (Demers & Lewellen, 2003; Pollock & Gulati, 2007; Pollock et al., 2008).

Underpricing refers to the percentage change in stock price on the first day a stock trades on a public exchange (Ibbotson & Ritter, 1995). The level of underpricing is considered important information about a newly public firm because it is the first opportunity for the market to “price” the firm, and it reflects the difference between where a highly informed agent—the underwriter—and the market set the price for the firm's stock. Based on assumptions of market efficiency, finance scholars have argued that the amount of underpricing a firm experiences indicates investors' assessments of and uncertainty about the firm (see Ibbotson & Ritter [1995] for a review); the lower the underpricing, the less uncertainty investors perceive, and the closer the stock's initial price will be to its “true” market value.

Underpricing, however, is a complex, equivocal piece of information that can create interpretive uncertainty for stakeholder audiences, including potential strategic alliance partners. A growing body of research suggests that high levels of underpricing are indicative of firms'

future potential and improves their access to a variety of resources and opportunities (e.g., Aggarwal et al., 2002; Cliff & Denis, 2004; Demers & Lewellen, 2003; Jegadeesh, Weinstein, & Welch, 1993; Pollock & Gulati, 2007; Pollock, Lee, Jin, & Lashley, 2015; Pollock et al., 2008; Rajan & Servaes, 1997; Tsang & Blevins, 2015). Pollock and Gulati (2007: 345) noted that “the vast amount of research and popular press coverage about the market’s initial responses to IPOs... validated [underpricing] in the minds of many observers as perhaps one of the most important indicators of an IPO’s success.”

The level of underpricing an IPO firm experiences can therefore convey both analytical and affective information. There is clearly an analytical component related to assessing the “true” value of a firm relative to its offering price (Ibbotson & Ritter, 1995); at the same time, the amount of underpricing can also reflect investors’ emotions and excitement about the firm (Pollock & Gulati, 2007; Pollock & Rindova, 2003; Pollock et al., 2008). For example, the extreme ambiguity and “irrational exuberance” (Shiller, 2015) of the Dot-Com Era led to unprecedented levels of underpricing⁴ (Aggarwal et al., 2002; Pollock & Gulati, 2007; Trueman et al., 2000). To the degree that analytical processes employing similar data and criteria narrow the range of assessments, the extreme levels of underpricing observed for some IPOs were likely shaped by emotional investing (Seo et al., 2010).

The interpretive uncertainty underpricing creates is reflected in the wide variety of theories offered to explain the phenomenon (Ibbotson & Ritter, 1995; Tsang & Blevins, 2015). Of relevance here, prior research has specifically shown that underpricing has a direct, positive relationship with strategic alliance formations (Pollock & Gulati, 2007). However, our arguments that status and celebrity serve as interpretive frames lead us to revisit this finding. Specifically,

⁴ Although Pollock and Gulati (2007) reported the average level of underpricing during this period was 76%, they also noted that underpricing ranged from -43% to 605% in their sample. Thus, there was substantial variation in underpricing across firms.

we expect that status and celebrity serve as frames that focus attention on different aspects of the information present at different levels of underpricing, drawing attention to and magnifying the information content that is consistent with the frame's socio-cognitive content.

Prior research (Ibbotson & Ritter, 1995; Tsang & Blevins, 2015) has suggested that low levels of underpricing indicate low levels of uncertainty about the firm's value following more accurate analytical assessments by investors. Status involves cognitive appraisals that an IPO firm has been vetted by well-informed and high-status others (Carter et al., 1998; Pollock et al., 2010). As an analytical frame, status thus focuses attention on and reinforces the interpretation of low levels of underpricing as an indicator of low levels of uncertainty, and therefore that the IPO firm is a valuable and appropriate alliance partner.

Conversely, celebrity is more congruent with, and thus focuses attention on the investor excitement and emotional buying manifested in high levels of underpricing (Pollock & Gulati, 2007; Seo et al., 2010). Celebrity involves cognitive appraisals that the IPO firm is doing unconventional things that excite audiences about its future potential. These high expectations validate the positive emotions reflected in high levels of underpricing, increasing the firm's desirability as an alliance partner.

Overall, we thus expect that status will enhance the relationship between underpricing and alliance formations more when a firm experiences low levels of underpricing, and we expect that celebrity will enhance the relationship between underpricing and alliance formations more when a firm experiences high levels of underpricing. We therefore hypothesize:

Hypothesis 1: Status will have a stronger positive effect on the relationship between underpricing and alliance formations by newly-public firms when underpricing is low than when underpricing is high.

Hypothesis 2: Celebrity will have a stronger positive effect on the relationship between underpricing and alliance formations by newly-public firms when underpricing is high than when underpricing is low.

The Joint Effects of Status and Celebrity

As interpretative frames, status and celebrity affect not only how other information is perceived and used, but also how possession of one asset affects the interpretation of the other. Prior research suggests that both status and celebrity directly increase stakeholders' willingness to exchange resources with a firm (Rindova et al., 2006; Sauder et al., 2012). Taking a framing perspective, however, reveals a more nuanced picture. Using the lens analogy discussed earlier, different kinds of lenses can provide "positive corrections," for example, by correcting nearsightedness or farsightedness. However, the effectiveness of one lens may be diminished if viewed through a lens with a different type of correction; that is, if the lenses are incongruent in the type of corrections they provide, their combined corrective effects could be negative.

Like lenses with different kinds of positive corrections, status and celebrity both reflect positive audience evaluations, but these evaluations rest on different socio-cognitive content (Rindova et al., 2006). Firms who become celebrities are more likely to engage in non-conforming actions whose outcomes are harder to predict (Pfarrer et al., 2010; Rindova et al., 2006). These actions and their unpredictability make them attractive protagonists for the media and exciting for audiences to follow, thereby generating strong emotional appeal, even if their performance lacks consistency and predictability (Pfarrer et al., 2010). Status reflects the ability to form relationships with prominent and central actors. Their willingness to form these affiliations is presumed to reflect the quality and stability of their behaviors (Podolny, 1994; Sauder et al., 2012). We therefore expect both status and celebrity will have positive direct effects on alliance formations; however, we expect their joint possession will increase

stakeholders' interpretative uncertainty because the different "foci" they promote makes the frames they generate incongruent.

In addition to focusing attention on particular types of information, frames also invoke expectations about characteristics actors will possess and how they are likely to behave (Cornelissen & Werner, 2014). While a celebrity frame by itself may elicit a direct positive response from potential alliance partners, its affective socio-cognitive content, including expectations of non-conforming behaviors, may clash with the expectations associated with high status affiliations. It takes time to acquire status and for positions in the status order to stabilize (Pollock et al., 2015; Washington & Zajac, 2005). Thus, actors carefully guard their status positions by engaging in accepted behaviors consistent with the position (Podolny, 1994), and by affiliating selectively with those who are likely to maintain the status hierarchy.

The joint possession of status and celebrity may therefore create interpretative uncertainty (Weber & Mayer, 2011). To the extent the behaviors associated with celebrity are inconsistent with those desired by high-status affiliates, stakeholder audiences may question the significance of the firm's high-status affiliations, as they may appear to be a by-product of being "start-struck," or a cynical attempt to cash in on the firm's celebrity, rather than the result of careful evaluation. As a consequence, what the high-status affiliations reflect may be harder to interpret, and therefore they may have weaker effects on alliances partners' willingness to form alliances with the firm. We therefore hypothesize:

Hypothesis 3: Newly-public firms will form fewer strategic alliances when they possess both celebrity and high-status affiliations than when they possess one or the other.

METHODS

Sample

Our initial sample consisted of 359 U.S.-based Internet start-up firms that conducted their IPOs between 1995 and 2000. We gathered data from *Compustat*, firm proxy statements, the *Compact Disclosure SEC* database, *Securities Data Corporation Joint Ventures* database, and *LexisNexis*. Consistent with prior research, we defined an Internet firm as a company founded with the intention of using the Internet as the core of its business and its primary basis for generating revenues (Pollock & Gulati, 2007). Older firms that were not founded with the intention of doing business on the Internet but later moved to the Internet were not included. The 1995 to 2000 time period encompassed the emergence of the Internet as a commercial space, and the building and bursting of the dot-com bubble. After accounting for missing data, the final sample included 347 firms. T-tests confirmed that there were no differences in our initial and final sample across salient dimensions such as celebrity, status, underpricing, and the number of strategic alliances formed.

Dependent Variable

Post-IPO strategic alliances. We measured post-IPO alliances as the number of alliances a firm entered into during the first year after its IPO (Pollock & Gulati, 2007). We obtained these counts from the *Securities Data Corporation Joint Ventures* database. They include all forms of strategic alliances included in the database (e.g., marketing agreements, R&D alliances, product licensing agreements, and equity joint ventures).

Independent Variables

Status. We used two different relationships that are important for assessing newly public firms' status: venture capitalist status and underwriter status (Carter et al., 1998; Pollock et al., 2015). We identified whether the lead VC (that is, the VC who had the largest percentage equity stake in the company) had high status and whether a prestigious underwriter led the IPO.

We operationalized venture capitalist status based on the VC's centrality in syndication networks (Guler, 2007; Hallen, 2008; Podolny, 2001; Pollock et al., 2015). We used the VC status data employed by Pollock and colleagues (2015) to create our measure. Using all available data in the *Thomson Banker One Private Equity* database, Pollock and colleagues constructed one-year adjacency matrices for each VC firm. Each annual matrix included co-investment networks based on five-year moving periods starting in 1990 or the VC's founding year, if founded later than 1990. They used all available data when the firm was fewer than five years old. They measured centrality using Bonacich (1987) beta centrality—a measure that accounts for the centrality of the VC firm being assessed, as well as the centrality of the actors they are connected to. The beta value for this centrality measure sets how much of the network is accounted for when calculating centrality at each point; if the beta is set to zero, only the local network is considered. Larger betas reflect more of a network's global structure. Consistent with prior research, they set beta to 75 percent of the reciprocal of the largest eigenvalue (Bonacich, 1987) and used UCINET version 6.399 to calculate VC status.

Because our interest is in the presence or absence of specific categorical affiliations with high-status actors (Deepphouse & Suchman, 2008; Pfarrer et al., 2010), we used this measure to identify the lead VC's status, and coded it 1 if the VC was in the top quartile of the VC status index the year the firm went public and 0 otherwise (Gompers, 1996; Lee & Wahal, 2004).

Underwriter status was operationalized using a measure developed by Jay Ritter, which is a modified version of the measure first developed by Carter and colleagues⁵ (cf. Carter & Manaster, 1990; Carter et al., 1998) that has been used in recent research (Acharya & Pollock,

⁵ Carter and Manaster (1990) originally referred to this measure as underwriter “reputation.” However, as others have noted (e.g., Acharya & Pollock, 2013; Podolny, 1993; Pollock et al., 2010) an investment bank's position in a tombstone announcement reflects its relative standing in a social hierarchy. Thus, measures based on tombstones are more accurately characterized as status measures, not reputation measures.

2013; Lee et al., 2011; Pollock & Gulati, 2007). The index ranges from 0 (low status) to 9 (high status). Again, because we are only interested in categorical high-status affiliations, consistent with prior research we coded high underwriter status as a 1 when the measure's value was greater than 8.75 and 0 otherwise (Pollock et al., 2010). We identified underwriters for the firms in our sample using the *SDC New Issues* database. Our overall measure of status equaled the sum of the two high-status affiliation indicators, creating a measure that ranged from zero (no high-status affiliations) to two (affiliations with both a high-status underwriter and a high-status VC).⁶ Based on this measure, 129 IPO firms (36%) had a status score of zero, 139 firms (39%) had a status score of one (46 had high VC status only, and 93 had high underwriter status only), and 91 firms (25%) had a status score of two.

Celebrity. Prior empirical research on firm celebrity has operationalized the construct as a combination of high levels of public attention and positive emotional responses from stakeholders (Pfarrer et al., 2010). Rindova and colleagues (2006), however, emphasized that celebrities are also more likely to be portrayed in the media as taking non-conforming actions. Therefore, in order to take this aspect of celebrity into account, we adapted the measure developed by Pfarrer and colleagues (2010) and operationalized celebrity as a binary indicator coded 1 if firms possessed all three of the following characteristics: 1) high public attention, operationalized as the count of media articles about a firm in a given year, 2) high levels of positive emotional resonance, based on a content analysis of the individual articles, and 3) the use of non-conforming language in the media accounts, which we determined using a separate content analysis of the individual articles. Firms that did not meet all three criteria were coded as non-celebrities.

⁶ Our results are substantively the same if we dichotomize this measure, coding a firm as high status if it is affiliated with both high-status venture capitalists and underwriters and low status otherwise (i.e., if it is affiliated with one or the other, or neither).

Research has shown that specialized industry media are more influential than the general media in reflecting and shaping market participants' views of young firms (Petkova et al., 2013). Indeed, Petkova and colleagues (2013) argued that industry-specific media are more informed about young technology firms and found that they had a greater effect than the general media on the level of funding VCs provided to high-tech start-ups. Consistent with this argument, we based our celebrity measure on industry media coverage.⁷ Specifically, we used articles published in *Red Herring* between 1995 and 2000. We chose *Red Herring* because it was “the magazine considered a must-read among the technology elite” (Carr & Ives, 2002: C6), making it an authoritative source of information about the firms we study, and likely reflective of potential strategic alliance partners' perceptions. *Red Herring* was a widely-read technology industry magazine, with over 350,000 subscribers during our study period (Carr & Ives, 2002).

Our LexisNexis search generated 6,006 articles published in *Red Herring* that we used for our analysis. We used this text corpus to assess each of our three criteria for celebrity. First, we assessed the volume of media coverage based on the total coverage of all the firms in our sample operating during a given year, and created a dummy variable called *high media coverage* that was coded 1 if a firm was in the top quartile of the number of articles about the firm in each year and 0 otherwise (Pfarrer et al., 2010).

Second, we measured the affective component of celebrity using the Linguistic Inquiry and Word Count (LIWC) 2007 software program (Bednar, 2012; Pennebaker, Francis, & Booth, 2007; Pfarrer et al., 2010; Zavyalova et al., 2012), which counts and categorizes the number of words an article contains using over 80 pre-validated content categories (Pennebaker et al., 2007). We used the positive and negative emotions categories from the LIWC dictionary⁸ and

⁷ We consider the effects using the general media in our robustness tests.

⁸ Please refer to <http://www.liwc.net> for additional information on the validity of the LIWC dictionaries.

calculated the positive emotional content of each article as the ratio of positive affective words to total affective words (i.e., the sum of all positive and negative affective words from the LIWC dictionary). We used this ratio because articles may have high levels of both positive and negative words, and negative words can attenuate the influence of positive words (Pfarrer et al., 2010; Pollock & Rindova, 2003; Zavyalova et al., 2012). We then calculated the mean emotional positivity of all articles about a firm in a given year. The mean positivity represents the tenor of the firm's coverage in each year.⁹ Using these values, we created a dummy variable called *high positive affect* that was coded 1 if the mean positivity of a firm's coverage was greater than 75% in a given year and 0 otherwise. We employed a fixed cut-off because other approaches resulted in restricted lists of celebrities that lacked face validity. The 75% cut-off was also consistent with prior studies of positive media tenor in nascent Internet markets with similar time frames (Rindova et al., 2007). We explore alternative cut-offs in supplemental analyses.

Third, we measured the non-conforming language employed in the media coverage by content analyzing the text corpus using a custom dictionary of non-conforming words. We created this dictionary following the process described by Short and colleagues (Short, Broberg, Coglisier & Brigham, 2010). We used the opposite of the definition for "conform" as our definition of non-conform: "to act against or in contradiction to the prevailing standards, attitudes, practices, etc., of society or a group" (The American Heritage Dictionary of the English Language, 2011). Key words were then chosen based on this definition. We used Rodale's (1978) *The Synonym Finder* to identify synonyms for these key words; we employed a snowball approach whereby we found all the synonyms of each subsequent synonym until they clearly fell outside the definition of non-conforming. This process resulted in 94 candidate words for our

⁹ Other studies have used similar measures of media tenor, including the Janis-Fadner (JF) coefficient of imbalance (Deephouse, 2000; Janis & Fadner, 1965; Pfarrer et al., 2010). We address why these alternative measures are inappropriate for our study in the Discussion.

dictionary. Five expert raters then assessed each word's match with the working definition of non-conforming using a five-point scale. There was strong agreement between the raters (ICC = 0.86). In the end, 29 words were retained. These words are provided in Appendix B.

We then calculated the percentage of non-conforming words in each firm's media coverage and created a dummy variable coded 1 if a firm's media coverage included a significant amount of non-conforming language. Word classes can vary in their degree of influence relative to their frequency of use; for example, negative words tend to be more influential than positive words, and thus relatively few negative words can overwhelm the influence of more frequent use of positive words (Haack et al., 2014; Rozin & Roizman, 2001; Zavyalova et al., 2012). Following this logic, we argue that non-conforming words have a similar influence, because they are more likely to stand out, and thus be attended to more closely and remembered (Pollock et al., 2016; Rindova et al., 2006; Zavyalova, Pfarrer, & Reger, 2016). Thus, firms only need to have a baseline level of non-conforming words to be considered non-conforming. Therefore, we created a dummy variable, *non-conforming language*, that has a value of 1 if the firm's non-conforming language exceeded the 25th percentile of the sample, and zero otherwise.¹⁰

Finally, we created the dummy variable *celebrity*, coded 1 if a firm's high media coverage, high positive affect, and non-conforming language scores were all 1, and 0 otherwise. We coded firms as celebrities if they met these criteria in either the year of their IPO or the year prior to their IPO.¹¹ This resulted in 72 celebrities, representing 20% of our sample. Examples of

¹⁰ Consistent results were found using a more restrictive cutoff of the 50th percentile of non-conforming words, but the number of firms identified as celebrities was decreased by about a third. We also found consistent results if we use a less restrictive cutoff of the mere presence of non-conforming words.

¹¹ We use both the year prior and the year of the IPO for two reasons. First, consistent with past theory and empirical findings (Pfarrer et al., 2010; Rindova et al., 2006), using only one or the other severely limited the variance in this measure, making statistical inferences difficult as firms were rarely coded as celebrities two years in a row. Second, alliance negotiations may have started in the year prior to the IPO year and culminated after the firm went public, or started and been culminated in the year a firm went public. We consider the implications of this decision in the Discussion.

celebrity firms included Amazon.com, Yahoo!, CNET, E*Trade, Pets.com, and VeriSign. Celebrities were distributed relatively equally across each level of status (19 celebrities were in the low-status category, 27 were in the moderate-status category, and 26 celebrities were in the high-status category). This distribution and the low correlation between status and celebrity ($r = 0.13$) provide evidence of our measures' discriminant validity.

Underpricing. Underpricing was measured as the percentage change in stock price on the first day the stock was traded on a national exchange multiplied by 100 (Pollock & Rindova, 2003). We used the natural log of this measure to normalize the distribution. Because underpricing can take on negative values, we added .01 to the positive counterpart of the lowest underpricing value observed before transforming the measure (Pollock & Gulati, 2007). We mean-centered underpricing to reduce nonessential multicollinearity (Edwards, 2009).

Control Variables

Founder-CEO. Prior research has shown founder-CEOs significantly influence post-IPO outcomes (e.g., Certo, Daily, & Dalton, 2001; Fischer & Pollock, 2004; Nelson, 2003). We coded this variable 1 if the CEO was also the founder of the firm during the IPO and 0 otherwise.

Firm age. We controlled for the age of the firm, in years, to account for the potential linkages, resources, and legitimacy that might have arisen over time (Pollock & Gulati, 2007).

Board size. The more board members a firm has, the more connections the firm may have to potential audiences (Pfeffer & Salancik, 1978), including alliance partners. We measured board size as the number of board members identified in a company's prospectus.

Business type. Following prior research on Internet start-ups (Pollock et al., 2009), we controlled for three industry sub-segments in our sample: business-to-business (B2B), business-to-consumer (B2C), and infrastructure companies, using infrastructure as the omitted category.

IPO year. To control for the differences in period effects between the emergence of the Internet (1995–1998), the peak of the Dot-com Bubble (1999), and the bubble’s bursting (2000), we included dummy variables for 1999 and 2000. IPOs before 1999 were the omitted group.

California-based. Geographic distance has been shown to affect the likelihood of alliance formations (Reuer & Lahiri, 2014). Given the concentration of dot-com firms and high-status VCs in California, firms headquartered there might have had better access to potential strategic alliance partners. We therefore included a dummy variable coded 1 if the IPO firm was headquartered in California and zero otherwise.

Cash before IPO. We controlled for the level of cash that each firm had in the year prior to the IPO to account for the need to form alliances based on resource needs before the IPO.

IPO free cash flow. Few dot-com start-ups were profitable at the time of their IPOs, and many generated little or no revenue. Thus, conventional financial performance metrics such as sales and net income are uninformative in this context (Trueman et al., 2000). To assess firms’ financial conditions, we calculated their free cash flow, or the amount of cash generated from operations. We calculated free cash flow as the net change in cash from the year prior to the IPO to the year of the IPO. We collected the data for the year of the IPO from *Compustat* and the year prior to IPO from the IPO prospectuses. This value was winsorized at the one percent level to control for the effects of outliers. We show results based on a standardized “z-score” transformation of this control variable to ease interpretation.

Number of VC firms. Venture capital firms provide a young firm with access to resources (Hallen, 2008; Pollock & Gulati, 2007), including connections to potential alliances partners. We therefore controlled for the number of VC firms that backed each firm.

Pre-IPO alliances. Prior research suggests that firms with more pre-IPO alliances are more inclined to, and are more capable of, forming alliances post-IPO (Pollock & Gulati, 2007). We calculated this measure using the same data sources used to calculate post-IPO alliances.

Method of Analysis

Our dependent variable, post-IPO alliances, is a count variable. We therefore used negative binomial regression with robust standard errors for the initial stage of our analysis (Long, 1997). Since all our hypotheses focus on the relative effect sizes of the different predictors, these regression results alone were insufficient for testing our hypotheses because simple comparisons of coefficients based on our non-linear analysis would be misleading (Long, 1997). Since negative binomial regression lines are nonlinear, the confidence interval for identifying significance varies along the length of the curve. Thus, to test our hypotheses we used comparisons of predicted marginal estimates employing the *mlincom* command in the *spost13* package run in Stata 14 (Long & Freese, 2014). This analysis compares the corresponding discrete change of the estimated effect size for different levels of predictors (Lee & Antonakis, 2014).

RESULTS

Table 1 presents the means, standard deviations, and correlations for our variables. The means and standard deviations were calculated using untransformed measures for ease of interpretation. While the correlations in our data are reasonably low, we tested for multicollinearity in our regressions using Variance Inflation Factors (VIF) and the condition number. We used linear regressions to calculate the VIF for each model; the results show a mean VIF of 1.39 and that no individual VIF was greater than 3.0, well below the recommended threshold of 10 (Cohen, Cohen, West, & Aiken, 2003). The condition numbers were less than 9,

well below the recommended threshold of 30 (Cohen et al., 2003). Thus, multicollinearity is unlikely to be an issue in our analyses.

Insert Tables 1 and 2 about here

As noted earlier, because our hypotheses focus on the relative effects of status and celebrity, they cannot be tested by simply examining the significance of the regression coefficients. However, regression models were a required first step for our analyses. Table 2 presents the results of our negative binomial regressions predicting post-IPO alliance formations. Model 1 includes the control variables, Model 2 adds the main effects of our independent variables, Models 3–5 test each interaction separately, and Model 6 presents the fully specified model. Table 2 provides the inputs for the analyses and hypothesis testing that we present in Tables 3 and 4. In each table, we computed the effect sizes for each level of status and celebrity based on the results in Model 6 of Table 2. We calculated the predicted effect size for each condition using the *margins* command in Stata 14 with all other variables held at their mean (for continuous measures) or mode (for discrete measures). Thus, the analyses testing Hypotheses 1 and 2 assumed that firms did not possess both high status and celebrity simultaneously.

Insert Table 3 about here

Hypotheses 1 and 2 predicted that status and celebrity would affect the positive relationship between underpricing and alliance formations in different ways at different levels of underpricing. Hypothesis 1 predicted that status enhances the positive relationship between underpricing and alliance formations more when underpricing was low than when underpricing was high, and Hypothesis 2 predicted that celebrity enhances the positive relationship between

underpricing and alliance formations more when underpricing was high than when underpricing was low.

We tested Hypothesis 1 by comparing the framing effect of low and high status at low levels (-1 SD) and high ($+1$ SD) levels of underpricing. Table 3 presents the results of our tests. The baseline effect of underpricing when status and celebrity are low (status = 0 and celebrity = 0) is 1.52 alliances at low levels of underpricing and 1.75 alliances at high levels of underpricing. It is interesting to note that the difference between these two values is not significant, suggesting that the relationship between underpricing and alliance formations alone, while significant, does not change significantly across low and high levels of underpricing.

The middle column in each side of Table 3 shows the predicted number of alliances when status is high (status = 2). When underpricing is low and status is high, the predicted number of alliance formations increases by 1.58 alliances, from 1.52 alliances to 3.10 alliances, a marginally significant change ($p < 0.10$). When underpricing is high and status is high, the number of alliance formations increases by 3.14 alliances, from 1.75 alliances to 4.89 alliances, which is a statistically significant change ($p < 0.01$). These two values represent the combined direct effect of status and the moderating effect of status on how underpricing is interpreted (the main effect of underpricing is constant and therefore drops out when the difference is taken). The difference between the two change values ($3.14 - 1.58$) removes the direct effect of status on alliance formations and captures the difference in the effect of status on the relationship between underpricing and alliance formations at high and low levels of underpricing. This is the value that tests Hypothesis 1. This difference (shown in the last column of Table 3) is 1.56 alliances, which is not statistically significant. Thus, although status has a significant main effect on

alliance formations, it does not have a significant moderating effect on the relationship between underpricing and alliance formations. Hypothesis 1 therefore is not supported.

We used the same approach to test Hypothesis 2. The results in Table 3 show that the combined main effect of celebrity and its effect on the relationship between underpricing and alliance formations was not statistically significant at low levels of underpricing—there is a non-significant decrease of 0.07 alliances (1.45 – 1.52 alliances). However, at high levels of underpricing their combined effects resulted in 2.25 more alliances (4.00 – 1.75 alliances), which is a significant effect ($p < 0.05$). The difference between these effects, which removes the direct effect of celebrity and tests how celebrity influences the way underpricing is interpreted, is 2.31 alliances (2.25 – (–0.07) alliances), which is statistically significant ($p < 0.05$). Thus, Hypothesis 2 is supported.

Insert Table 4 about here

Hypothesis 3 predicted that firms form more strategic alliances when they possess either status or celebrity alone than when they possess both social approval assets. Although the coefficient for the interaction of status and celebrity is statistically significant in Model 6 of Table 2, we needed to assess whether the relative change in the joint effect of being both high status and a celebrity was significantly greater than possessing just one social approval asset or the other. We calculated the predicted effect size for each condition with all other variables held at their mean or mode. The analysis of these relative effects is shown in Table 4. Specifically, we calculated effect sizes for high status (status = 2) and low status (status = 0) with and without celebrity, and for no celebrity and celebrity with and without high status. The *Row Difference* column presents the differences for high- and low-status firms when they do not have and when

they have celebrity. When a firm has low status, being a celebrity does not have a significant effect, as the difference between the No Celebrity and Celebrity columns (0.81) is not significant. When a firm is high status, however, also being a celebrity results in 1.65 (2.26 – 3.91) fewer alliances, which is a statistically significant difference ($p < 0.05$) supporting Hypothesis 3. The *Column Difference* row explores the effect of status on celebrity. As this row shows, the difference between being low and high status when a firm is not a celebrity is 2.28 alliances ($p < 0.01$), confirming the main effect of status. However, when a firm is a celebrity, the effect of also being high status does not result in a significant difference in the effect of celebrity on alliance formations. Thus, Hypothesis 3 is supported for the effect of celebrity on status, but there is no significant effect of status on celebrity.¹²

Robustness Tests

We conducted several additional analyses to further explore our theory and results and to rule out alternative explanations of our findings.

Alternative stakeholder audience. To assess the generalizability of our findings, we repeated our analyses using analyst coverage as the dependent variable. Analysts evaluate public firms and provide both summary judgments and regular estimates of earnings expectations to their clients, who use this information to make investment decisions (Rao, Greve, & Davis, 2001; Zuckerman, 1999). Given their time and resource constraints, as well as their preference to issue positive ratings, analysts are selective about the firms they follow (Rao et al., 2001). However, analysts were also under significant pressure to follow newly-public dot-coms during our period of study. The ability to provide analyst coverage affected who was selected to lead the lucrative

¹² We also considered that firms with high status and celebrity might have sufficient resources, and, thus, would seek fewer strategic alliances than other firms in our sample. We conducted t-tests comparing the level of resources of these 26 firms compared to the rest of the sample. There were no statistical differences between the two groups' levels of cash in the year before the IPO ($p = 0.53$) or sales in the year before the IPO ($p = 0.62$). Given the comparable resource bases, we expect similar resource-seeking behaviors between the two groups.

IPOs, and it also led to additional underwriting business (Krigman, Shaw, & Womack, 2001). As discussed, the ambiguity of this era led to extreme levels of uncertainty about what many of these companies were worth. Indeed, since the valuations dot-com firms received were unjustifiable using analysts' traditional valuation methods, analysts searched for alternative ways to assess their potential (Demers & Lewellen, 2003; Trueman et al., 2000).

We measured analyst coverage as the number of analysts following a firm 12 months after its IPO (Pollock & Gulati, 2007). We collected this data from the *Compact Disclosure SEC* database. The results of our analyses are included in Appendix A, and show the same pattern of support for our hypotheses as alliance formations. Hypothesis 1 was not supported—the moderating effect of status at low and high levels of underpricing was not significantly different for firms with high-status affiliations. Hypothesis 2 was supported—celebrity did not have a statistically significant moderating effect at low levels of underpricing, but it did have a statistically significant effect at high levels of underpricing, and the difference between these effects was significant. Hypothesis 3 was also supported for the effect of celebrity on status, but there was no significant effect of status on celebrity. This suggests that our findings generalize to audiences beyond alliance partners.

Alternative media sources. While industry-specific media provide a more relevant indicator of celebrity for our stakeholder audience and in our context than the general media do (Petkova et al., 2013), we explored the effects of the general media by analyzing two other sources of media coverage. First, we collected articles from *Fortune* magazine, a general business media outlet with wide readership that publishes more “feature” or profile-style articles (Pfarrer et al., 2010: 1139), using the same process we described above for *Red Herring*. Our search resulted in 4,131 articles—approximately a third fewer articles than published in *Red*

Herring. Consistent with our expectations, there were 110 firms in our sample that did not receive coverage in *Fortune*, which is approximately a third of our sample. *Red Herring* had no coverage for only 15 companies, four percent of our sample. The average tenor of the articles from *Fortune* magazine (mean positivity of 71%) was similar to those found in *Red Herring* (mean positivity = 73%).¹³ Using *Fortune* as the primary media source resulted in 50 celebrity firms, 22 fewer than we identified using *Red Herring*. Using the same analyses described above, we retained support for Hypothesis 3, but lost support for Hypothesis 2, likely due to range restriction in the celebrity variable.

Second, we assessed how incorporating the general mass media outside of the industry and business press might influence our hypothesized relationships. We conducted an additional search of Major U.S. Newspapers using LexisNexis—representing the English language newspapers that are listed in the top 50 in circulation in *Editor & Publisher Year Book*. There were 1,269 feature articles about our sample firms in the mass media during our sample period—approximately one fifth the number of articles published in *Red Herring*. There were 145 firms (43%) that did not receive any coverage in the general media sample. Using the same methods to calculate celebrity as before, we identified 93 celebrities based on this text corpus. This higher number of celebrities, despite the limited amount of coverage, was driven by the highly positive average tenor in the mass media (83% in our sample of LexisNexis articles) relative to the *Red Herring* and *Fortune* text corpuses. We re-ran our analyses and, unsurprisingly, we did not find support for any of our hypotheses with this set of celebrities. We then restricted our celebrity list to those firms that were celebrities in both the industry (based on *Red Herring*) and the mass

¹³ Business media coverage is generally positive (Deephouse, 2000; Fombrun & Shanley, 1990; Pollock & Rindova, 2003; Zavyalova et al., 2012). The mean tenor of all media coverage from 1985 to 2010—based on our analysis of 257,741 articles from Factiva’s Major News and Business Sources—was 60%. Thus, while the tenor of media coverage in *Red Herring* and *Fortune* during our sample period was higher than the mass media generally, it is not qualitatively different enough to suggest that the sample period is driving results.

media text corpora. This restriction reduced our list to 26 celebrities. Despite this loss of power, the results of this supplemental analysis showed full support for Hypothesis 3, and no support for Hypothesis 2 (While the results are in a consistent direction, the statistical significance drops to $p = 0.13$). Collectively, these results suggest that different media outlets vary in how they cover new high-tech firms, and that celebrity measures should be constructed by assessing the fit between the media and the target audience under investigation (cf. Petkova et al., 2013).

Different operationalizations of media tenor. In addition to the cut-off (we used to measure the positive affective component of celebrity mean positivity of media coverage > 75%), we conducted additional analyses that incorporated more permissive, as well as more stringent cut-offs: greater than 70% mean positivity, greater than 80% positivity, and the top quartile of positivity in a given year. When we reduced the cut-off to 70% (that is, we allowed firms that had mean affective content of 70% to be candidates for celebrity), we saw substantively similar results. Using the top quartile of media tenor in a given year resulted in thirty-eight celebrity firms (53% of the celebrity firms identified originally) being dropped from the analyses. This affected our support for Hypothesis 3. When we increased the cut-off to 80%, the variance in the number of celebrities was also greatly reduced, and removed support for all hypotheses. These results suggest the utility of using a conservative yet face-valid cut-off (cf. Pfarrer et al., 2010), as more stringent cut-offs unduly limit the variance in a celebrity measure.

Endogeneity of underpricing, status, and celebrity. Although status, celebrity, and underpricing were only modestly correlated with each other, we also considered two potential sources of endogeneity: 1) that “better” firms were more likely to be high status and celebrities, and also to form more strategic alliances; and 2) that firms with higher underpricing may also be more likely to have high status and/or celebrity. To assess these concerns we created residualized

versions of our three independent variables by first predicting their value using ordinary least squares regression. We chose to use cash in the year prior to the IPO, number of alliances before the IPO, number of venture capitalists invested, sales in the year prior to the IPO, and the year of the IPO as predictors of status and celebrity. All of the variables except sales significantly predicted status, and only the number of pre-existing alliances significantly predicted celebrity, suggesting the two constructs are not driven by similar factors. We used celebrity, status, and cash in the year prior to the IPO as predictors of underpricing. Status ($p < .01$) and celebrity ($p < .10$) were both significantly related to underpricing. Cash did not have a significant relationship. We took the difference between the predicted value and the actual value of each measure to create the residualized variables. We then used the residualized measures to test our hypotheses. The results were consistent with those reported above.

DISCUSSION

In this study we set out to extend our understanding of how social approval assets influence market exchanges by focusing on how status and celebrity—two social approval assets with different socio-cognitive content—serve as interpretative frames for stakeholder audiences. We investigated this argument by examining how status and celebrity interacted with the level of underpricing at the time of a firm's IPO, as well as with each other.

We found that although status had a direct positive relationship with alliance formations, it did not affect the positive relationship between underpricing and alliance formations. These findings suggest that, at least in our context, status may be used by alliance partners primarily as a signal and not as an interpretative frame. Celebrity, in contrast, appeared to function primarily as an interpretive frame that influenced how other information was perceived. Specifically, although celebrity did not have a significant direct effect relationship with alliance formations, it

enhanced the positive relationship between high levels of underpricing and alliance formations, amplifying the affective interpretation of the information conveyed by high levels of underpricing. However, it diminished the positive relationship between high status and alliance formations, suggesting that an incongruent interpretative frame—such as celebrity—can interfere with status’s direct signaling effects. These results provide general support for our arguments, while offering a more nuanced understanding of how different types of social approval assets can serve as either signals or frames.

Theoretical Contributions

Interplay between frames and signals. In our study status had a clear, positive, direct-effect relationship with alliance formations. This result is consistent with the signaling perspective on high-status affiliations as valuable signals that reduce stakeholders’ perceived uncertainties and influences their decision making (Kim & King, 2014; Podolny, 2001; Pollock et al., 2010; Stern et al., 2014). The signaling perspective posits that high-status actors’ superior access to information and willingness to put their status at risk through an affiliation reduces information asymmetries about the underlying quality of the affiliate (e.g., Connelly et al., 2011; Spence, 1974, Stuart et al., 1999). This explanation, however, assumes the availability of reliable private information about the firm’s future potential that high-status actors can access. In our context, which was characterized by pervasive ambiguity about technologies, business models, and market demands (Hendershott, 2004; Sine et al., 2006), it is unclear that any of the actors had “quality” private information that it could disclose to reduce uncertainty (Trueman et al., 2000). Indeed, Trueman and colleagues offered as an example of the uncertainty about what these firms were worth, “At a time when the stock was trading at \$130 a share, the analyst issued a buy recommendation, even though his official predictions led him to a valuation of only \$30.”

The analyst admitted “he could justify any valuation between \$1 and \$200 by varying his assumptions” (Trueman et al., 2000: 138).

An alternative explanation might be that the focus on analytical information stimulated by high-status affiliations and the associated cognitive processes (Cornelissen & Werner, 2014) created an increased sense of certainty in the stakeholders’ assessments—even if they did not really “know” any more based on the high-status affiliations—and it was this increased, albeit unfounded, confidence in their interpretations that affected their decision making (Heath & Tversky, 1991; Kahneman, 2011). While speculative, this suggests another possible mechanism through which signals can affect perceived uncertainty—what Kahneman (2011) referred to as the “illusion of validity”—that future research should explore.

Our results also suggest that in contrast to status, celebrity serves as an interpretive frame affecting how other information is perceived. Whereas Pfarrer and colleagues (2010) considered how celebrity affected the way relatively equivocal positive and negative information (i.e., positive and negative earnings surprises) were interpreted, we focused specifically on underpricing because it has both analytical and affective components, making it an equivocal information cue. Our results showed that while status had a positive relationship with alliance formations at both low and high levels of underpricing, it did not significantly influence how underpricing was interpreted. In contrast, whereas celebrity did not have a significant influence at low levels of underpricing it significantly enhanced the effect of high levels of underpricing, providing a congruent positive framing for the affective information high underpricing conveys. Our results support Pfarrer and colleagues’ (2010) claim that celebrity creates value by enhancing the positive emotional elements of other information, and extends their research by demonstrating that when the information cue has both analytical and affective components,

affective frames reinforce the effects of the cue's salient affective components. Thus, our findings advance research on the framing effects of social approval assets by elaborating the effects of different frames on different types of information.

In contrast to its effects on underpricing, celebrity reduced, rather than enhanced the positive signaling effect of status on alliance formations. We argued that celebrity focused attention on celebrities' non-conforming behaviors and the positive emotional responses they generate (Heckert & Heckert, 2002; Rindova et al., 2006), and that this focus may undermine the signaling value of high-status affiliations with VCs and underwriters. It is also possible that possessing both celebrity and status may increase concerns that an IPO firm will have a greater ability to capture more of the value created in an alliance, making the alliance less desirable to potential partners, and reducing the number of alliances formed.

In addition to highlighting how social approval assets may function differently as signals and interpretative frames, when considered alongside the findings of Plummer and colleagues (2016) and Stern and colleagues (2014), our results provide an important insight into the joint effects of multiple social approval assets. In their study of how nascent firms obtain outside funding, Plummer and colleagues (2016) found that affiliating with a venture development organization clarified the otherwise uncertain signaling value of other nascent firm characteristics such as renting commercial office space and introducing a product, and increased their effects on the likelihood that a nascent firm received outside funding. Stern and colleagues (2014) found that when an IPO firm's status and reputation were congruent their effect on alliance formations was greater, although the congruence effects were greater when status and reputation were both low than when they were both high. In both cases the combined variables being considered involved similar information cues—that is, the interpretive lenses provided the

same correction—enhancing their combined effects by reducing the interpretive uncertainty associated with a given measure. In contrast, our findings show that when the interpretive frame and signal involve different socio-cognitive content, as with celebrity and status, the difference may increase rather than decrease interpretive uncertainty and diminish the uncertainty reducing value of the signal, even when the values of both social approval assets are high.

Thus, for a social approval asset to act as an interpretive frame that enhances how signals are assessed, the signal and frame need to be congruent with respect to the information being processed and the frame being invoked. That is, to understand how social approval assets create value, we need to account for their analytical and affective socio-cognitive content and to understand how they interact. Future research should continue to explore how differences in the socio-cognitive content of different social approval assets influence their individual and combined effects.

Implications for research on underpricing. Our findings also have interesting implications for research on underpricing, which has proffered a variety of arguments based on information asymmetries to explain this phenomenon (Daily, Certo, Dalton, & Roengpitya, 2003; Ibbotson & Ritter, 1995). Our results suggest that the analytical component of underpricing is relatively constant across levels of underpricing, while high levels of underpricing may be largely driven by emotional factors. Thus, high levels of underpricing may reflect more emotion than uncertainty, and the influence of investors' emotions on other stakeholders can be reinforced by affective-laden frames, such as celebrity. Future research should continue to explore how the information derived from different levels of underpricing may be reinforced by the interpretative frames available for assessing it.

Importance of different stakeholders. Finally, our study expands research on the influence of social approval assets (e.g., Pfarrer et al., 2010) by considering stakeholders other than investors (e.g., alliances partners and analysts), and by considering longer periods of time than the one- to three-day movements in stock price typically explored in prior studies. Considering other stakeholders besides investors is important, because these are the actors that provide firms—particularly new firms—with the resources necessary to compete and grow. They have different interests than investors, and ultimately are making larger and more consequential decisions for their own competitiveness than investors, who can quickly buy and sell stocks. Further, the short time frames for decision making considered in most prior research (e.g., Carter & Manaster, 1990; Pfarrer et al., 2010) may also affect the relative influence of different frames, and thus the way different social approval assets affect decision making. Future research should explicitly take the time available for evaluation and decision making into account in theorizing about the value of social approval assets in different contexts.

Implications for Practice

Our results also have implications for managers. They suggest that developing relationships with high-status actors is a more productive use of a newly public firm's limited time and resources than pursuing celebrity in the media. Further, if a new firm possesses high-status affiliations, it may need to be cautious about courting celebrity, as celebrity can create interpretative uncertainty that degrades the value of these affiliations. However, if there is substantial positive emotion about the firm in the market, celebrity can be helpful in leveraging the positive emotional tide to garner more resources and opportunities.

Limitations and Future Research Directions

Like all research, our study has limitations. Although our sample offers a number of benefits for studying the effects of status and celebrity, it consists of only high-tech firms in an ambiguity-ridden context—the Dot-Com Era. Several other studies have used a similar sample and time frame to explore theoretical issues that are more difficult to study in other contexts (e.g., Aggarwal et al., 2002; Demers & Lewellen, 2003; Krigman et al., 2001; Pollock et al., 2009; Pollock & Gulati, 2007; Reuer, Tong, & Wu, 2012; Rindova et al., 2010). The importance of interpretation in this context enabled us to focus on social approval assets as interpretative frames, rather than just as signals. Classical signaling theory assumes signals are both readily observable and interpretable. Adopting a frames perspective challenges these assumptions and raises questions about the frames through which signals are interpreted. Although we are unable to assess whether our findings generalize to other time periods, we could show that the processes we theorized generalized across two different kinds of stakeholders with somewhat different interests and concerns. Additional systematic investigation of interpretive frames in other time periods and contexts is needed.

Another limitation of our study is that our data are cross-sectional—we could not look at changes in firm status and celebrity or their effects on alliance formations over time. Our data are also archival. Thus, we could only measure these processes indirectly, and could not directly assess how a firm's status and celebrity affected individuals' perceptions. However, similar to Pfarrer and colleagues (2010), our content analysis of thousands of articles can help address the internal validity issues of large-sample archival research by analyzing and coding the perceptions of market participants. Nonetheless, future research using other methods such as lab studies or policy capturing that more directly test stakeholders' psychological reactions to specific

interpretive frames amidst high uncertainty (Gerloff, Muir, & Bodensteiner, 1991) could triangulate on and extend our understanding of the relationships identified here.

A third potential limitation has to do with our choice of a media tenor measure. Tenor has been operationalized several different ways, such as the Janis-Fadner (JF) coefficient of imbalance (Deephouse, 2000; Pollock & Rindova, 2003). Despite its use in organizational studies, there were two reasons we did not use the JF coefficient. First, in our context the media were highly positive (only 235 out of 6,006 articles, or 3.9%, had more negative than positive emotion words). The JF coefficient weights positive and negative coverage equally, which would have likely led to biased outcomes in our sample (Fiske & Taylor, 2008; Zavyalova et al., 2012). Second, the JF coefficient is less reflective of a firm's overall tenor when the volume of media coverage varies greatly across firms (Zavyalova et al., 2012). For example, a firm with only two positive articles written about it would have a higher JF coefficient than one with nine positive articles and 1 negative article in given year. We also chose not to use another alternative, the difference between positive and negative articles (Zavyalova et al., 2012), because this measure conflates positive emotional resonance with the volume of tenor, the other dimension of celebrity. Future research could explore how different tenor measures reflect a study's context and underlying research questions.

Finally, while we considered the status of VCs and underwriters that affiliated with the firms in our sample, some of these VCs and underwriters became celebrity firms in their own right. Capturing their celebrity and exploring its effects on strategic alliance formations is beyond the scope of our study. However, exploring the influence of affiliating with celebrity firms is an interesting avenue for future research.

Conclusion

Social approval assets such as status and celebrity play important roles in how information in markets is interpreted and assessed. This study expands our understanding of the complexities of this process by demonstrating that different social approval assets create value by influencing stakeholder interpretations in different ways. Future research should continue to explore the extent to which social approval assets create value as signals or interpretive frames, and how both analytical reasoning and emotional reactions combine to influence the way we make sense of uncertain and ambiguous information.

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TABLE 1
Summary Statistics and Correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Post-IPO Alliances	2.40	4.48															
2. Status	0.90	0.78	0.25														
3. Celebrity	0.20	0.40	0.16	0.13													
4. Underpricing	0.78	0.96	0.20	0.25	0.12												
5. Founder-CEO	0.52	0.50	-0.07	-0.07	-0.19	-0.04											
6. Firm Age	4.75	3.67	-0.11	-0.13	-0.14	-0.08	-0.07										
7. Board Size	6.24	2.07	-0.02	0.01	0.03	0.04	-0.12	-0.02									
8. Business-to-Business	0.53	0.50	0.07	0.05	0.05	0.01	0.04	0.15	-0.10								
9. Business-to-Consumer	0.29	0.46	-0.03	-0.05	0.04	-0.05	-0.01	-0.09	0.14	-0.69							
10. IPO 1999	0.57	0.50	0.14	-0.05	0.06	0.11	-0.01	-0.10	0.00	-0.07	0.08						
11. IPO 2000	0.22	0.41	-0.19	0.10	-0.18	0.00	0.04	0.08	0.20	0.13	-0.14	-0.61					
12. California-based	0.44	0.50	0.13	0.31	0.11	0.11	-0.14	-0.08	0.08	0.06	-0.06	-0.02	0.01				
13. Prior Cash	9.24	16.19	0.03	0.25	-0.02	0.06	-0.07	-0.09	0.15	-0.05	0.00	-0.16	0.29	0.15			
14. IPO Free Cash Flow	47.12	90.27	0.15	0.21	0.09	0.19	-0.03	-0.03	0.09	-0.01	-0.05	0.13	-0.06	0.00	0.08		
15. Number of VC firms	2.05	1.67	0.09	0.23	0.06	0.18	0.02	-0.08	0.13	0.04	-0.05	0.13	0.06	0.15	0.11	0.03	
16. Pre-IPO Alliances	5.41	7.18	0.22	0.24	0.09	0.07	0.04	-0.03	0.19	0.01	0.00	-0.03	0.16	0.20	0.10	0.03	0.11

n = 359; correlation coefficients greater than 0.11 are significant at the 5% level and those greater than 0.14 are significant at the 1% level.

TABLE 2
Negative Binomial Regression Predicting Post-IPO Alliances

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Founder-CEO	-0.14 (0.15)	-0.08 (0.15)	-0.07 (0.15)	-0.10 (0.15)	-0.05 (0.15)	-0.05 (0.15)
Firm Age	-0.05* (0.02)	-0.04 [†] (0.02)	-0.04 [†] (0.02)	-0.04 [†] (0.02)	-0.04 [†] (0.02)	-0.04 [†] (0.02)
Board Size	-0.01 (0.05)	0.03 (0.05)	0.03 (0.05)	0.03 (0.05)	0.03 (0.05)	0.03 (0.04)
Business-to-Business	0.46* (0.23)	0.39 [†] (0.22)	0.40 [†] (0.22)	0.39 [†] (0.22)	0.41 [†] (0.22)	0.42 [†] (0.22)
Business-to-Consumer	0.18 (0.24)	0.16 (0.23)	0.18 (0.23)	0.16 (0.23)	0.17 (0.23)	0.20 (0.22)
IPO 1999	-0.08 (0.19)	-0.15 (0.19)	-0.15 (0.19)	-0.20 (0.19)	-0.14 (0.19)	-0.21 (0.19)
IPO 2000	-1.47** (0.27)	-1.53** (0.26)	-1.54** (0.26)	-1.56** (0.25)	-1.53** (0.27)	-1.58** (0.26)
California-based	0.22 (0.15)	0.05 (0.14)	0.04 (0.14)	0.04 (0.14)	0.07 (0.14)	0.07 (0.14)
Prior Cash	0.01 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.00)
IPO Free Cash Flow	0.16 [†] (0.10)	0.05 (0.04)	0.05 (0.04)	0.05 (0.04)	0.06 (0.04)	0.06 [†] (0.04)
Number of VC Firms	0.05 (0.04)	0.01 (0.04)	0.01 (0.05)	0.02 (0.05)	0.01 (0.05)	0.02 (0.05)
Pre-IPO Alliances	0.04** (0.01)	0.03** (0.01)	0.03** (0.01)	0.03** (0.01)	0.03** (0.01)	0.03** (0.01)
Celebrity		0.04 (0.17)	0.03 (0.17)	-0.07 (0.18)	0.31 (0.26)	0.39 (0.25)
Status		0.35** (0.10)	0.34** (0.11)	0.34** (0.10)	0.40** (0.11)	0.43** (0.11)
Underpricing		0.31** (0.10)	0.21 (0.14)	0.23* (0.11)	0.31** (0.10)	0.10 (0.14)
Underpricing x Status			0.09 (0.12)			0.10 (0.12)
Underpricing x Celebrity				0.39 [†] (0.23)		0.58* (0.24)
Celebrity x Status					-0.25 (0.21)	-0.48* (0.20)
Constant	0.57 (0.41)	0.22 (0.40)	0.20 (0.40)	0.28 (0.39)	0.11 (0.39)	0.10 (0.38)
Pseudo Log-likelihood	-658.5	-646.5	-646.3	-645.3	-645.8	-643.0

n= 347; robust standard errors in parentheses.

[†] $p < .10$

* $p < .05$

** $p < .01$; two-tailed tests

TABLE 3
Comparison of Effects of Underpricing on Post-IPO Alliance Formations
Conditioned on Status and Celebrity

	Low Underpricing (-1 s.d.)			High Underpricing (+1 s.d.)			Difference in Changes
	Low	High	Change	Low	High	Change	
Status (H1)	1.52	3.10	1.58 [†]	1.75	4.89	3.14**	1.56
Celebrity (H2)	1.52	1.45	-0.07	1.75	4.00	2.25*	2.32*

Differences based on all other variables held at either their means or their modes (for non-continuous measures).

[†] $p < .10$, * $p < .05$, ** $p < .01$

TABLE 4
Comparison of Effect Sizes for the Joint Effects of Status and Celebrity

Variable	No Celebrity	Celebrity	Row Difference
Low Status	1.63	2.44	0.81
High Status	3.91	2.26	-1.65*
Column Difference	2.28**	-0.18	

Differences based on all other variables held at either their means or their modes (for non-continuous measures).

[†] $p < .10$, * $p < .05$, ** $p < .01$

APPENDIX A
Assessing Analyst Coverage

In this appendix, we provide the tables and figures for analyst coverage. After accounting for missing data, the final sample included 328 firms with no differences in our initial and final sample across salient dimensions such as celebrity and status.

TABLE A1
Negative Binomial Regression Predicting Analyst Coverage

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Founder-CEO	-0.07 (0.09)	0.04 (0.08)	0.04 (0.08)	0.04 (0.08)	0.06 (0.08)	0.04 (0.08)
Firm Age	-0.02 [†] (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Board Size	-0.02 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)
Business-to-Business	0.27* (0.12)	0.15 (0.11)	0.14 (0.11)	0.15 (0.11)	0.14 (0.11)	0.14 (0.11)
Business-to-Consumer	-0.05 (0.13)	-0.10 (0.12)	-0.10 (0.12)	-0.10 (0.12)	-0.10 (0.12)	-0.10 (0.11)
IPO 1999	0.12 (0.11)	0.07 (0.11)	0.08 (0.11)	0.06 (0.11)	0.10 (0.10)	0.07 (0.11)
IPO 2000	-0.37** (0.13)	-0.41** (0.13)	-0.41** (0.13)	-0.42** (0.13)	-0.39** (0.13)	-0.41** (0.13)
California-based	0.03 (0.09)	-0.12 (0.08)	-0.12 (0.08)	-0.12 (0.08)	-0.11 (0.08)	-0.10 (0.08)
Prior Cash	0.01 [†] (0.01)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.00 (0.00)
IPO Free Cash Flow	0.21 (0.15)	0.05 (0.12)	0.05 (0.12)	0.04 (0.12)	0.05 (0.12)	0.05 (0.11)
Number of VC Firms	0.01 (0.03)	-0.02 (0.03)	-0.02 (0.03)	-0.02 (0.03)	-0.03 (0.03)	-0.02 (0.03)
Pre-IPO Alliances	0.01* (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Celebrity		0.06 (0.10)	0.06 (0.10)	0.03 (0.10)	0.34* (0.15)	0.33* (0.15)
Status		0.33** (0.06)	0.34** (0.06)	0.33** (0.06)	0.39** (0.06)	0.40** (0.06)
Underpricing		0.32** (0.06)	0.35** (0.10)	0.30** (0.07)	0.33** (0.06)	0.30** (0.09)
Underpricing x Status			-0.03 (0.07)			-0.02 (0.07)
Underpricing x Celebrity				0.11 (0.15)		0.21 (0.14)
Celebrity x Status					-0.25* (0.11)	-0.30** (0.11)
Constant	1.46** (0.20)	1.12** (0.20)	1.12** (0.20)	1.13** (0.20)	1.05** (0.20)	1.06** (0.20)
Pseudo Log-likelihood	-839.5	-809	-809	-808.8	-807.1	-806.1

n= 328; robust standard errors in parentheses. [†] $p < .10$, * $p < .05$, ** $p < .01$; two-tailed tests

TABLE A2
Comparison Effects of Underpricing on Analyst Coverage
Conditioned on Status and Celebrity

	Low Underpricing (-1 s.d.)			High Underpricing (+1 s.d.)			Difference in Effects
	Low	High	Change	Low	High	Change	
Status (H1)	3.12	7.20	4.08**	4.91	10.70	5.79**	1.71
Celebrity (H2)	3.12	3.73	0.61	4.91	8.03	3.12*	2.51 [†]

Differences based on all other variables held at either their means or their modes (for non-continuous measures).

[†] $p < .10$, * $p < .05$, ** $p < .01$

TABLE A3
Comparison of Effect Sizes for Joint Effects of Status and Celebrity

Variable	No Celebrity	Celebrity	Row Difference
Low Status	3.97	5.59	1.62*
High Status	8.87	6.88	-1.99 [†]
Column Difference	4.90**	1.29	

Differences based on all other variables held at either their means or their modes (for non-continuous measures).

[†] $p < .10$, * $p < .05$, ** $p < .01$

APPENDIX B
Non-Conforming Dictionary Terms

Non-Conforming Words (29 words)	
contrast*	nonconform*
deviate*	opposition
deviator	original
differ	pathfinder
difference	pioneer*
different	radical
disagree*	rare
dissimilar	rebel*
distinct	renegade*
diverge*	revolution*
diversif*	trailblazer*
maverick	unlike
misfit	varied
mismatch*	vary
mix it up	