A SOCIAL PSYCHOLOGICAL APPROACH TO CELEBRITY

by

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(Under the Direction of W. KEITH CAMPBELL)

ABSTRACT

Across the humanities and social sciences, researchers have explored the concept of celebrity; without a unified conceptual or operational definition the literature remains fragmented and difficult to synthesize. The fields of social and personality psychology, with their varied and rigorous methodologies and robust theoretical frameworks, are uniquely situated to unite these disparate works with a standard vocabulary and clarified nomological network of related constructs. After a brief survey of the problem area in the introduction in chapter one, chapter two organizes relevant psychological literature into a framework for understanding celebrity as a measurable social phenomenon. Chapter three offers validation for a text-based operationalization of a social process by which celebrity might be studied through media-mediated communication. Chapter four then applies this measure, as well as others, to a traditional lab experiment in which celebrity status is manipulated to explore its effects on participants' communicative behavior. Finally, chapter five explores the importance of non-academic research for the continued exploration of empirical literature about celebrity. The final chapter ends with calls to action to address the necessary training needed to expand the number of social scientists

in non-academic research roles in general, as well as those specifically interested in pursuing the continued refinement and advancement of celebrity studies.

INDEX WORDS: Celebrity Studies, Status, Psycholinguistics, Fan Studies

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At one point I was told that, above all else, I should, "do cool shit."

I really hope this counts.

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CHAPTER 1

A BRIEF HISTORY OF CELEBRITY STUDIES

"…he cannot live but in the opinion of. others, and it is from their judgement alone that he derives the sentiment of his own existence."

- Jean-Jacques Rousseau, *On the Origin of Inequality*

Pop sensation Lady Gaga accepts an MTV Video Music Award wearing a dress made of raw beef. Movie star Tom Cruise professes his love for TV star Katie Holmes on-air and jumps up and down on talk-show host Oprah's couch. Rapper Flo Rida and socialite Nicole Richie make headlines for their (unrelated) DUI charges. Moments like these occupy space in the modern American's memory – but why? Many of us have never met these people and their behavior certainly doesn't directly impact the day-to-day lives of a person on the street. The answer is that they are celebrities.

In his text *A Short History of Celebrity*, Fred Inglis, a cultural historian, explores the concept of celebrity, rooting it to the emergence of both leisurely consumerism and mass journalism in England during the mid-1700s (2010). As artistic talent became commodified and accessible outside of the aristocracy and as the recognition and acclaim that artists received were magnified through the creation of general interest publications like *The Gentleman's Magazine* and daily editions of newspapers, people started to become, as Boorstin would say, "well-known for their well-knownness" (1992). These celebrities, Inglis writes, have won or been conferred celebrity by being "popularly

acknowledged, familiarly recognized, attended to, [etc.]" (2010, p. 57). He applies this formula to actors, musicians, artists, and athletes up to and including the modern era.

Inglis's historical tour of the origins and development of celebrity as we know it today was complemented by communication scholar Kelli Burns's text *Celeb 2.0: How Social Media Foster Our Fascination with Popular Culture* (2009). As Inglis focuses on the way that traditional media and journalism have constructed curated celebrity targets, Burns explores the way these processes translate to the digital space. Unlike early celebrity, modern celebrity is shaped just as much by the fans as it is by media companies – if not more – thanks to bi-directional media. Celebrities, too, have the opportunity to directly engage with their audiences through sites like Twitter, YouTube and Instagram. Partnered with the micro-segmentation of the Internet (Castells, 2001), has vastly expanded the number of people who could assemble and maintain a dedicated group of followers. Celebrity, Burns argues, has shifted from a top-down process controlled by media and entertainment companies, to include bottom-up development of this status.

Coincidentally, the crux of Inglis's definition of the phenomenon of celebrity – that this term "combines knowability with distance" (2010, p. 11) – is shockingly similar to one of the more formative writings on the topic in the post-positivist literature. Horton and Wohl's study to coin the term "parasocial" as a way to describe the one-way media-mediated relationships that pseudo-connect media personae and media consumers was published in the journal *Psychiatry* titled "Mass Communication and Para-Social Interaction: Observations on Intimacy at a Distance" (1956). This paper, which is often cited when communication scholars and psychologists write about characters from TV shows and books, is the closest thing to a guiding text for these explorations but doesn't

speak to the specific distinction of celebrity, leaving much of this work un-operationalized.

In the following chapters I will make the argument that social and personality psychologists are uniquely positioned to advance the subfield of celebrity studies and offer some potential theoretical and methodological advancements of my own. In Chapter 2 I offer a novel theoretical framework to conceptualize celebrity not as its own phenomenon, but as an extreme case of high status; this framework integrates the strong legacy of status work established by social psychologists with considerations of the media-mediated nature of this status dynamic.

In Chapters 3 and 4, I first validate a text-based measurement strategy of a relevant interpersonal process – self disclosure between celebrities and their audience – using a naturalistic digital dataset. I then apply this new linguistic disclosure metric, as well as others from the social psychological literature, to a true lab experiment in which participants wrote response letters to manipulated celebrity/control targets.

I follow these three substantive chapters with a discussion of the opportunity to advance the field of social psychology by advocating for social psychologists entering industry in Chapter 5. In brief, I argue that academic social psychologists have been able to explore many of the questions that guide our field, but those in industry roles are uniquely situated to further advance the area of empirical celebrity.

The subfield of celebrity studies is one of great interest to the layperson but suffers from a lack of consistent operationalization. By highlighting the similarity between celebrity and extant lines of work in the field, I hope to offer evidence for the legitimizing of celebrity studies in social psychology and make a case for its continued

exploration. Leveraging enduring definitions from humanities, validated methodology from social sciences, and valuable datasets from corporations, the interested social psychologist can actively contribute to the clarification and advancement of celebrity studies.

CHAPTER TWO

TRIANGULATING CELEBRITY: USING INTERDISCIPLINARY WORK TO OPERATIONALIZE CELEBRITY STATUS

Whether you're browsing magazine covers in the grocery store checkout line, flipping through radio stations or tv channels, or scrolling down your Twitter timeline, it's nearly impossible to avoid the flood of information about the life and times of celebrities. While these pop media examples certainly are go-to sources for updates about musicians, actors, and on-screen personalities, academics have explored these topics as well, leading to countless articles, dedicated conferences and journals, and hundreds of books aimed at exploring the lives of those deemed celebrities.

But what, exactly, is a celebrity? The work from scholars across economics, history, marketing, sociology/cultural studies, communication, and psychology have varying definitions at both the conceptual and operational levels. This has led to a challenge in the literature: how might findings of an article that focuses on a metric like number of Twitter followers (e.g., Marwick & boyd, 2011) to quantify celebrity be compared to another that uses media appearance (e.g., M. S. Young & Pinsky, 2006). Another concern is that these indicators are directly tied to media processes that evolve and change over time; the number of times an artist's song is downloaded on iTunes may have been a meaningful indicator of an artist's celebrity in the mid 2000s (e.g., Longhurst, 2007), but digital streaming has since superseded downloads – and who is to say something else won't replace streaming?

The solution proposed by this manuscript, then, is this: a construct like celebrity – which has endured since well before the advent of tools like Twitter and iTunes – should be measured not with technological indicators, but by the social psychological processes inherently *underlying* these indicators. Not only is this independent of the ebbs and flows of technological advancement, but it allows for more meaningful application of the robust theories upon which our field is built.

The current manuscript aims to do the following: first, distinguish celebrity from related concepts like fame and power; next, explain celebrity as an extension or extreme case of the well-defined social concept *status*; and finally, using the mutual constitution model, offer considerations for opportunities to synthesize extant work on celebrity from across disciplines into an empirical framework.

What Celebrity is Not

Fame

While the words celebrity and fame often go hand in hand (e.g., Deflem, 2013), these words refer to two related but distinct concepts. Across dozens of cultures and time periods, fame itself is un-valanced attention (Braudy, 1997). The phrase "famous for" suggests that fame is the result of a specific action or accomplishment. Everyone, Andy Warhol stated, gets their 15 seconds of fame.

Measures of the desire for fame focus on the appeal of increased attention (Gountas et al., 2012) and visibility (Greenwood, Long, & Dal, 2013). To study the behavior of individuals focused on achieving fame at all costs, Lankford (2016, 2018) conducted qualitative coding of manifestos written by those who have committed mass shootings. Similarly, Twenge and Campbell (2003) argued that language found in these

manifestos echo scale items used to measure narcissistic grandiosity. People who commit these atrocities aren't worried about being celebrated or even liked; their main goal is to capture the attention of the public.

Celebrity, though, is reflective of the *person* rather than the *attribute* (Cashmore, 2006). A person who is "known for their well-knownness" (Boorstin, 1992) has achieved celebrity in that their title exists beyond being famous for individual actions or accomplishments. And, given that celebrity is an extension of status and not just of attention, the valence of this sustained attention must be positive. An example of this would be Madonna – young generations may not be able to identify why they know the name or a specific song, but they know that she is a celebrity.

Power

Power – defined as control over the use and distribution of valued resources (Keltner et al., 2003) – correlates with high status (e.g., a CEO of a company), but is distinct in both definition and occurrence. Financial power, for example, is often over-estimated for celebrities; boxer Mike Tyson, actor Nicolas Cage, and rapper T-Pain all had to file for bankruptcy at the height of their careers (Michaels & Acevedo, 2019). While a celebrity might be able to translate the attention of their audiences to wealth (though not well – the average click-through rate for an Instagram story ad is less than 1% (Lozan, 2020)), direct and effective monetization of fanbases is not yet possible. Power, then, is distinct from celebrity in economies where positive attention isn't the same as cash.

What Celebrity Is: Status (at Scale)

Despite their various nuances (see Ferris, 2007 for a thorough review), many of the writings from the field of sociology about celebrity focus on its function as a status marker. Milner (2005, 2010) reflects on the conceptual definition of celebrity being an individual whose positive appraisals exceed that which would be predicted by their talent, as well as independent of their political and economic value. While the inclusion of talent complicates measurement strategies, this framework aligns closely with pure status – a concept well-studied by social psychologists.

Status is defined as the accumulation of positive appraisals (Harrington et al., 2006) which leads to respect, admiration, and prestige. Decades of research on status in social psychology have contributed to a wide nomological network from which I draw the following key takeaways summarized by Fiske (2010): that status is a core component of social experiences; that status has both short and long-term effects; and that status affects intrapersonal processes, interpersonal processes, and group processes. Status leads to the stratification of groups which are then organized into social hierarchies.

Social hierarchies are not unique to humans (Sapolsky, 2005) nor are they modern (Page et al., 2017). Status boundaries can be established around meaningful groups: a high school (Milner, 2012) or a corporation, for example. Given that status is a *relative* ranking (S. Fiske, 2010; Milner, 2005), it may be helpful to imagine a normal distribution where stigma can be found on the lower end of status (Major & O'Brien, 2005) and celebrity is at the high tail end.

The difference between the focus of this manuscript and past work on individuals with high status is the question of scale. While high status in a high school environment translates to a difference between a lunch table of cheerleaders and a few hundred peers, musicians, athletes, and actors have millions of audience members keeping up with their every move. Though many of the social psychological processes relevant for studying status in celebrity cases need to be adjusted for media-mediated interactions (for reasons explored later in this manuscript), focusing on the absolute tail end of the status continuum should be useful for testing and advancing theory.

Establishing Celebrity: The Mutual Constitution Model

As mentioned earlier, celebrity is not a novel topic in the social sciences or humanities. The problem, however, is that the extant work – both conceptual and empirical – does not have a shared definition of celebrity. By adopting the theoretical assumption that celebrity is the extreme end of status, a topic about which social psychology has much to contribute, we can begin to more sustainably operationalize who is and is not a celebrity. To do so, it is important to situate celebrity in a framework that captures the levels at which it might be measured. One of the challenging parts of celebrity is, again, the scale at which these individuals are appraised. Instead of drawing boundaries around status groups that align with high school cafeterias or corporate organizations, celebrity status has implications at the much more abstract cultural level.

The mutual constitution model (Markus & Kitayama, 2010) offers a paradigm by which we can understand the mutually-reinforcing effects of self and culture. The self – the "me" which is made up of perceptions, cognitions, emotions, motivations, and behavior – is nested within daily situations and practices, institutions and products, and

societal factors and pervasive ideas (p. 422). In the same way that an individual is influenced to make choices that align with, for example, cultural norms surrounding personal hygiene, that person's decision to shower daily contributes to the expectation that others do the same. This interaction-dominant dynamic system (Eiler et al., 2017) explains why celebrity is so pervasive in so many cultures.

The mutual constitution model can be applied to celebrity by focusing on the intrapersonal, interpersonal, and cultural processes that allow for the establishment and cyclical reinforcement of the accumulation of positive appraisals. The accumulation of status is not immediate – though it can be facilitated (Giacomin et al., 2018) – and fundamentally changes the social experiences of those who attain it. Given this, it follows that celebrity, as an edge case of status, should be able to be detected at the intrapersonal, interpersonal, and cultural levels. The following sections draw a collection of empirical social science work to do so.

Before continuing, it is important to recognize another complex component of celebrity: appraisals of celebrity can vary across individuals. Stated another way: celebrity can be thought of as idiographic or nomothetic. Due to the rapid micro-segmentation of the media landscape (an important component of celebrity development), someone might believe that a target (like the lead singer of a popular but overall niche band) is a celebrity despite many others not recognizing that person at all. This is discussed in the following sections but is worth mentioning before the rest of the model is proposed. For this reason, the terms "audience", "fans", and "members of the public" are used semi-interchangeably in the following sections: *audience* directs much of the attention to the celebrity, *fans* highlights the more directed relationship between celebrity

and other, and *members of the public* allows for network-level change affecting people who may not be interested in (or even aware of) the celebrity.

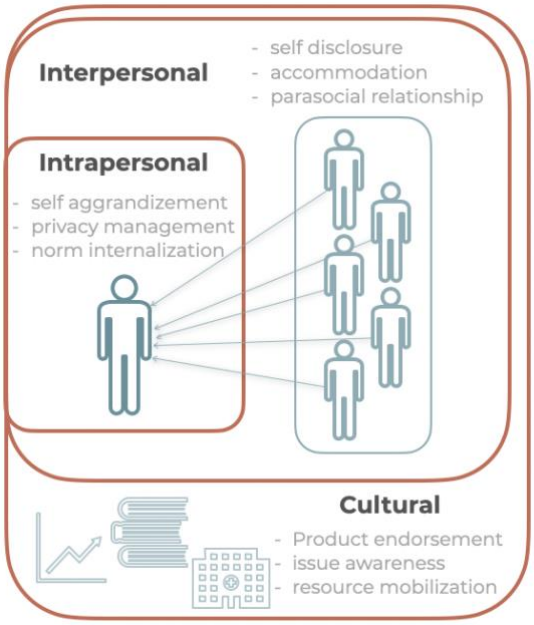

Figure One. An illustration of the mutual constitution of celebrity.

Table One. Markers of celebrity status.

	Markers of Celebrity Status		
Intrapersonal	Self-Aggrandizement	Privacy Management	Norm Internalization
Interpersonal	Self-Disclosure	Accommodation	Parasocial Relationship
Cultural	Product Endorsement	Issue Awareness	Resource Mobilization

Intrapersonal – MEMBERS OF THE PUBLIC

Though celebrity status is inherently relational, it should be able to be measured at the intrapersonal level because of the impact relational dynamics have on the individual (Cooley, 1902). Emergence of celebrity status over time should allow researchers to measure within-person variation in addition to differences between celebrities and non-celebrities. However, the challenge of studying intrapersonal markers of celebrity is, ironically, related to one of the pillars of it: celebrities are not easily accessible to study.

Much of the following section is based on sparse – though provocative – empirical evidence focused on status work broadly.

Self-Aggrandizement & Narcissism. Give that the accumulation of status shifts relational dynamics so dramatically (see the *Interpersonal* section, below), it follows that this change should affect the self-concept (Mead, 1962). Adler and Adler (Adler & Adler, 1989) studied this shift within the context of collegiate athletes and, drawing from symbolic interactionalists like Goffman (1951) and Sullivan (1953), identified the process by which these participants developed a *glorified self*. Unintentional, unwanted, and driven by appraisals of others (both interpersonally and media-mediated), athletes began to develop a self that accepted this new status. This process of becoming too "puffed" or arrogant was a point of stress for many players – they reported wanting to avoid becoming a celebrity. However, the players' athletic success made this unavoidable.

These findings are echoed in part by one of the few psychological studies based on survey data collected directly from celebrities. Young and Pinsky (2006) leveraged Pinsky's *Loveline with Dr. Drew* radio show that featured interviews with celebs to collect responses using the 40-item *Narcissism Personality Inventory* (NPI; Raskin & Terry, 1988). Celebrities scored higher than nationally-representative samples from around the world (Foster et al., 2003), and higher than MBA students (a group traditionally very high in trait narcissism) collected in the same study. While the nature of these data do not allow for temporal comparisons, the number of years a person has been a celebrity was not associated with their NPI scores.

Gentile (2011) explores the interplay of celebrity and narcissism, arguing that celebrity is especially attractive to those with high trait narcissism, as well as having a magnifying effect on individuals' pre-celebrity levels. The second process is consistent with the core tenants of hierometer theory: increases in relative status are associated with increases in narcissism (Mahadevan et al., 2019, 2016). This acquired situational narcissism (Sherrill, 2001) closely resembles the glorified self-processes discussed by Adler and Adler (Adler & Adler, 1989).

Future Directions. Qualitative work proposes a framework by which accumulated appraisals lead to the self-aggrandizement of mico-celebrities in the realm of collegiate athletics (Adler & Adler, 1989). Later, one of the few studies with survey data collected directly from celebrities found evidence supporting a similar narrative – that those in the spotlight score higher on traditional measures of narcissism than members of the public (M. S. Young & Pinsky, 2006). Finally, recent research suggests a model by which this process happens: narcissism is a gauge by which the influence of status can be measured. (Mahadevan et al., 2019). To help synthesize these findings, associations between time since becoming a celebrity and NPI scores may be detected when leveraging a sample of individuals who have not yet reached the level of celebrity, especially since respondents from Young and Pinsky's study were already celebrities enough to have been invited to be on a radio show for celebrities (2006).

Privacy Management. Sustained fame means sustained attention from millions of audience members. For years paparazzi followed celebs as they drove kids to school, went to the grocery store, and met friends for dinner (Cashmore, 2006); now, celebrities are also "followed" throughout their digital worlds on sites like Twitter and Instagram.

The slightest blunder is suddenly magnified by countless media outlets sharing screenshots of poorly-worded tweets or a bad hair day (*Best of celebrity bad hair days*, 2018).

Privacy management theory (Petronio, 2002) is a framework used to explain how individuals choose to share information with others. We develop "rules" regarding distribution of information that we understand as "belonging" to us. However, as we share this information it is no longer privately owned – it's co-owned. Others may then share this information and this sharing may be inconsistent with the rules of the original owner. Petronio is clear to distinguish self-disclosure (more on this in the *Interpersonal* section, below) from disclosure of private information to account for the reality that much of the focal information for this theory is shared about someone other than the speaker – a consideration especially relevant for the discussion of celebrities.

Though privacy management theory discusses the situationally dependent aspects of information sharing, emerging research has focused on the individual tendency to disclose. Researchers in the field of information sciences have developed scales to examine trait-level concern regarding internet privacy (e.g., Malhotra et al., 2004). Specifically, the Dispositional Privacy Concern scale's *Desire for Privacy* subscale (Morton, 2013) offers quantitative support for this line of questioning. The scale reflects a desire for personal space and minimization of disclosure of personal information; privacy management language would describe those who strongly endorse items on this scale (e.g., "I'm comfortable telling other people, including strangers, personal information about myself." [reverse scored]) as having thick privacy boundaries. Desire

for privacy is negatively correlated with extraversion and agreeableness, suggesting that these traits for social engagement and desire for distance are at odds.

As an individual becomes a celebrity, their private information becomes more valuable and they may be motivated to develop and maintain thicker privacy boundaries. Milner's theory of status relations highlights the inherent risk to accumulated status if celebrities are too close to their audience members – they may be seen as too accessible and lose their glamorous mystery (Milner, 2005). Hoffman and Sheridan (2015) offer a more practical reason for celebrities developing privacy boundaries: personal safety. While the celebrity's job is to maintain a likeable persona, management and security create distance between the celebrity and threatening audience members.

Future Directions. Though the desire for fame is inherently rooted in increased attention (e.g., Gountas et al., 2012; Greenwood, Long, & Dal Cin, 2013), once celebrity is achieved and threats – both physical and status – become salient, public figures may re-assess their privacy boundaries. This should be detectable in longitudinal designs in which privacy boundaries are assessed for change independent of more stable and conceptually related personality traits like extraversion and agreeableness (Jensen-Campbell et al., 2002).

Norm Internalization. Status distribution leads to interpersonal stratification in which individuals of similar status form groups (S. Fiske, 2010). These status groups co-construct norms that signify membership and organize and orient new members' behavior (Milner, 2005). Veblen's (1899) classic text *The Theory of the Leisure Class* introduces the term conspicuous consumption to describe the process of signaling status through the outward expression of taste in fine goods. Purchases, he argues, can be strategically

chosen to express not just wealth, but status. Veblen's work is echoed today – articles published in *Forbes* magazine advice purchasing a Patek Philippe watch "to impress business colleagues," but a Rolex "to show wealth, casually" (Adams, 2013). This gatekeeping is an effective way to separate money and status (Todorova, 2014) – after all, money can't buy class (J. H. Young et al., 2010).

As an individual is surrounded by norms of a dominant group, they may begin to internalize these expectations and adopt them as their own (E. Q. Campbell, 1964; Kelman, 1958). In the case of celebrity and conspicuous consumption, this may manifest in an internalization of materialism (Belk, 1985; Richins & Dawson, 1992). The tendency to view the accumulation and presentation of material goods as a way of creating and communicating social value can be measured using scales that assess *the material self*; Bagozzi and colleagues' (2020) recent work that includes a scale measuring the material self by pulling from both Belk's (1985) and Richins and Dawson's (1992) frameworks that explore similar but distinct concepts. The scale, which includes items like "I choose products and brands that will make others evaluate me favorably as a person" and "I tend to evaluate others by the things they own", contains the subscales *material self-projection, materialistic evaluations of others, emotional self-assurance,* and *self deservingness* (Bagozzi et al., 2020). The authors argue that the scale is designed to measure the material self as value sensitive to social environments.

Applied to celebrities, materialism is a way to continue to express status through affiliation with high-status brands. Donatella Versace, Tom Ford, Alexander McQueen, Giorgio Armani, and Alessandro Michele are some of the most elite names in fashion and celebrities wearing their work often mention their close relationship (Klein, 2016;

Minton, 2018). Not only is the new Gucci suit or gown a marker of taste (and, thus, status), but the network by which it was acquired is even more exclusive. The fixation on conspicuous consumption interacting with the lack of equivalence between celebrity and wealth (as discussed above) may explain the tendency for some celebrities spend above their means (Michaels & Acevedo, 2019).

Future Directions. As an individual rises in the status ranks through becoming a celebrity, their internalization of norms should be able to be detected through the development of a material self. This not only allows for the individual to exhibit group membership, it helps to define boundaries between those with high status vs. those with low status.

Interpersonal

Since status is inherently relational, status differences organize the interactions between individuals of different status groups (S. Fiske, 2010). Because of this, theories sensitive to relational dynamics should offer insights into the way celebrity/audience interactions unfold. Unlike much of the relational work regarding status (Hall et al., 2005), the problem of scale, again, should be considered. To account for the one-to-many and media-mediated nature of these relationships, the following section draws primarily from theories focused on communicative behavior, especially that of the audience member.

The core assumption of interpersonal correlates of status as it applies to celebrity is that low-status individuals are motivated to align with high-status individuals. This process, when rooted in the literature of status often cites an agentic motivation – that the goal is to increase status through affiliation (e.g., Cialdini et al., 1976; Milner, 2005,

2010). However, much of the work from communication scholars assumes a more communal motivation – that the goal is to actualize a relationship with the celebrity (e.g., A. M. Rubin et al., 1985). These motivations are not mutually exclusive (Locke, 2000) as could be argued in some of the following examples (e.g., Gabriel et al., 2017a). Regardless of the motivation, the behavioral patterns are similar.

While traditionally employed in dyadic dynamics, the following theories can be applied to the dynamic between celebrities and their audience members – the fan feels as if they have a relationship with the celebrity while the celebrity has a relationship with the generalized audience (Marwick & boyd, 2011). Since the measurement is being taken from the audience member, these approaches take into account the *imagined* relationship with the celebrity – which is why much of the theory below focuses on the fan.

Parasocial Relationships. Parasocial relationships between media personae and media consumers facilitate the expansibility of celebrity; as a media persona is seen by others and accumulates positive appraisals, their relative standing (as opposed to the viewer) increases. The more media exposure a person receives, the larger the audience for potential appraisal they have.

It is important to make clear that these are one-way media-mediated relationships that exist within the mind of the fan (Horton & Wohl, 1956). While not interpersonal, these relationships resemble traditional relationships in that participants report feelings of closeness comparable to those felt about friends (A. M. Rubin et al., 1985) and can actively anticipate the feelings and attitudes of media personae (Perse & Rubin, 1989). The strength of the relationship is also positively correlated with media exposure and engagement (Bond, 2016).

Recent work done by Bond (2018) identifies stigmatized social identity as a predictor of strong parasocial relationships relative to non-LGBTQ peers. Relational motivations explained above are useful for exploring this association. Due to their high rejection sensitivity (Pachankis et al., 2014) and need to belong (McLaren et al., 2008), LGBTQ youth may turn to these media figures because they cannot be rejected (Gabriel et al., 2017a) and to boost self-esteem by being a member of a group (Derrick et al., 2008). Similar patterns of relationship strength are found in those who have experienced trauma, suggesting that these imagined relationships are especially functional for those with increased need for social support (Derrick et al., 2009).

Since stigma may be seen as the opposite of status (Lucas & Phelan, 2012; Major & O'Brien, 2005), those with stigmatized identities may be interested in reducing the distance between themselves and celebrities in order to increase their own standing. This agentic relational motivation is a self-enhancement strategy by which a person of low status is affiliating with a person of high status in order to boost themselves, even if only as it relates to their self-concept (Cialdini et al., 1976). These relationships could offer more than just opportunities for increasing status, but this is the most relevant outcome when discussing celebrity.

Notably, some of these parasocial relationships exceed what many psychologists would consider normal; the Celebrity Worship Scale (McCutcheon et al., 2002) identifies low-level behaviors like consuming media about a celebrity, moderate behaviors like more completely conceptualizing a friendship with the celebrity, and strong behaviors including over-identification, obsession with details, and compulsive behaviors about the celebrity. Scores from the overall scale are positively associated with measures of anxiety

and depressive symptoms (John Maltby et al., 2001) and the final subscale, sometimes referred to as the "borderline pathological" items, correlates strongly and positively with measures of tendency to dissociate and Eriksonian ego diffusion (John Maltby et al., 2006).

These findings have lead some scholars to refer to celebrity worship as a form of pathology (e.g., McCutcheon et al., 2002) – that those fans with parasocial relationships marked with obsessiveness and a blurred self/other distinction may have underlying mental illness – all of which is reminiscent of work done by Gabriel and colleagues (2017a) regarding those who experienced trauma. While more research is needed to clarify the extent to which these tendencies are their own diagnosable condition as opposed to an expression of another disorder (e.g., obsessive-compulsive disorder) with a celebrity target, the upper-limits of the unidimensional celebrity worship scale certainly highlight the importance of this work (Sansone & Sansone, 2014).

Future Directions. Given the complicated relationship between agentic and communal motivations underlying fans' relationships with celebrities, work should be done to better define these pathways, as well as explore both psychological and behavioral correlates.

Social Penetration. Altman and Taylor's (1973) work regarding the steps by which self-disclosure leads to interpersonal intimacy is one of the clearest examples of a communicative process a person uses to establish closeness. The key assumption, that the mutual sharing of self-relevant information allows for two people to feel close, has been found to replicate across time, cultures, and disciplines. As fans build these imagined one-way relationships with celebrities, they learn information about the personae they

attribute to the celebrity themselves (Kim & Song, 2016), and they feel motivated to reciprocate.

In their media ethnography regarding celebrities' media use, Marwick and boyd (2011) specifically reference the process by which celebrities give their fans the illusion of disclosure –enough for the fans to feel as if they have a backstage look into celebs' lives – while still keeping them at a distance. This allows fans to feel as if they have special access to their favorite celebrities.

In content analyses of letters written by fans to celebrity targets, researchers have identified themes of self-disclosure and information seeking – authors wrote about their lives and asked questions about the celebrities' experiences (Dietz et al., 1991; Leets et al., 1995). Computational linguistic approaches found similar patterns in the comments sections of YouTube videos (Doyle & Campbell, 2020; see Chapter 3). These strategies work in interpersonal relationships to establish closeness and, since fans conceptualize these relationships as similar to those with friends (Bond, 2016; A. M. Rubin et al., 1985), it seems to be a viable strategy in these contexts as well.

Future Directions. The naturalistic nature of these studies makes causal claims impossible, but the overall pattern of fans strategically disclosing to establish closeness with a celebrity is a promising avenue by which the influence of celebrity may be operationalized.

Communication Accommodation. Communication accommodation theory (CAT; Giles, 1973) states that individuals are motivated to reduce psychological distance between themselves and desired others by adjusting their communicative behavior. This can be done through verbal and non-verbal behavior at a conscious or unconscious level.

Since its origins, CAT has included considerations of status - those of low status are motivated to mimic the styles of those with high status while those of high status are motivated to maintain distance (see Holtgraves, 2010). This is especially relevant for discussion of celebrity/fan interactions.

While CAT can be detected at the content level of a conversation, it can also be measured computationally at a much more subtle level. Language style matching (LSM; Gonzales et al., 2010; Niederhoffer & Pennebaker, 2002) has been used. To accurately predict relationship quality and closeness (Ireland et al., 2011) by focusing on the unconscious use of function words (Chung & Pennebaker, 2007).

LSM has been used to assess desire for closeness with media personae. Goode and Robinson (2013) analyzed comments left by fans on blog posts ostensibly written by characters from a soap opera and found that those who left more comments (a proposed behavioral stand-in for intensity of relationship) engaged in more LSM.

Future Directions. Given its historic sensitivity to questions of status, CAT can be leveraged to explore the influence of celebrities on fans' linguistic behavior.

Sociological

The number of accumulated appraisals necessary for celebrity to be established requires more than dyadic interactions. The propagation of mass media allowed for communication of a person's name and reputation to far exceed that of their immediate network, thus making fame possible. Increased access to mass media has furthered this process, allowing artists like Justin Bieber to draw almost three million people to concerts across four different continents (Pollstar, 2017). The distribution of status within a

cultural system being concentrated around celebrities leads to clear patterns of behavior measured on sociological scales.

Though some researchers argue that culture can be measured using self-reports of individuals (e.g., Hofstede, 1980), others rely on the analysis of cultural artifacts like children's names (Twenge et al., 2010), sports teams' performance (Doyle et al., 2018), and media portrayals (Robinson et al., 2004) to understand sociological dynamics. In the following sections, I explore three points at which celebrity status has already been explored, suggesting meaningful strategies by which researchers might explore celebrity through a sociological lens.

Market Influence. Some of the most convincing work regarding the influence of celebrity is that which explores the effects of status on markets. Recently, Schimmelpfennig and Hunt (2019) introduced a comprehensive framework that synthesized over five decades of evidence for celebrities' ability to influence members of the public's consumer behavior through endorsements.

Despite the variation in celebrity endorsement studies, the general finding – that an intentionally-selected celebrity is able to positively shift consumer buying intention – has been well-established since the line of questioning first emerged (Friedman et al., 1976). Additionally, to further support the argument that the power of celebrity is the accumulation of *positive* appraisals and not simply fame, which is based on the amount of attention someone is receiving, Amos and colleagues (2008) found that negative associations with an individual have a negative effect on product endorsements. This valanced status, then, is being communicated through affiliation, consistent with Milner's claims (2005).

Outside of the individual-as-purchaser paradigm, celebrity status can also be measured at a systems level by observing the effect of endorsement on the market. Using data from Indian markets, researchers have found that celebrity endorsements in this emerging market are associated with positive returns (Agnihotri & Bhattacharya, 2018). Additionally, these effects are stronger for "niche" celebrities – those with specific fan bases. These findings are important to compare to similar studies conducted with dominant markets with a similar, albeit attenuated, pattern of results (Choi et al., 2005). Emerging dynamic systems are less stable than established systems (Eiler et al., 2017) and, thus, more sensitive to outside influences. A celebrity endorsement in an established market can still shift the needle, though not as dramatically as in a market in which patterns of behavior are still being developed and normed.

Future Directions. Given the wealth of information about those with high status being able to indirectly influence the market, this body of literature would benefit from a clear definition of celebrity. Related work – especially focusing on the breath of influence of celebrity endorsement – may be a meaningful avenue for contributing to this definition. Additionally, interested researchers should explore the ability of celebrities to more dramatically influence emerging products instead of well-established products.

Issue Awareness. Another important pathway by which celebrity influence on society can be measured is through public health campaigns. Actress Angelina Jolie shared, in an op-ed published in the New York Times, her decision to undergo a preventive double mastectomy after having been identified as high risk for breast and ovarian cancer due to having the BRCA1 gene (2013). The op-ed, which explained the process by which the surgery happened, the impact it had on her relationships with her

family, and her reaction to each step of the process, ended with a call to action – specifically regarding gene testing.

In the weeks that followed, reports of genetic screening and calls to related medical helplines increased dramatically across the globe (Desai & Jena, 2016; Evans et al., 2014). More targeted analyses of similar data identified an even steeper increase for high-risk women (Liede et al., 2018). This epidemiological evidence for celebrity influence has been complemented with the results of a US survey that indicated an increase in awareness, but not in understanding of the disease (Borzekowski et al., 2014). Interestingly, participants report little exposure to the primary text (the NYT article); instead, of those who were aware of her announcement, over 80% learned of it through other media outlets. This finding suggests that the influence of celebrities at a sociological level is not hypodermic (i.e., directly administered to an audience; Bineham, 1988); instead, it is exerted by shifting multiple aspects of the media landscape.

Jolie is not the only example of a celebrity shifting public health perceptions. Before the Angelina Effect (Kluger & Park, 2013), the Katie Couric effect (Cram et al., 2003) prompted a brief increase in colonoscopies after the newscaster's launch of a colorectal cancer awareness campaign. Couric's endorsement did not lead to the same dramatic increase as Jolie's, possibly because Couric did not herself have colorectal cancer. Additionally, using data from Google Trends, Kaleem and colleagues (2019) identified peaks in searches regarding multiple kinds of cancer associated with multiple celebrity disclosures of diagnoses; these peaks exceeded the attention each illness received during official campaigns and awareness month, safe for breast cancer.[1]

[1] It should be noted that pop musician Taylor Swift saw similar effects after posting on Instagram in October of 2016 encouraging her 100+ million followers to register to vote; the site Vote.org saw an

Community health-oriented psychologists have leveraged social status to shift health behavior in quasi-experimental designs for decades (e.g., Kelly et al., 2020, 1992) and have found similar patterns of results: that changes in the behavior of high-status individuals affects the behavior of people who are not immediately connected. Celebrities are able to shift awareness, but for larger groups than those in these studies.

Future Directions. Similarly to questions of market influence, literature surrounding the influence of those with high status on sociological levels is robust. Celebrity-hosted telethons are effective (and parodied, Scardino, 2009) for that same reason – with status comes attention which can then be directed toward salient issues.

General Discussion

The above framework synthesizes post-positivist theory from sociology, communication, and psychology to offer meaningful markers of celebrity status. This series of arguments includes testable propositions that address many of the shortcomings of work surrounding celebrity and suggest strategies by which the interested researcher can identify the point at which an individual may be considered a celebrity. In short, this manuscript addresses three major questions relevant to deciding who is and is not a celebrity or, as is sometimes asked, how much of a celebrity they are.

How Long?

According to the arguments above, the development of celebrity status should result in changes to the self-concept. However, it is unlikely that these changes would occur immediately; instead, as positive appraisals from others slowly accumulate, so to

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increase in web traffic and an unprecedented number of registrations, especially in Swift's home state of Tennessee (Grady, 2018; Respers France, 2018). Whether these registrations lead to increased voter turnout is unclear…

should new aspects of the self. These changes, which I argue can be best detected using measures of self-aggrandizement, narcissism, privacy orientation, and materialism, require longitudinal methodology not yet applied to studies of celebrities. Publicly accessible data has been used to explore similar questions, but results should be interpreted with caution given small sample sizes and considerations of authorship (Schaller, 1997).

How Strong?

The next point to consider regarding how much of a celebrity someone is relates to the dynamic that emerges between celebrities and non-celebrities. First, much of the literature regarding media personae relies on measures of parasocial relationships. This is important because, despite never interacting with them, audience members feel a closeness with celebrities that can spill over from perceived friendship to worship and obsession. While parasocial measures are often idiographic in that participants are asked to respond to items regarding their favorite celebrity, both communication accommodation and social penetration are compatible with nomothetic approaches to studying these questions. By assigning an innocuous target with the label "celebrity," it is possible to understand just how much participants will use these targeted linguistic strategies to establish closeness (Doyle & Campbell, under review, see Chapter 4). Thus, asking how strong a relationship is between a fan and their favorite celebrity can be measured both through self-reported attitudes and communicative behavior.

How Wide?

Finally, the question of scale can be addressed using sociological markers of celebrity status. Across public health, economic markets, and resource distribution,

celebrities have the ability to shift attention through a network. This also offers an opportunity for researchers to address the boundary conditions that are often discussed in celebrity research; that is: how can someone with 15+ million followers like Cameron Dallas be considered a celebrity if so many people over the age of 30 have never heard of him? By clearly stating and operationalizing these boundaries, the work surrounding pop singer Rihanna and a local TV newscaster can be included in conversations that acknowledge scale.

By unifying work done surrounding celebrity under this umbrella, researchers can develop an inflection point – a temperature at which fame or popularity boils over into celebrity.

Weaknesses

This framework, despite being thorough, is not without limitations. Milner (2005) includes in his discussion of celebrity an interest in controlling for the amount of positive appraisals a target receives due to their talent. This is an important consideration but challenging to employ in nomothetic approaches given that talent is subjective. While objective markers such as album sales or awards received could be used as abstract stand-ins for talent, the appraisal of the celebrity must be the value independent of talent, both of which are best measured using idiographic self-reports. Additionally, these markers of talent may be unreliable; whether the metric is number of Instagram followers (Ellis, 2019) or position on the New York Times Best Sellers list (Temple, 2017), an interested party can buy success.

This is NOT an exhaustive list of ways by which the interested researcher may argue for or against the declaration that someone is a celebrity. These are a collection of

robust interdisciplinary theories that may be able to be used as indicators of extreme social status and that can be applied despite (and sometimes because) of the unique one-to-many and media-mediated nature of celebrity.

Another critique of this work is that these ideas are indistinguishable from conversations about status. As Milner states, celebrity is a status system – this is a question of scale which, again, requires firm sociological boundaries. The argument in this paper, then, is that extreme status should be studied not only to further expand the literature on status, but to allow researchers to identify meaningful threshold boundaries at which a person with high status is suddenly a celebrity. Luckily, the hearty history of status work in social psychological research means that this critique offers extant resources for measurement – a major challenge of celebrity work.

Finally, these claims are independent of the oft-referenced sociology of celebrity developed by Ferris (2007) in which much of the conceptual work regarding celebrity is organized into one of two camps: celebrity as pathology and celebrity as commodity. Those in the pathology camp cynically disparage the systems responsible for developing celebrity (e.g., mass media; Postman, 1984) as well as the celebrities themselves (Gitlin, 1998). These authors often refer to celebrity as an empty accomplishment that does nothing but damage the very fabric of society (Schickel, 1986; West, 2005). Those whose work focuses on the commodification of celebrity do so to reduce celebrities to entities that can be sold to the masses (Cashmore, 2006; Coombe, 1992).

The independence of this framework from the structure identified by Ferris (2007) is intentional. The assumptions laden within the false pathology/commodity dichotomy dehumanize both celebrities and their audiences in ways that remove two key aspects of

these relationships: first, that these systems are not simply a by-product of mass media and exist, to a smaller scale, within other relational dynamics; and second, that the dynamics surrounding celebrity are not inherently negative. Status is an aspect of social systems (Harrington et al., 2006); celebrity is simply an extreme case of it.

CHAPTER THREE

LINGUISTIC MARKERS OF SELF-DISCLOSURE: USING YOUTUBE COMING OUT VIIDEOS TO STUDY DISCLOSURE LANGUAGE

Self-disclosure, the process by which an individual intentionally shares increasingly intimate information about themselves to others in order to establish interpersonal closeness, is a cornerstone of social psychological and communicative research. Early work explored the existential importance of disclosure for maintaining relationships and fostering a deeper understanding of the self (Jourard, 1966), how extreme levels of disclosure (both too little and too much) is socially undesirable (Cozby, 1972), and measurement models focused on topic-based approaches (Jourard & Lasakow, 1958; Vondracek & Vondracek, 1971). Social penetration theory (Altman & Taylor, 1973), one of the most-cited relational theories in the field of communication, has organized many of these findings into a succinct model, robust across time, culture, and medium (Collins & Miller, 1994).

Despite its well-established position within the social sciences, a majority of attempts to measure disclosure fall into two flawed categories: those that focus on the perceptions of disclosure and those that focus on the outcomes of disclosure. For example, the widely-used scale by Laurenceau and colleagues (1998) asks participants to indicate, using two items, how much they felt they self-disclosed during an interaction. Similarly, the researchers ask participants to judge how much their partner disclosed with

three items. These strategies both reflect participants' perceptions of self-disclosure – an important construct but conflated with individual differences including self-consciousness (Shaffer & Tomarelli, 1989) and attachment style (Chen et al., 2019). Without accounting for these covariates, self-reports of disclosure are challenging to interpret.

Other researchers, instead, focus on relevant outcomes when attempting to measure disclosure. Using the Outness Inventory (Mohr & Fassinger, 2000) which is a double-barreled scale that measures how much members of different social groups know about the participants' homosexual identity and how much the participant discusses their identity with these people, Villicana and colleagues claim to measure verbal disclosure (2016, p. 5). At most these researchers are capturing frequency with which participants discuss their identity, but this is different from measuring disclosure itself. While both perceptions and frequency are important components of disclosure, the intimacy of the disclosure itself is overlooked when it comes to attempts at measurement.

The work that does target the intimacy of disclosure traditionally relies on qualitative content analysis by trained coders reading transcripts of interactions (Joinson, 2001; Sermat & Smyth, 1973). This process is time consuming, resource intensive, and increasingly complex as samples become larger (Burnard et al., 2008; Erlingsson & Brysiewicz, 2017). Additionally, disclosure is understood to be situationally dependent (Antaki et al., 2005) which leads to many coding schemes being designed for specific contexts like disclosing infidelity between relationship partners (Walters & Burger, 2013) or therapists disclosing to their clients (Knox et al., 1997).

An instance of self-disclosure, like all messages, is made up of both content words and function words. Take, for example, the following sentences that communicate similar information: “Spiders are terrifying,” and, “I am terrified of spiders.” While both sentences include the same content - the evaluation of spiders as terrifying - the second communicates an aspect of self while the first states a fact. The difference between these sentences is not the content, but the function words. Pronouns, prepositions, articles, and conjunctions are indicators of communicative style and, as Alport (1961) suggested, markers of individual differences. Chung and Pennebaker’s (2007) review of function words highlight their utility for predicting psychosocial variables reflective of the message itself, the person sending it, and the relational context of the speakers.

Past attempts at developing text-based markers of disclosure have relied, primarily, on number of words in a text (Pedersen & Breglio, 1968), as well as use as first-person pronouns (Barak & Gluck-Ofri, 2007), and emotionality (Levi-Belz & Kreiner, 2016). While these metrics are associated with trained coders’ perceptions of disclosure within messages, much of the relationship is explained by the use of first-person pronouns (see Levi-Belz & Kreiner, 2016, p. 236). While the use of first-person pronouns is certainly relevant for disclosure, the metric on its own has been known to be associated with dozens of other concepts including age, gender, and mental health (see Tausczik & Pennebaker, 2010). However, the most recent release of LIWC suggests a new solution.

LIWC2015 (Pennebaker et al., 2015) includes many of the same metrics as its former releases – most of which reflect the percentage of words in an analyzed text that are found in LIWC’s carefully-constructed dictionaries relating to topics like positive

emotion, work, and swear words. New to the program are summary variables – *Analytic, Clout, Authentic,* and *Tone*. These variables are still reported as percentiles, but unlike other output, these metrics are standardized composite scores calculated based on other published research. The exact formulas are not publicly available.

One of these summary variables, *Authentic*, is based on research surrounding truthfulness. Researchers found that, in both spoken and written language in five independent samples, a combination of pronouns, negative emotion words (e.g., jealousy, tragic) , exclusive words (e.g., but, without), and motion verbs (e.g., move, went) was able to distinguish truth from lies better than both human coders and random chance (Newman et al., 2003). This work, which informed the development of the *Authentic* variable in LIWC2015, is conceptually similar to disclosure – after all, disclosure requires the speaker to be truthful to share intimate aspects of themselves (Fisher, 1984, p. 279). In fact, the LIWC2015 Operator Manual even describes this *Authentic* variable by saying, "higher numbers are associated with a more honest, personal, and disclosing text…" (Pennebaker et al., 2015, p. 22).

The goal of this paper is to validate the claims that LIWC's *Authentic* variable can adequately identify disclosure in text. To do so, we turn to a unique publicly available dataset: YouTube videos. A large percentage of the billions of hours of video content hosted on YouTube is uploaded by "vloggers" – individuals who post video logs of their lives. These content creators' networks have become micro-segmented to reflect interests of their audience members; some discuss fashion brands or fitness strategies while others share stories about their day-to-day activities.

In the mid-2010s, a new genre of video emerged after being posted by some popular vloggers. These content creators expressed to their digital audiences that they were lesbian, gay, bisexual, and/or transgender (LGBT). Soon after, other creators shared their similar stories in which they disclose having other concealable stigmatized identities (CSI; Chaudoir & Quinn, 2015; Quinn & Chaudoir, 2009). "Coming Out" videos were quickly shared by fans and garnered tens of millions of views within a very short period of time. After sharing these videos, many vloggers returned to their typical posts, discussing travel tips, makeup tutorials, and answering fan mail. True to YouTube's motto of "Broadcast Yourself", these YouTubers unintentionally created a robust dataset with which this linguistic marker of disclosure can be validated.

Study 1a

We began by evaluating the linguistic marker of disclosure within an early form of high-disclosure videos: coming out as LGBT. Using a known-groups repeated-measures paradigm, we hypothesized that self-disclosure, measured with both trained coders and LIWC2015's *Authentic* variable, would be higher in coming out videos than in other videos posted by the same creators. We also hypothesized that both measures would positively correlate with each other.

Method

Analyses for all studies were completed in R (R Core Team, 2013) using the *psych* (Revelle, 2018), *lme4* (Bates et al., 2015), and *simr* (Peter Green & Macleod, 2016) packages. All analytic code and data are available as supplementary materials. All multi-level models include creator as a random effect. Studies 1b and 2 also include topic of disclosure as a random effect. Data and analytic code can be found here.

Data Collection

We searched YouTube for videos in which a content creator came out as LGBT to their fans using the search term "coming out LGBT". Videos must have met the following inclusion criteria: the content creator must be the only person in the video, they must directly address their audience (a "vlog" setup), and they must be expressing their CSI – not recounting another time that they came out to someone else. Once these high disclosure event (HDE) videos were identified, we collected YouTube's automatically generated transcripts, as well as video meta-data including number of comments, views, and date posted. We then identified up to five videos before and five videos after the HDE that followed similar inclusion criteria and collected the same information. A total of 71 transcripts were successfully collected.

Measures

Disclosure Language. LIWC2015 is a text-analysis software that calculates the number of words in a text that fall into various dictionaries. The psychometric properties of LIWC have been well-established elsewhere (Tausczik & Pennebaker, 2010). Newman and colleagues' (2003) work exploring features of truthfulness lead to the generation of a LIWC summary variable called *Authentic*; scores for this variable are standardized and range from 0 to 100 with higher scores indicating more, "honest, personal, and disclosing text" (Pennebaker et al., 2015, p. 22).

Disclosure Ratings. Following protocol. From Barak and Gluck-Ofri (2007) for coding observations of disclosure in online forums, we had trained coders evaluate each transcript for amount of self-disclosure regarding information, thoughts, and feelings using a three-point scale ("low", "medium", and. "high"). Coders' ratings were then

averaged such that each transcript was assigned a continuous value between 1 and 3 inclusive.

Four coders rated all 71 LGBT coming out videos; interclass correlation. With fixed raters' means (ICC3k; Shrout & Fleiss, 1979) indicate satisfactory inter-rater reliability, $r(70, 210) = .91$, $p < .001$, 95% CI: [.88, .94].

Video. Videos were coded such that HDE was listed as the 0^{th} event, videos posted before the HDE were listed as a negative value, and videos posted after were listed as a positive value. In one case, a creator's coming out video was posted across two separate videos (part one and part two); in this case, both videos were coded as HDE. For planned contrasts, all non-HDE videos were compared to HDE.

Results

A linear mixed model in which videos were nested within creator identified significant differences in disclosure language (LIWC's *Authentic*), $F(10, 54.70) = 2.53$, $p = .014$. A planned contrast comparing HDE to all other videos was significant, $\beta = .10$, 95% CI: [.03, .16]. The same pattern of results emerged when using disclosure ratings as the DV for both the omnibus test, $F(10, 53.19) = 3.95$, $p < .001$ and planned contrast $\beta = .15$, 95% CI: [.10, .21]. Observed power, based on 1000 iterations, for the overall MLMs were .942 and .995, respectively.

Disclosure language and disclosure ratings positively correlated, $r(69) = .38$, $p < .001$, 95% CI: [.16, .57].

Discussion

Results indicate support for both hypotheses: disclosure language and disclosure ratings were both higher in videos in which content creators came out as LGBT than in their other videos and these two metrics were positively correlated.

Study 1b

To further investigate the linguistic markers of disclosure, we repeated study 1a with additional topics of self-disclosure: HIV and mental illness. Though the exact formula of *Authentic* is unpublished, the work on which it is based primarily relies on function words as opposed to content and, thus, is blind to the actual topic of conversation. Because of this, we anticipated a similar pattern: that coming out videos would have higher levels of disclosure language and disclosure ratings than other videos and that these two measures would be correlated.

Method

The method for study 1b mimicked study 1a except using the search terms "coming out HIV" and "coming out depression" and "coming out anxiety" to assemble the corpus of transcripts, as well as a modification to self-disclosure ratings (described in the next paragraph). A total of 143 transcripts were collected across 17 content creators.

To reduce rater burden, transcripts were rated by a random two of the four original coders; interclass correlations accounting for random raters means (ICC2k; Shrout & Fleiss, 1979) indicate high inter-rater reliability, r (139, 417) = .84, $p < .001$, 95% CI: [.72, .89].

Results

Before running the analyses, we used the *simr* package (P Green & MacLeod, 2016) to complete a power analysis based on effects found in study 1a. Simulations for the overall disclosure language and ratings models suggested anticipated power of .973 and 1.000, respectively.

The linear mixed model in which videos were nested within creator within topic identified significant differences in disclosure language as a function of video, F (10, 114.16) = 2.85, p < .01. The planned contrast comparing HDE to all other videos was also significant, β = .09, 95% CI: [.05, .13]. The same pattern of results emerged when using disclosure ratings as the DV for both the omnibus test, F (10, 116.24) = 9.56, p <. 001, as well as the planned contrast, β = .14, 95% CI: [.11, .18].[2]

Disclosure language and disclosure ratings, again, positively correlated, *r*(138) = .39, p < .001, 95% CI: [.24, .52].[3]

We then decided to run an exploratory analysis to test *Authentic* against other published models of text-based disclosure using all three disclosure topics. Barak and Gluck-Ofri (2007) propose using total word count (*WC*) and use of i-pronouns (*ipron*); Levi-Belz and Kreiner (2016) propose total word count, use of i-pronouns, and emotionality (*affect)*. While all three models outperform a null model (chi square values range from 29.36 to 52.47, all p values < .0001), the model using only *Authentic* has better model fit than the others. See Table Two for fit statistics.

Discussion

[2] We also ran a model including all three topics which reflected the same pattern, F (10, 178.67) = 4.20, p < .0001. The planned contrast was significant, , β = .09, 95% CI: [.06, .12].

[3] Across all three topics the correlation between disclosure language and disclosure ratings remained significant,
r (209) = .38, p < .001, 95% CI: [.26, .49].

These results further support those reported in study 1a: that while coders' ratings of self-disclosure are the gold-standard for assessing self-disclosure within the context of YouTube videos, the pattern remains strong when using an automated text analysis software. See Figure Two.

Table Two. Fit statistics for models predicting disclosure ratings across all three topics.

Name	LIWC Variables	AIC	BIC	Log Likelihood	$\Delta \chi^2$
(null)	none	359.42	369.47	-176.71	
(Barak & Gluck-Ofri, 2007)	*WC* *ipron*	336.06	356.17	-162.03	29.36**
(Levi-Belz & Kreiner, 2016)	*WC* *ipron* *affect*	333.50	356.96	-159.75	4.56*
(all)	*WC* *ipron* *affect* *Authentic*	281.90	308.71	-132.95	53.60**
(Pennebaker et al., 2015)	*Authentic*	310.95	327.71	-150.74	52.47**[4]

Note: * indicates p < .05, ** indicates p < .001

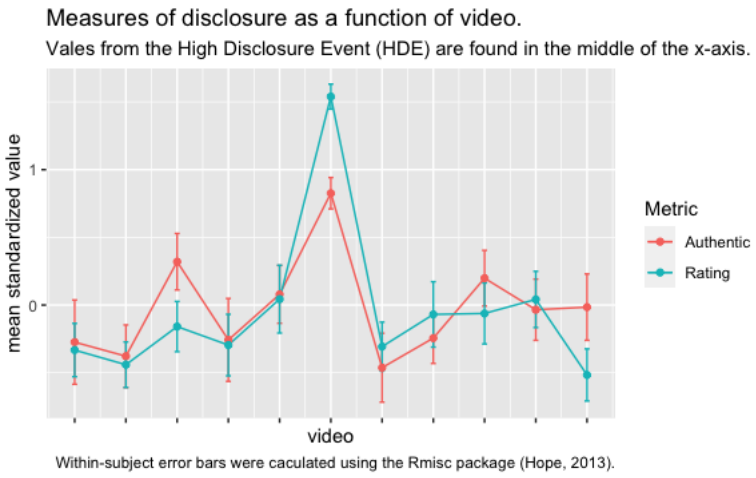

Figure Two. Standardized values of LIWC's *Authentic* variable compared to coders' ratings of disclosure across all video topics.

[4] Compared to null model.

Study 2

Jourard and Laskow's (1958) early writing about disclosure introduces what they refer to as the dyadic effect – that disclosure begets disclosure. Altman and Taylor's (1973) Social Penetration Theory formalizes this process by reflecting on the tendency for members of a dyad to offer reciprocal self-disclosure. While audience members' relationships with content creators are not as dyadic as face-to-face relationships, the comment section of YouTube videos allows viewers to send messages to the content creator in the hopes that the creator might respond.

Additionally, due to the increased intimacy associated with disclosure and the tendency for audience members to more actively engage with content posted by those with whom they feel they have a close relationship (Gabriel et al., 2017b; Perse & Rubin, 1989; A. M. Rubin et al., 1985), we anticipated a positive relationship between video disclosure and video meta-data. These meta-data are behavioral markers of the amount of interaction YouTubers are garnering on their videos.

We hypothesized a positive relationship between the amount of disclosure in the transcript of YouTube videos and the comments left on the videos. We also hypothesized that video authenticity should predict the number of views, comments, and likes that each video has, given that disclosure should enhance the relationship between audience members and the content creator (R. Rubin & McHugh, 1987).

Method

Data Collection

Using a JavaScript command line utility (Klostermann, 2017), we scraped (downloaded) all comments from the videos used in studies 1a and 1b. Within the weeks

between studies some of these videos were removed, leading to a reduced sample. Additionally, some videos' comments could not be scraped, likely due to the high number of comments (between 69,000 and 169,000+ comments at the time of attempted scraping).[5] A total of 1,230,322 comments were scraped from 216 videos (94.9% of the original videos).

Measures

Video Disclosure. LIWC-generated measures of *Authentic* used in studies 1a and 1b were retained for study 2.

Comment Disclosure. After being scraped, only comments (not replies to other comments) were passed through LIWC. All comments with a score of 0 on the *Dic* (a measure of the percentage of words in a text that are contained in LIWC's English dictionary) indicator were removed; this is a crude but effective way of removing comments made exclusively of graphics (e.g., emojis) and many comments written in languages other than English. A total of 514,312 (41.8%) comments were retained. The median *Authentic* metric for each set of comments was used to reflect the amount of comment disclosure for each video.[6]

Video Meta-data. Meta-data were collected but remained unanalyzed during studies 1a and 1b. Number of views and number of comments were recorded exactly as they appeared on the video page while transcripts were being collected. Because of the

[5] Unfortunately, this affected HDE videos more so than non-HDE videos, specifically within the LGBT topic group. However, the number of comments metadata variable was unaffected.
[6] Supplemental materials include the analysis run using the comments' mean scores which identify a similar pattern ($p < .001$), though attenuated due to extreme skew. Median values are not as sensitive to skew caused by our generous inclusion criteria of any comment with a *Dic* value > 0.

way YouTube displays likes, any number over 1000 was estimated to the nearest hundreds place.

Results

A mixed-effect multi-level model in which video disclosure was used to predict comment disclosure with creator within topic indicated a significant effect, $F(1, 192.65) = 17.26$, $p < .001$, $\beta = .28$, 95% CI: [.15, .42].

Video disclosure also significantly positively predicted meta-data for both number of views, $F(1, 1186.1) = 3.95$, $p = .047$, $\beta = .12$, 95% CI: [.00, .24], as well as number of comments, $F(1, 195.84) = 4.36$, $p = .04$, $\beta = .14$, 95% CI: [.01, .26]. The relationship between video disclosure and likes was marginally significant in the anticipated direction, $F(1,203.18) = 3.41$, $p = .067$, $\beta = .11$, 95% CI: [-.01, .22].

Discussion

These results support the relational aspect of disclosure that Jourard (1966) defines as the dyadic effect – that disclosure from one member of a dyad (in this case, video disclosure) is associated with disclosure from the other (average comment disclosure). Additionally, disclosure is predictive of not only reciprocal disclosure, but other measures of audience engagement, including total number of views and comments. Given that YouTube's monetization structure is based heavily on audience engagement metrics (Han, 2018), these findings are important for content creators to keep in mind when planning their content.

General Discussion

Across two studies, results indicate that a metric generated from a word-count software moderately correlates with trained coders' ratings of disclosure and tracks the

pattern anticipate in regard to HDE videos compared to creators' other videos. Though these patterns were stronger when measuring disclosure using raters (see Supplemental Materials), the goal of this paper was not to say that LIWC output should entirely replace content coding; instead, we were interested in offering validation for the utility of LIWC's *Authentic* variable for predicting disclosure. While text analysis strategies are not perfect (see Boyd & Schwartz, 2020 for a history and critique of LIWC and related softwares), this strategy is a useful alternative when the number of texts to analyze is large. It took our trained coders weeks to complete their ratings for video transcripts; it too LIWC less than a minute to analyze transcripts and comments combined.

Though the quasi-experimental nature of these data make causal claims impossible, repeated time-series with reversal designs are some of the most robust designs for exploring associations when experimental manipulation is not an option (Miller et al., 2019). Multilevel modeling allowed us to isolate the effect of disclosure, controlling for repeated measures of video within different creators and topics of disclosure. Given that the data used are observations of publicly available information across different CSI groups posted over an 8-year span (2012 to 2020), we argue that the patterns identified here reflect processes likely to be found in other videos and, possibly, other incidences of disclosure. Additionally, one of the strengths of this approach is the (anticipated) focus on function words as opposed to content words. This means that this LIWC indicator is blind to the disclosure being shared – it is based on *how* something is being shared more so than *what* is being shared. Of course, since the formula by which *Authentic* is calculated is not published, there may be some inclusion of content words.

However, our analyses were consistent across video topic which makes this less of a concern.

On a related note: the careful reader of Table Two may have noticed that, when comparing all models, the inclusion of all four predictors (*WC, ipron, affect, Authentic*) significantly improved model fit. Without knowing the process by which *Authentic* is calculated, we cannot endorse using this strategy to avoid potentially repetitive predictors. However, fit indices still outperformed other published models with just *Authentic* as a predictor.

Future research should expand on these findings by testing the same pattern on other forms of disclosure, ideally in a setting in which disclosure could be manipulated within speaker and about information other than CSIs. Working with social media data is challenging and there are no standard approaches to cleaning and screening assembled datasets (Stieglitz et al., 2018). We opted to use generous inclusion criteria and accounted for artifacts using modified measures of central tendency (using the median *Authentic* metric for comments as opposed to the mean); future research may use more stringent designs to further refine potential text-based metrics of self-disclosure.

The work aimed to validate the utility of a fast, broad, and easily accessible metric for quantifying self-disclosure in transcripts and text. In addition to the known-groups paradigm helpful for establishing criterion validity (Hattie & Cooksey, 1984), we also demonstrated that this one-item metric was able to predict associated meta-data.

CHAPTER FOUR

JUST TO CHAT, YOURS TRULY:

AN EXPERIMENTAL EXPLORATION OF LETTER WRITING TO CELEBRITIES

The impact of celebrities on public life cannot be understated. From Kim Kardashian's half-a-million-dollar price tag for an Instagram endorsement (K. Taylor, 2019) to LeBron James's billion-dollar lifetime deal with Pepsi (Ricks, 2021), the celebrity economy is stronger than ever before thanks, in part, to the direct access offered by social media sites (Stever & Lawson, 2013). The parasocial – one-way media-mediated (Horton & Wohl, 1956)– relationships that audience members have with celebrities are positively associated with outcomes ranging from perceived social support (e.g., Gabriel et al., 2017) and belongingness (Paravati et al., 2020) to impulse buying (Park & Lennon, 2004) and consuming additional media content (R. Rubin & McHugh, 1987). While the literature surrounding perceptions of parasocial relationships as similar to friendships is well-established (Koenig & Lessan, 1985; A. M. Rubin et al., 1985), the process by which members of the public attempt to actualize these friendships is lacking.

Celebrities are difficult to access simply by the nature of them being celebrities – their increased status means that, for a variety of reasons, they must maintain distance from members of the public (see Milner, 2005, 2010 for a thorough review of celebrity as a status system). Increased status also may partially explain why non-celebrities are desperate to connect with celebs, often making personal safety needs especially relevant

for those in the public eye (Hoffmann & Sheridan, 2015). While this makes many traditional interaction-based research paradigms for studying relationships infeasible, some robust social and communication theories translate well to studying these asymmetric relationships through behavioral processes (i.e., actual communication), not just outcomes (i.e., relationship satisfaction scales). Specifically, we will briefly describe social penetration, communication accommodation, and status relations as justification for an experimental letter-writing task to better understand these relational processes.

Social Penetration

Social penetration theory (Altman & Taylor, 1973) posits that the strength of interpersonal relationships depends on the amount of intimate information that is disclosed between two parties. This process of disclosure can be naturally occurring or quickly induced in laboratory settings (Sedikides et al., 1999) and leads to feelings of interpersonal closeness. Disclosure isn't necessarily symmetric and reciprocated (e.g., Cozby, 1972) though conversational partners often feel motivated to reciprocate disclosure to maintain and deepen the relationship (Antaki et al., 2005; Derlega et al., 1973; Sprecher et al., 2013).

Perse and Rubin's (1989) early work regarding the perceptions of disclosure in parasocial relationships establishes that, while disclosure by – for example – a television character may not apply to the actor playing the character, audience members mis-attribute their feelings of closeness – of knowing the target and being able to anticipate their behavior – to the actor. More recent approaches using both professional and personal disclosures on Twitter echo the same pattern; participants feel closer to

celebrities who share information about their lives, even though the process is asymmetric (Kim & Song, 2016).

In the early 1990s, Dietz and colleagues' (1991) explored the other side of the equation: letters written to Hollywood celebrities. Their findings, which were based on a collection of nearly 1800 letters which were identified by a security consultation agency as being threatening or obscene, identify that nearly half (41%) of the authors of these letters cast themselves as friends, advisers, or acquaintances of the target (p. 199). Many of these letters also included requests for face-to-face (40%) or mail or telephone (39%) interaction (p. 200). In a conceptual extension, Leets, de Becker, and Giles (1995) analyzed non-threatening letters to celebrities pulled from the same source. These letters also included markers of desire for closeness; specifically making a request (like for an autograph) and asking questions about the celebrity's life. In the same study, researchers also collected survey responses from college students and found that desire for affiliation and questions about the celebrity's life were the top motivations for contacting a target.

Across both of these studies, letter writers engaged in disclosure themselves – by telling the targets information about themselves – and prompted disclosure from the targets – by asking questions about their personal and professional lives. Given that the goal is to actualize a dyadic relationship with the target, this behavior is consistent with social penetration theory.

Communication Accommodation

Communication accommodation theory (CAT; Giles, 1973) argues that individuals change their language to reflect attitudes toward conversational partner(s). While this can take many forms (see Gallois & Giles, 2015 for a thorough review), the

most relevant for the current study is *convergence* – the process in which a speaker adjusts their language to become more similar to someone else. A recent meta-analysis of CAT literature found evidence that the accommodation effect is moderately strong (r = .30) and robust across setting, experimental/correlational designs and actual/perceived communication. Of note, effects found in student samples were significantly stronger than in non-student samples ($Q = 11.70$, $p < .001$; p. 123).

Psychologists have developed an operationalization of CAT that goes by a slightly different name (Giles, 2016). In order to computationally analyze written instances as well as transcribed verbal interactions for evidence of synchrony (an almost identical concept to convergence), researchers turned to Pennebaker and colleagues' *Linguistic Inquiry and Word Count* software (LIWC; 2015) when developing a new metric: language style matching (LSM; Niederhoffer & Pennebaker, 2002). Both theoretical frameworks – CAT and LSM – overlap in that they trace back to the similarity-liking hypothesis (Byrne, 1961): that similarity leads to affiliation.

By relying entirely on function words (e.g., pronouns, articles, prepositions, etc.), the calculated LSM metric is independent of content words and, thus, can be computed regardless of the topic of conversation. LSM has been shown to be predictive of a host of positive relational outcomes including interpersonal romantic relationship initiation and longevity (Ireland et al., 2011), professional success (Ireland & Pennebaker, 2010), and small-group collaboration in in-person and computer-based settings (Gonzales et al., 2010). Instead of focusing on *what* participants are saying, LSM is based on *how* they say it. Most relevant for the current study is the application of LSM to parasocial relationships.

Harkening back to some of the foundational parasocial work from the 1980s (e.g., Perse & Rubin, 1989; A. M. Rubin et al., 1985; R. Rubin & McHugh, 1987), Goode and Robinson (2013) focused on the relationships between fans and characters of soap operas. A popular show a website full of supplemental material, including blog posts ostensibly written by the characters featured on the show[7]. Fans were able to leave comments on these individual blog posts, giving researchers a collection of texts to analyze for evidence of LSM. Their analysis revealed similarity between posts and affiliated comments and that this similarity was positively associated with frequency of comments left by fans. The authors argue that this is evidence that those committed to the characters (a proxy for strength of para-social relationship) engage in more LSM than casual viewers.

Theory of Status Relations

A celebrity is someone whose social status (their accumulated positive appraisals) outweighs that which would be predicted by their talent (Milner, 2005, 2010). While this definition creates some challenges for operationalization, it offers a clear baseline definition: a celebrity is someone with noticeably high status. And, given that social hierarchies are often based on status (Magee & Galinsky, 2008), it follows that celebrities can be seen as the top of the social food chain.

Status is inherently relational – for one person to have status it means that other people must not (S. Fiske, 2010). This dynamic, which can be found everywhere from corporations (Campbell et al., 2011) to high school cafeterias (Milner, 1994), has

[7] Though, realistically, these were written by an underpaid college interns.

implications for linguistic behavior at both the cultural and interpersonal level. For example, a review of over one million texts indexed through Google Books over 100+ years identified an increase in female (she, her, hers, herself) relative to male pronouns that strongly correlated with indicators of status for women including educational attainment and labor force involvement (Twenge et al., 2012). Status also influences the way that people communicate interpersonally.

Given the extensive work surrounding the tendency for those of high status to be more other-focused (Blader & Chen, 2012) and the social nature of pronoun use (Chung & Pennebaker, 2007), Kacewicz and colleagues (2014) identified, across five independent studies – including experiments and observations as well as written and spoken word – linguistic behavior that reflected status. Specifically, lower-status individuals used the first-person singular pronoun, I, more than those with high status who preferred the first-person plural, we. Additionally, high status individuals used second-person pronouns at higher rates and low status individuals used more tentative words – like "maybe" and "possibly" – more often. This work has since been applied to many status systems, including Saddam Husain's regime (Hancock et al., 2010).

The Current Study

The literatures reviewed above offer a helpful framework by which the influence of celebrity status may influence the language found in letters written by audience members. However, it is important to point out that the three studies that explore the application of these theories to celebrities themselves suffer from a large methodological flaw: in both fan letter studies (Dietz et al., 1991; Leets et al., 1995), as well as the blog post study (Goode & Robinson, 2013), analyses did not include comparison groups to

contextualize these findings. That is: these studies do not offer insight into how these communication strategies reflect a fan's commitment to the artist themselves. How might these communication strategies be unique to communicating with celebrities if they cannot be compared to what's said to non-celebrities? Fan letters (or, in one study, comments) don't offer the opportunity for researchers to test the influence of celebrity status without also conflating these results with fan-ness.

While Goode and Robinson (2013) use number of comments as a stand-in for strength of parasocial relationship, the fact that all authors in these three studies are going out of their way to write these letters in the first place puts them at a level of fandom that many casual viewers may not ever reach. A study more sensitive to level of commitment by a fan should help to refine these patterns.

To combine the strengths of the theories explored above, as well as to address the methodological flaws of the studies specifically applied to celebrity status, we designed an experiment in which participants completed a response letter writing task. In addition to experimentally manipulating the celebrity status of the target of the letter, we also collected attitudes toward a collection of celebrities before the target was assigned to control for "fan-ness". Our hypotheses regarding participants' linguistic behavior were as follows:

H_1: Celebrity status would be positively associated with disclosure.

H_2: Celebrity status would be positively associated with convergence – as measured by language style matching.

H_3: Celebrity status would be negatively associated with participant's status.

H_4: Fan-ness would partially mediate the relationships between celebrity status and linguistic behaviors.

Method

All analyses were completed through R (R Core Team, 2013). Analytic code as well as data (sans raw written responses per IRB policy regarding possibly identifying information) are available here. All data were collected through an online Qualtrics survey. Effect sizes were computed using the *lsr* package (Navarro, 2015).

Participants

Participants were recruited through an introductory-level psychology course during the Spring 2020 and Fall 2020 semesters at a large public university in the American southeast in exchange for course credit. The total analytic sample was 302 participants.

Measures

Celebrity. Participants were shown a list of 25 musicians pulled from the Billboard Top 100s chart during the week the study was programmed. If a band was listed, the lead singer was used. Five made-up names were also included on the list. The artist's name was contextualized with the phrase (solo artist) or (lead singer of [band name]). Fake celebrities also received a mix of (solo artist) and (lead singer of [made-up band]) contextualizers. Participants were asked to indicate, using a sliding scale, how much of a celebrity each individual was. Scores ranged from 0 to 100 with higher scores indicating more celebrity status.

Fan-ness. After completing the celebrity status measure, participants were shown the same list of names, but were asked to indicate how much of a fan they are of each

individual. This slider scale ranged from -100 to 100 with lower numbers indicating strong dislike of an artist and high numbers indicating affinity or "fan-ness'.

Target. Participants were then randomly assigned into one of three conditions: student at another university (control), pseudo-celebrity (one of the five fake names included on the *celebrity/fan-ness* list), and celebrity (a nationally recognized celebrity). Within each condition there were two target names, a man and a woman, which were randomly presented to account for potential participant gender by target gender interactions. Due to low sample sizes, these interactions were not explored - responses were collapsed into the three overall target categories.

Disclosure. Pennebaker and colleagues' Linguistic Inquiry and Word Count (LIWC; 2015) is a text-analysis software with well-established psychometric properties (see Tausczik & Pennebaker, 2010). In the most recent release, LIWC includes a summary variable, *Authentic*, based on Newman and colleagues (2003) work on detecting truthfulness. The LIWC2015 operator's manual suggests this metric can also be used to detect disclosure; recent work has supported this claim using YouTube video transcripts as well as comments (Doyle & Campbell, under review). Though the exact formula for this metric is not published, the scores are normed based on thousands of texts in the LIWC repository. Scores can range from 0 to 99 with higher scores indicating more disclosure.

LSM. LSM was calculated following the dyadic comparison procedure explained in Gonzales and colleagues' work (2010). Participants' LIWC-generated scores for all 9 word categories (auxiliary verbs, articles, adverbs, personal pronouns, indefinite pronouns, prepositions, negations, conjunctions, and quantifiers) were generated, then

added to the following equation in which *v* represents the LIWC category, *T* represents the score from the target letter, and *P* represents the score from the participant's response

$$LSM_v = 1 - (|T_v - P_v|)/(T_v + P_v)$$

These scores were then averaged to create an overall LSM score. This metric ranges from 0 to 1 where lower scores indicate more similarity between texts.

Clout. LIWC2015 also includes a summary variable sensitive to indicators of social status. The *Clout* variable, similar to *Authentic*, is a summary variable without a publicly-available equation indicating exactly how it is calculated, but is based on past research (Kacewicz et al., 2014). This metric ranges from 0 to 99 with higher scores indicating the speaker's higher social status.

Suspicion. Participants were asked to indicate on a sliding scale how much they believed the author of the letter actually wrote the letter. Scores were reversed such that higher scores indicated more suspicion. Scores ranged from 0 to 100.

Procedure

Participants completed demographic measures, followed by a brief survey assessing celebrity status and fan-ness, then were shown a letter and asked to write a response. Though the content of the letter was held constant across all readers, the signature at the bottom was different across randomly assigned groups to manipulate celebrity status. Participants were deceived into thinking that the study was being done in collaboration with large record labels and that the person to whom they were writing their letter may choose to respond if they wanted to. Afterward participants completed a quantitative suspicion check; higher numbers indicate more suspicion. Finally, they were debriefed and awarded credit for their participation.

Before analysis, written responses were passed through LIWC and LSM scores were calculated.

Results

All results were run including fan-ness of the two celebrity targets as covariates, as well as the suspicion check. In all analyses these predictors were not significantly associated at the .05 alpha level with the DVs. For brevity, we include full models in supplemental materials and, here, only report main effects.

Before continuing, we confirmed that the celebrity targets (Taylor Swift (solo artist) and Harry Styles (solo artist, former lead singer of One Direction)) were understood to have more celebrity status than the pseudo-celebrity targets (Maddy Cohen (lead singer of Wolfrun) and Leo Foster (Solo Artist)). Participants' scores on the *Celebrity* metric were averaged for each group and compared using a paired-samples t-test. Results indicate significant differences, $t(301) = 36.69$, $p < .0001$, Cohen's $d = 2.11$, with the celebrity targets ($M=96.93$, $SD = 10.94$) having much more celebrity status than pseudo-celebrity targets ($M = 18.16$, $SD = 35.34$).

Disclosure

A one-way ANOVA comparing disclosure across the three experimental groups identified no significant differences between control ($M = 58.26$, $SD = 36.5$), pseudo-celebrity ($M = 57.97$, $SD = 35.05$), and celebrity ($M = 54.88$, $SD = 32.86$) conditions, $F(2, 296) = 0.17$, $p = .85$. See Figure Three.

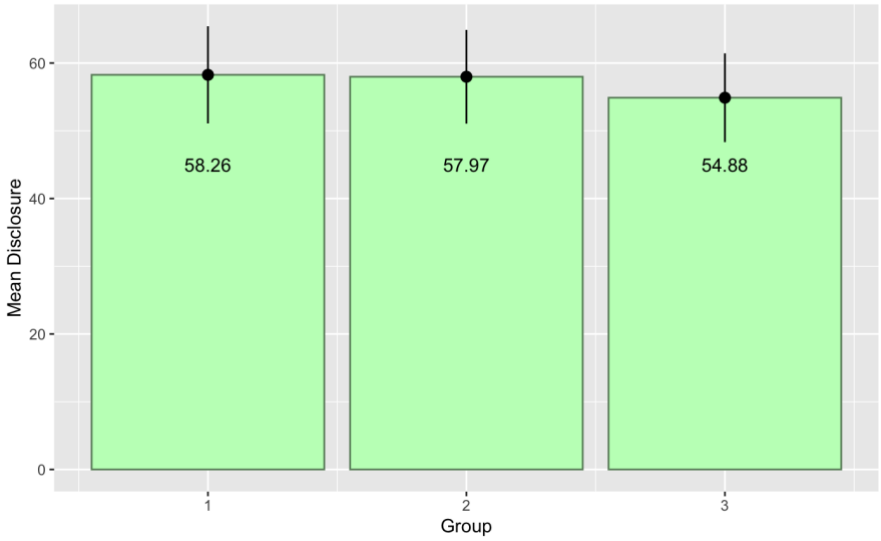

Figure Three. Mean disclosure by experimental condition.

LSM

A one-way ANOVA comparing LSM across the three experimental groups identified no significant differences between control (M = .27, SD = .12), pseudo-celebrity (M = .29, SD = .12), and celebrity (M = .27, SD = .15) conditions, F(2, 296) = 0.58, p = .56. See Figure Four.

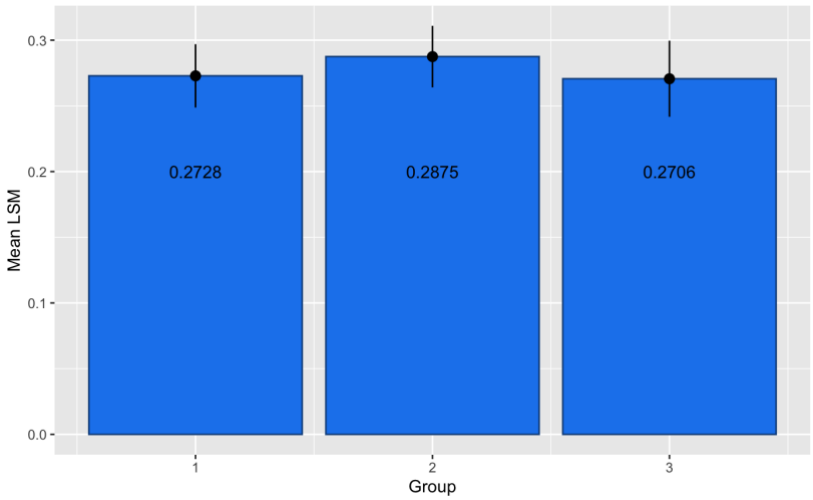

Figure Four. Mean Language Style Matching (LSM) by experimental group.

Clout

A one-way ANOVA comparing clout across the three experimental groups identified significant differences between control (M = 49.74, SD = 26.02), pseudo-celebrity (M = 53.91, SD = 27.64), and celebrity (M = 62.22, SD = 21.02) conditions, F(2, 296) = 6.06, p = .003. Dummy coding the grouping variable revealed the significant difference being between the control group and the celebrity group. See Figure Five.

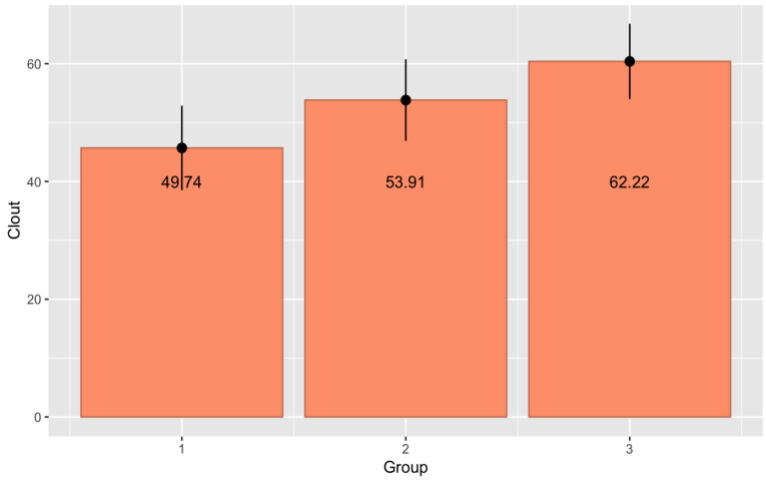

Figure Five. Mean Clout by experimental group.

Suspicion

A one-way ANOVA comparing the quantitative suspicion check identified significant differences between control (M = 45.7, SD = 36.56), pseudo-celebrity (M = 53.82, SD = 35.11), and celebrity (M = 60.39, SD = 32.07) groups, F(2, 297) = 4.54, p = .01. Dummy coding the grouping variable revealed the significant difference being between the control group and the celebrity group. See Figure Six.

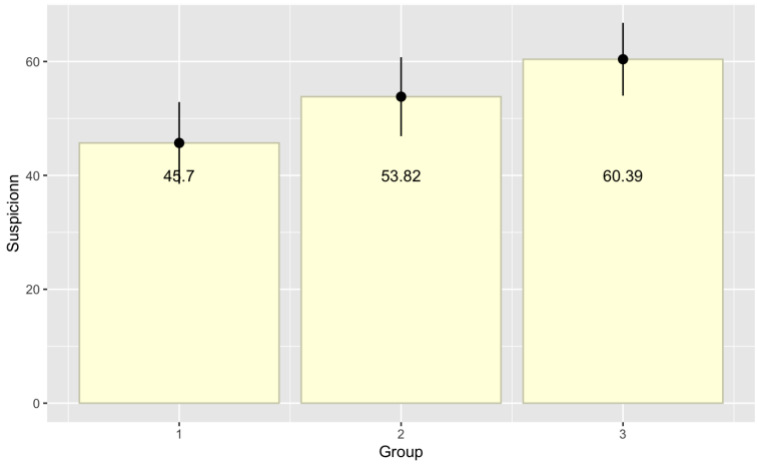

Figure Six. Mean suspicion by experimental group.

Fan-ness Correlations

Exploratory bivariate correlations were conducted to investigate relationships between fan-ness and linguistic outcome metrics within letters written to each celebrity target. Of the six bivariate correlations conducted, only one was significant at the .05 alpha level. In the subgroup of fans who wrote to Harry Styles (n = 50), being a fan of Styles was moderately and positively associated with disclosure, $r(48) = .40$, $p < .005$, 95% CI: [0.14, 0.61]. Nonsignificant effects ranged from -0.21 to 0.15.

Discussion

In a letter writing task using an experimental manipulation of celebrity status and accounting for individual fan-ness, we failed to replicate past findings of disclosure and language style matching. Additionally, while there was a significant relationship between status-oriented language and celebrity status, this was in the opposite direction of what was hypothesized.

Before continuing, the claims able to be made in this paper are constrained by the results of the suspicion check. Participants report not believing celebrity targets wrote the original letter. While many argue involving covariates measured after the outcome

variable is inappropriate (Miller & Chapman, 2001), we believe this is the most effective way to assess believability without the suspicion check itself arousing suspicion (K. M. Taylor & Shepperd, 1996). While the suspicion check was not significantly associated with the outcome variables, increased participant suspicion is a threat to the overall validity of the study. Results, then, should be interpreted with this in mind. A higher-fidelity design, possibly run by a non-academic organization to offer some legitimacy to the claims that celebrity targets may read the letter, may result in effects more consistent with theory.

Attempts to replicate both disclosure and LSM findings failed. This may be because the original studies failed to include control groups; perhaps the disclosure found in qualitative coding of letters is more dramatic given the content of the disclosures but is missed in LIWC's focus on function words. It is also possible that LSM scores were consistent across groups because convergence happens over time and a simple call-and-response paradigm may not allow for this timescale process to emerge, especially when including those who are not fans of the celebrity targets. However, the results of the exploratory correlations, overall, do not support this.

Finally, the result of the analysis regarding Clout is an interesting one. Prior theoretical work has shown that those sensitive to the higher status of conversation partners are more likely to use self-focused language (Kacewicz et al., 2014), but the opposite is true in this sample. This could be for multiple reasons: first, some of the indicators of high status speech may also tap into participants' interest in celebrities' lives. For example, the following quote comes from a letter written to Taylor Swift that scored high on LIWC's Clout metric:

For starters, it's so nice to have this opportunity to communicate with you, and I know how busy you must be so I promise I'll keep it short and sweet. I loved hearing about the goals you have for yourself and I think it's amazing how you're always so motivated even with all the things you've achieved. You're a wonderful role model and thank you so much for being who you are! [Clout score = 99.00]

Or this, written to Harry Styles:

I find you and your projects so inspirational. I know you work very hard to bring joy to your fans. Personally, your work has brought me out of very low points in my life and gave me comfort. I know many of your fans feel the same way. Your dedication and confidence sets an example for everyone, and it makes you one of the best role models in the music industry. Thank you for all of your hard work, I know it's saved me and many others countless times. I am so excited to see what you have planned for the future. [Clout score = 93.42]

While reliance on second-person pronouns may indicate an awareness of status differences (Hancock et al., 2010; Kacewicz et al., 2014), it also may measure aspects of politeness or praise as indicated in these examples. While that may be an aspect of status in and of itself (those of high status are in the position to offer praise), it may also be a function of re-enforcing that hierarchy.

Conclusion

This study addressed methodological limitations of past work applying communicative theory to measure processes central to the dynamic between celebrities and members of the public. Whether a flaw of the underlying theories as applied to these

types of relationships or a lack of sensitivity due to a non-targeted audience, we failed to find support for processes of social penetration, communication accommodation, and status relations. Future research should explore the pattern found regarding status relations, possibly as an indicator of reverence based on status.

CHAPTER FIVE

THE FUTURE OF EMPIRICAL CELEBRITY STUDIES

In this dissertation I approached the question of celebrity with a clarified theoretical model and with freshly-validated empirical tools. Conceptualizing celebrity as an extension of status including an element of media-mediated distance allowed for the combination of social and personality psychology, communication, and sociology; this interdisciplinary work provides opportunities for scholars from related disciplines to synthesize past work and standardize future projects using shared definitions and processes. Despite the conceptual strength of the proposed operational model of celebrity, many of the proposed processes cannot be easily tested by academics today.

Interdisciplinary Synthesis

In the introductory chapter, I briefly explored the roots of celebrity as summarized by two prominent scholars from cultural studies and communication, Fred Inglis and Kelli Burns, respectively. Similarly, the next chapter - though focused particularly on the relevance of psychology to the understanding of celebrity - also highlighted the importance of humanities and social sciences for contributing to our understanding of celebrity status.

Despite nomenclature and campus real estate, the disciplines under the umbrella of the social sciences share much of the same underlying theory about human behavior. In the early to mid-20th century the distinction between departments was negligible - researchers with their PhDs in psychology taught about and published across disciplines

including what we would now call communication, political science, anthropology, and sociology. As universities expanded and became more specialized, departments began to sharpen the distinction between fields. This silo-ing (Stirling, 2014) has some advantages, but makes interdisciplinary research challenging to justify given current academic incentive structures.

The then-president of the Association for Psychological Science, John Cacioppo, wrote an op-ed about the ability of psychologists to address interdisciplinary research given their status as members of a "hub science" (Boyack et al., 2005; Cacioppo, 2007). Given their positioning between so many of the social sciences as well as humanities like philosophy and cultural studies, psychologists, he argues, can merge conceptual models with empirical approaches in ways that other fields cannot.

This placement means that psychologists have the opportunity to address exactly the theoretical gaps identified in the early chapters of this dissertation. Psychology's strong background in broad methodological toolboxes and familiarity with challenges of operationalization of conceptual models positions them for unique contributions to this topic.

Increasing Access to Celebrities

Much of the work surrounding celebrities and fans focuses on the fan experiences. While these are clearly important for our understanding of these dynamics, it's hardly the whole story. Increased effort must be made to connect with celebrities themselves, highlighting the utility of doing so for both the advancement of science as well as for supporting the goals of the participants - whatever those may be.

It is notable that one of the few quantitative projects published regarding celebrity experiences was conducted by a psychologist (M. S. Young & Pinsky, 2006). However, it is not realistic to expect psychologists to launch a syndicated radio talk show in order to answer questions of celebrity. Pinsky was able to leverage his media connections to recruit a sample of celebrities who were afforded a level of anonymity not often offered to average research participants.

Non-Academic Research

As explored in the initial chapter, much of the work necessary to properly explore the nomological network of celebrity is unable to be completed by academic social scientists who primarily rely on samples pulled from introductory courses, research panel sites like Mturk and Prolific, and nationally representative datasets. These sources are excellent for exploring many of the questions that our field is attempting to answer – how do *most* people think, feel, and behave? The problem is: celebrities aren't sitting in on PSYC 101 lectures or completing out online surveys for $2.00 an hour.

Instead, these questions are perhaps better answered by social scientists in industry research-oriented positions. Corporations in entertainment, media, and technology are the facilitators and beneficiaries of celebrity and, thus, are motivated to understand the applied aspects of this dynamic and enduring phenomenon (Ferris, 2007). Market, human factors, and user experience research teams are made up of people with advanced training in human research methodology, statistical approaches, and content areas, to explore many of the questions relevant to these companies' continued growth. After all, even though it's often referred to as product research, this work is centered around understanding how **people** use these products (i.e., user experience or UX).

Though their main goals are more oriented around ensuring their continued financial performance, companies allow space for researchers to contribute to academia by publishing non-proprietary information. Not only does this increase the prestige of the organization and its employees in the eyes of current academics (who are also potential new employees), but this helps researchers remain actively involved in their field.

Employees at Facebook (e.g. Birnholtz et al., 2017), Spotify (e.g. Anderson et al., 2020), and Snapchat (e.g. Yang et al., 2018) have published findings from datasets collected through their institutions in top-tier journals across the social sciences, information science, and more. Given both the scale and control offered by these companies, the experiments in these papers are able to answer questions that academics simply cannot in their labs or with their available samples of participants. Additionally, companies like Tinder and Netflix bypass the lengthy process of academic publishing, preferring instead to share their work directly to blogs designed for tech-oriented audiences.

Industry positions are expanding and allow for continued basic and applied scholarship. At the Society for Personality and Social Psychology conference, tech companies like Facebook and Uber are well-represented at pre-conferences as well as private networking events. These companies attend not only to share their work, but to recruit budding scientists for internships and junior level roles.

Moving from Academia to Industry

Whether it's questions of celebrity, media use, finances, or any other under-studied aspect of the human experience, scholarship should make space for the inclusion of work done by industry professionals. Leaving the ivory tower and joining "the dark

side" (as it's often phrased) is not a flaw of these researchers – it's an opportunity to test and expand theory in applied settings. Corporate research roles are more plentiful than tenure-track positions (Z, 2018) and offer competitive salaries with more career flexibility. It's not shocking that more and more graduates of social science programs are becoming industry researchers. However, all of this is hinging on the assumptions that academics can a) develop the skills useful for non-academic research roles and b) communicate those skills effectively. The over-reliance on quantitative methods as well as the strong focus on complex and specific language is functional for the needs of an early career psychologist establishing themselves in their field but can limit the strength of their application in industry roles.

Qualitative Training.

The first point is a complicated one given that different roles expect different skillsets, but let us consider the route by which the greatest number of doors are open for career trajectories. Many positions often require a nuanced understanding and application of mixed methods; with less than 10% of empirical publications in major psychology journals being built on qualitative methodology (Eagly & Riger, 2014), it is unsurprising that none of the top ten PhD programs in social psychology in the US include qualitative methods in their graduate training requirements. Programs around the world are addressing these shortcomings (Roberts & Castell, 2016), but this movement has not made its way to graduate curricula.

The importance of a strong background in qualitative methodology is important for these non-academic jobs because many of the questions that are being asked of product managers and engineers can't be completely answered by the team of analysts

dedicated to measuring users' behavior on a platform. Celebrity studies can be expanded by researchers in industry roles who target inherently qualitative questions like, "What is the experience of celebrity?" and, "How does celebrity change over time?" The few psychologists who have been able to conduct this kind of research were limited to niche groups and small samples (e.g. Adler & Adler, 1989; Stever, 2019) but sustained interests in these topics organized using the framework proposed in chapter two can lead to the development of quantitative tools that expand the mapping of celebrity studies. The first step, however, is to begin with qualitative projects.

Non-Academic Communication.

Another challenge many industry researchers experience when moving to industry is communicating scientific value. This is true of both method as well as findings. Product research, while based on the experiences of people, is oriented around product. Many social psychologists aim to answer basic questions: What is personality? How can we measure relational satisfaction? What are attitudes able to predict? Product research aims instead to translate basic research into applied insights: Given how users discuss privacy, how can we develop our product to account for their concerns?

Conveniently, as academics move away from traditional NHST (Cumming, 2014), our reporting of statistical findings are more useful for industry stakeholders. Driver analyses (what we would call regressions) and A/B tests (which are true experiment t-tests) may result in significant models but reporting the size of the effect as percentage change (as well as the financial impact of the effect) helps to communicate the value of research. These business cases aren't often included in basic research, but applied research centers around impact. Combining rigorous methodological training

from academia and large-scale data collection from industry would offer excellent opportunities to expand theory and application - as long as the value of these studies can be adequately communicated.

Studying Celebrity in Industry

While, again, celebrity is independent of financial power, these concepts aren't mutually exclusive. Attempts to directly monetize celebrity are found across extant media sites like Facebook and Spotify and have prompted their own dedicated sites like Patreon and OnlyFans. This "creator economy" (Julia Maltby, 2020) means there is a financial motivation to understand the opportunity area that is celebrity. Though, yes, many of the processes proposed and explored here are distant from the goal of directly influencing economic impact, studies can be thoughtfully designed to explore celebrity, relationships, communication, **and** financial outcomes.

General Discussion

The field of celebrity studies is rife with quantitative and qualitative research questions that social scientists can answer, especially those who are interested in conducting this research outside of the context of academia. Importantly, these results must not remain locked behind "proprietary information" distinctions. I began with a discussion of the history of celebrity research. I called for the importance of using theory and methods from social and personality psychology to reinvigorate celebrity research. I made and effort in this direction by synthesizing conceptual models from social theorists with empirical practices and quantitively doing expanding relevant methodology. I hope that I had some success in this endeavor. However, there is much more research to be done. In the final chapter, I described several ways in which this research could be

effectively conducted in professional settings for the benefit of both advancing theory and supporting business outcomes. I hope there is a future of fruitful academic and industry research collaboration.

REFERENCES

Adams, A. (2013). *Top watches for social peacocking*. Forbes Online.

Adler, P. A., & Adler, P. (1989). The Gloried Self: The Aggrandizement and the Constriction of Self. *Social Psychology Quarterly*, *52*(4), 299. https://doi.org/10.2307/2786993

Agnihotri, A., & Bhattacharya, S. (2018). The market value of celebrity endorsement evidence from India reveals factors that can influence stock-market returns. *Journal of Advertising Research*, *58*(1), 65–74. https://doi.org/10.2501/JAR-2016-021

Allport, G. W. (1961). *Pattern and growth in personality.* Holt, Rinehart, & Winston.

Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships.* Holt, Rinehart, & Winston.

Amos, C., Holmes, G., & Strutton, D. (2008). Exploring the relationship between celebrity endorser effects and advertising effectiveness: A quantitative synthesis of effect size. *International Journal of Advertising*, *27*(2), 209–234. https://doi.org/10.1080/02650487.2008.11073052

Anderson, I., Gil, S., Gibson, C., Wolf, S., Shapiro, W., Semerci, O., & Greenberg, D. M. (2020). "Just the Way You Are": Linking Music Listening on Spotify and Personality. *Social Psychological and Personality Science*. https://doi.org/10.1177/1948550620923228

Antaki, C., Barnes, R., & Leudar, I. (2005). Self-disclosure as a situated interactional practice. *British Journal of Social Psychology*, *44*(2), 181–199.

https://doi.org/10.1348/014466604X15733

Bagozzi, R. P., Ruvio, A. A., & Xie, C. (2020). The material self. *International Journal of Research in Marketing*, *xxxx*. https://doi.org/10.1016/j.ijresmar.2020.03.002

Barak, A., & Gluck-Ofri, O. (2007). Degree and reciprocity of self-disclosure in online forums. *Cyberpsychology and Behavior*, *10*(3), 407–417. https://doi.org/10.1089/cpb.2006.9938

Bates, D., Maechler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, *67*, 1–48. https://doi.org/10.18637/jss.v067.i01

Belk, R. W. (1985). Materialism: Trait Aspects of Living in the Material World. *Journal of Consumer Research*, *12*(3), 265. https://doi.org/10.1086/208515

Best of celebrity bad hair days. (2018). Stars Insider.

Bineham, J. L. (1988). A historical account of the hypodermic model in mass communication. *Communication Monographs*, *55*(3), 230–246. https://doi.org/10.1080/03637758809376169

Birnholtz, J., Burke, M., & Steele, A. (2017). Untagging on social media: Who untags, what do they untag, and why? *Computers in Human Behavior*, *69*, 166–173. https://doi.org/10.1016/j.chb.2016.12.008

Bond, B. J. (2016). Following Your "friend": Social Media and the Strength of Adolescents' Parasocial Relationships with Media Personae. *Cyberpsychology, Behavior, and Social Networking*, *19*(11), 656–660. https://doi.org/10.1089/cyber.2016.0355

Bond, B. J. (2018). Parasocial relationships with media personae : Why they matter and

how they differ among heterosexual , lesbian , gay, and bisexual adolescents. *Media Psychology*, *21*(3), 457–485. https://doi.org/10.1080/15213269.2017.1416295

Boorstin, D. J. (1992). *The Image: A guide to Pseudo-Events in America*. Vintage Books.

Borzekowski, D. L. G., Guan, Y., Smith, K. C., Erby, L. H., & Roter, D. L. (2014). The Angelina effect: Immediate reach, grasp, and impact of going public. *Genetics in Medicine*, *16*(7), 516–521. https://doi.org/10.1038/gim.2013.181

Boyack, K. W., Klavans, R., & Börner, K. (2005). Mapping the backbone of science. *Scientometrics*, *64*(3), 351–374.

Boyd, R. L., & Schwartz, H. A. (2020). Natural Language Analysis and the Psychology of Verbal Behavior: The Past, Present, and Future States of the Field. *Journal of Language and Social Psychology*, 1–21. https://doi.org/10.1177/0261927X20967028

Braudy, L. (1997). *The Frenzy of Renown: Fame and Its History*. Vintage Books.

Burnard, P., Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Analysing and presenting qualitative data. *British Dental Journal*, *204*(8), 429–432. https://doi.org/10.1038/sj.bdj.2008.292

Burns, K. S. (2009). *Celeb 2.0: How Social Media Foster Our Fascination with Popular Culture*. Praeger.

Cacioppo, J. T. (2007). *Psychology is a Hub Science*. Association for Psychological Sciences.

Campbell, E. Q. (1964). The Internalization of Moral Norms. *Sociometry*, *27*(4), 391–412. https://www.jstor.org/stable/2785655

Cashmore, E. (2006). *Celebrity Culture*. Routledge. https://doi.org/10.1007/s12115-010-

9367-6

Castells, M. (2001). *The Internet Galaxy: Reflections on the Internet, Business and Society*. Oxford University Press.

Chaudoir, S. R., & Quinn, D. M. (2015). Evidence that anticipated stigma predicts poorer depressive symptom trajectories among emerging adults living with concealable stigmatized identities. *Self and Identity*, *15*(2), 139–151. https://doi.org/10.1080/15298868.2015.1091378

Chen, L., Hu, N., Shu, C., & Chen, X. (2019). Adult attachment and self-disclosure on social networking site: A content analysis of Sina Weibo. *Personality and Individual Differences*, *138*(2), 96–105. https://doi.org/10.1016/j.paid.2018.09.028

Choi, S. M., Lee, W.-N., & Kim, H.-J. (2005). Lessons from the Rich and Famous : A Cross-Cultural Comparison of Celebrity Endorsement in Advertising. *Journal of Advertising*, *34*(2), 85–98.

Chung, C. K., & Pennebaker, J. W. (2007). The Psychological Functions of Function Words. In K. Fiedler (Ed.), *Social Communication* (pp. 343–359). Psychology Press.

Cialdini, R. B., Borden, R. J., Thorne, A., Walker, M. R., Freeman, S., & Sloan, L. R. (1976). Basking in Reflected Glory. *Journal of Personality and Social Psychology*, *34*(3), 366–375. https://doi.org/10.4135/9781412979306.n20

Collins, N., & Miller, L. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin*, *116*, 457–475. https://doi.org/10.1037/0033-2909.116.3.457

Cooley, C. H. (1902). Looking-glass self. In *The production of reality: Essays and readings on social interaction.*

Coombe, R. J. (1992). The celebrity image and cultural identity: Publicity rights and

subaltern politics of gender. *Discourse*, *14*, 59–88.

Cozby, P. C. (1972). Self-disclosure , Reciprocity and Liking. *Sociometry*, *35*(1), 151–160.

Cram, P., Fendrick, A. M., Inadomi, J., Cowen, M. E., Carpenter, D., & Vijan, S. (2003). The impact of a celebrity promotional campaign on the use of colon cancer screening: The Katie Couric effect. *Archives of Internal Medicine*, *163*(13), 1601–1605. https://doi.org/10.1001/archinte.163.13.1601

Cumming, G. (2014). The New Statistics: Why and How. *Psychological Science*, *25*(1), 7–29. https://doi.org/10.1177/0956797613504966

Deflem, M. (2013). Professor Goes Gaga: Teaching Lady Gaga and the Sociology of Fame. *The American Sociologist*, *44*(2), 117–131.

Derrick, J. L., Gabriel, S., & Hugenberg, K. (2009). Social surrogacy : How favored television programs provide the experience of belonging. *Journal of Experimental Social Psychology*, *45*, 352–362. https://doi.org/10.1016/j.jesp.2008.12.003

Derrick, J. L., Gabriel, S., & Tippin, B. (2008). Parasocial relationships and self-discrepancies : Faux relationships have benefits for low self-esteem individuals. *Personal Relationships*, *15*, 261–280.

Desai, S., & Jena, A. B. (2016). Do celebrity endorsements matter? Observational study of BRCA gene testing and mastectomy rates after Angelina Jolie's New York Times editorial. *BMJ (Online)*, *355*. https://doi.org/10.1136/bmj.i6357

Dietz, P., Matthews, D., Van Duyne, C., Martell, D., Parry, C., Stewart, T., Warren, J., & Crowder, J. (1991). Threatening and otherwise inappropriate letters to Hollywood celebrities. *Journal of Forensic Sciences*, *36*, 185–209.

https://doi.org/10.1520/JFS13019J

Doyle, P. C., & Campbell, W. K. (2020). Linguistic Markers of Self-Disclosure: Using YouTube Coming Out Videos to Study Disclosure Language. *PsyArXiv*. https://doi.org/10.1017/CBO9781107415324.004

Eagly, A. H., & Riger, S. (2014). Feminism and Psychology: Critiques of Methods and Epistemology. *American Psychologist*, *69*(7), 685–702. https://doi.org/10.1037/a0037372

Eiler, B. E., Kallen, R. W., & Richardson, M. J. (2017). Interaction-Dominant Dynamics, Timescale Enslavement, and the Emergence of Social Behavior. In R. R. Vallacher, A. Nowak, & S. J. Read (Eds.), *Frontiers in Social Psychology: Computational Models in Social Psychology* (pp. 105–126). Routledge.

Ellis, E. G. (2019). *Fighting Instagram's $1.3 Billion problem - fake followers*. WIRED.

Erlingsson, C., & Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African Journal of Emergency Medicine*, *7*(3), 93–99. https://doi.org/10.1016/j.afjem.2017.08.001

Evans, D. G. R., Barwell, J., Eccles, D. M., Collins, A., Izatt, L., Jacobs, C., Donaldson, A., Brady, A. F., Cuthbert, A., Harrison, R., Thomas, S., Howell, A., Miedzybrodzka, Z., & Murray, A. (2014). The Angelina Jolie effect: How high celebrity profile can have a major impact on provision of cancer related services. *Breast Cancer Research*, *16*(5), 1–6. https://doi.org/10.1186/s13058-014-0442-6

Ferris, K. O. (2007). The sociology of celebrity. *Sociology Compass*, *1*(1), 371–384.

Fisher, D. V. (1984). A Conceptual Analysis of Self-Disclosure. *Journal for the Theory of Social Behaviour*, *14*(3), 277–296. https://doi.org/10.1111/j.1468-

5914.1984.tb00498.x

Fiske, S. (2010). Interpersonal Stratification. In S. T. Fiske, D. T. Gillbert, & G. Lindzey (Eds.), *Handbook of Social Psychology* (pp. 941–982). John Wiley & Sons, Inc.

Foster, J. D., Campbell, W. K., & Twenge, J. M. (2003). Individual differences in narcissism: Inflated self-views across lifespann and around the world. *Journal of Research on Personality*, *37*, 469–486.

Friedman, H. H., Termini, S., & Washington, R. (1976). The effectiveness of advertisements utilizing four types of endorsers. *Journal of Advertising*, *5*(3), 22–24. https://doi.org/10.1080/00913367.1976.10672647

Gabriel, S., Read, J. P., Young, A. F., Bachrach, R. L., & Troisi, J. D. (2017a). Social Surrogate Use in Those Exposed to Trauma: I Get by with a Little Help from my (Fictional) Friends. *Journal of Social and Clinical Psychology*, *36*(1), 41–63. https://doi.org/10.1521/jscp.2017.36.1.41.Social

Gabriel, S., Read, J. P., Young, A. F., Bachrach, R. L., & Troisi, J. D. (2017b). Social surrogate use in those exposed to trauma: I get by with a little help from my (fictional) friends. *Journal of Social and Clinical Psychology*, *36*(1), 41–63. https://doi.org/10.1521/jscp.2017.36.1.41

Gentile, B. (2011). Celebrity and narcissism. In W. K. Campbell & J. D. Miller (Eds.), *The Handbook of Narcissism and Narcissistic Personality Disorder* (pp. 403–409). John Wiley & Sons, Ltd.

Giacomin, M., Battaglini, A. M., & Rule, N. O. (2018). Grandiose narcissists seek status selectively. *Social Cognition*, *36*(1), 20–42. https://doi.org/10.1521/soco.2018.36.1.20

Giles, H. (1973). Accent Mobility: A Model and Some Data. *Anthropological Linguistics*, *12*(2), 87–105.

Gitlin, T. (1998). The culture of celebrity. *Dissent*, *45*, 81–83.

Goffman, E. (1951). Symbols of class status. *The British Journal of Sociology*, *2*(4), 294–304.

Gonzales, A. L., Hancock, J. T., & Pennebaker, J. W. (2010). Language style matching as a predictor of social dynamics in small groups. *Communication Research*, *37*(1), 3–19. https://doi.org/10.1177/0093650209351468

Goode, J., & Robinson, J. D. (2013). Linguistic synchrony in parasocial interaction. *Communication Studies*, *64*(4), 453–466. https://doi.org/10.1080/10510974.2013.773923

Gountas, J., Gountas, S., Reeves, R. A., & Moran, L. (2012). Desire for Fame: Scale Development and Association with Personal Goals and Aspirations. *Psychology & Marketing*, *29*(9), 680–689. https://doi.org/10.1002/mar

Grady, C. (2018). *Did Taylor Swift really drive a spike in voter registration? The numbers say maybe.* Vox.

Green, P, & MacLeod, C. (2016). simr: An R package for power annalysis of generalized linear mixed models by simulation. *Methods in Ecology and Evolution*, *7*(4), 493–498. https://doi.org/10.1111/2041-210X.12504

Green, Peter, & Macleod, C. J. (2016). SIMR: An R package for power analysis of generalized linear mixed models by simulation. *Methods in Ecology and Evolution*, *7*(4), 493–498. https://doi.org/10.1111/2041-210X.12504

Greenwood, D., Long, C. R., & Dal Cin, S. (2013). Fame and the social self: The need to

belong, narcissism, and relatedness predict the appeal of fame. *Personality and Individual Differences*, *55*(5), 490–495. https://doi.org/10.1016/j.paid.2013.04.020

Greenwood, D., Long, C. R., & Dal, S. (2013). *Fame and the social self : The need to belong, narcissism, and relatedness predict the appeal of fame*. *55*, 490–495.

Hall, J. A., Coats, E. J., & LeBeau, L. S. (2005). Nonverbal behavior and the vertical dimension of social relations: A meta-analysis. *Psychological Bulletin*, *131*(6), 898–924. https://doi.org/10.1037/0033-2909.131.6.898

Han, B. (2018). *Views versus subscriptions : which one matters to a YouTuber ' s monetisation success ? 14*(4), 325–334.

Harrington, A., Marshall, B. L., & Müller, H.-P. (2006). Status. In *Encyclopedia of Social Theory* (pp. 596–599). Routledge.

Hattie, J., & Cooksey, R. W. (1984). Procedures for Assessing the Validities of Tests Using the "Known-Groups" Method. *Applied Psychological Measurement*, *8*(3), 295–305. https://doi.org/10.1177/014662168400800306

Hoffmann, J., & Sheridan, L. (2015). Celebrities as Victims of Stalking. *Stalking, Threatening, and Attacking Public Figures*, 195–214. https://doi.org/10.1093/med:psych/9780195326383.003.0009

Hofstede, G. (1980). Motivation, Leadership, and Organization: Do American Theories Apply Abroad. *Organizational Dynamics*, 42–63.

Holtgraves, T. (2010). Social Psychology and Language. In S. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of Social Psychology* (pp. 1386–1422). John Wiley & Sons, Inc. papers3://publication/uuid/B052DB93-2251-4FAF-A542-20983F4CEA66

Horton, D., & Wohl, R. R. (1956). Mass communication and para-social interaction:

Observations on intimacy at a distance. *Psychiatry*, *9*, 215–229.

Inglis, F. (2010). *A Short History of Celebrity*. Princeton University Press.

Ireland, M. E., Slatcher, R. B., Eastwick, P. W., Scissors, L. E., Finkel, E. J., & Pennebaker, J. W. (2011). Language Style Matching Predicts Relationship Initiation and Stability. *Psychological Science*, *22*(1), 39–44. https://doi.org/10.1177/0956797610392928

Jensen-Campbell, L. A., Adams, R., Perry, D. G., Workman, K. A., Furdella, J. Q., & Egan, S. K. (2002). Agreeableness, extraversion, and peer relations in early adolescence: Winning friends and deflecting aggression. *Journal of Research in Personality*, *36*(3), 224–251. https://doi.org/10.1006/jrpe.2002.2348

Joinson, A. N. (2001). Self-disclosure in computer-mediated communication: The role of self-awareness and visual anonymity. *European Journal of Social Psychology*, *31*, 177–192.

Jolie, A. (2013, May 14). My Medical Choice. *New York Times*.

Jourard, S. M. (1966). Some psychological aspects of privacy. *Law and Contemporary Problems*, *31*, 307–318.

Jourard, S. M., & Lasakow, P. (1958). Some factors in self-disclosure. *Journal of Abnormal and Social Psychology*, *56*, 91–98.

Kaleem, T., Malouff, T. D., Stross, W. C., Waddle, M. R., Miller, D. H., Seymour, A. L., Zaorsky, N. G., Miller, R. C., Trifiletti, D. M., & Vallow, L. (2019). Google search trends in oncology and the impact of celebrity cancer awareness. *Cureus*, *11*(8). https://doi.org/10.7759/cureus.5360

Kelly, J. A., Amirkhanian, Y. A., Walsh, J. L., Brown, K. D., Quinn, K. G., Petroll, A. E.,

Pearson, B. M., Rosado, A. N., & Ertl, T. (2020). Social network intervention to increase pre-exposure prophylaxis (PrEP) awareness, interest, and use among African American men who have sex with men. *AIDS Care*, *32*(sup2), 40–46. https://doi.org/10.1080/09540121.2020.1739207

Kelly, J. A., St. Lawrence, J. S., Stevenson, L. Y., Hauth, A. C., Kalichman, S. C., Diaz, Y. E., Brasfield, T. L., Koob, J. J., & Morgan, M. G. (1992). Community AIDS/HIV risk reduction: The effects of endorsements by popular people in three cities. *American Journal of Public Health*, *82*(11), 1483–1489. https://doi.org/10.2105/AJPH.82.11.1483

Kelman, H. C. (1958). Compliance, identification, and internalization: Three processes of attitude change. *Journal of Conflict Resolution*, *2*(1), 51–60.

Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, Approach, and Inhibition. *Psychological Review*, *110*(2), 265–284. https://doi.org/10.1037/0033-295X.110.2.265

Kim, J., & Song, H. (2016). Celebrity's self-disclosure on Twitter and parasocial relationships : A mediating role of social presence. *Computers in Human Behavior*, *62*, 570–577. https://doi.org/10.1016/j.chb.2016.03.083

Klein, A. V. (2016). *EXCLUSIVE: Gucci to dress Florence Welch for her upcoming "How Beautiful" tour*. Fashionista.

Klostermann, P. (2017). *YouTube Comment Scraper* (1.0.2).

Kluger, J., & Park, A. (2013). The Angelina effect. *Time Magazine*.

Knox, S., Hess, S. A., Petersen, D. A., & Hill, C. E. (1997). A Qualitative Analysis of Client Perceptions of the Effects of Helpful Therapist Self-Disclosure in Long-Term

Therapy. *Journal of Counseling Psychology*, *44*(3), 274–283. https://doi.org/10.1037/0022-0167.44.3.274

Lankford, A. (2016). Fame-seeking rampage shooters: Initial findings and empirical predictions. *Aggression and Violent Behavior*, *27*, 122–129. https://doi.org/10.1016/j.avb.2016.02.002

Lankford, A. (2018). Identifying Potential Mass Shooters and Suicide Terrorists With Warning Signs of Suicide, Perceived Victimization, and Desires for Attention or Fame. *Journal of Personality Assessment*, *100*(5), 471–482. https://doi.org/10.1080/00223891.2018.1436063

Laurenceau, J.-P., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology*, *74*, 1238–1251.

Leets, L., De Becker, G., & Giles, H. (1995). Fans: Exploring expressed motivations for contacting celebrities. *Journal of Language and Social Psychology*, *14*, 102–123.

Levi-Belz, Y., & Kreiner, H. (2016). What You Say and How You Say It: Analysis of Speech Content and Speech Fluency as Predictors of Judged Self-Disclosure. *Social Psychological and Personality Science*, *7*(3), 232–239. https://doi.org/10.1177/1948550616632575

Liede, A., Cai, M., Crouter, T. F., Niepel, D., Callaghan, F., & Evans, D. G. (2018). Risk-reducing mastectomy rates in the US: a closer examination of the Angelina Jolie effect. *Breast Cancer Research and Treatment*, *171*(2), 435–442. https://doi.org/10.1007/s10549-018-4824-9

Locke, K. D. (2000). Circumplex scales of interpersonal values: Reliability, validity, and applicability to interpersonal problems and personality disorders. *Journal of Personality Assessment*, *75*(2), 249–267.

Longhurst, B. (2007). *Popular Music and Society*. Wiley.

Lozan, T. (2020). *[IG Stories Study 2020] 726,135 Instagram stories ad story ads show how to drive results*. Social Insider.

Lucas, J. W., & Phelan, J. C. (2012). Stigma and Status: The Interrelation of Two Theoretical Perspectives. *Social Psychology Quarterly*, *75*(4), 310–333. https://doi.org/10.1177/0190272512459968

Mahadevan, N., Gregg, A. P., & Sedikides, C. (2019). Is self-regard a sociometer or a hierometer? Self-esteem tracks status and inclusion, narcissism tracks status. *Journal of Personality and Social Psychology*, *116*(3), 444–466. https://doi.org/10.1037/pspp0000189

Mahadevan, N., Gregg, A. P., Sedikides, C., & De Waal-Andrews, W. G. (2016). Winners, losers, insiders, and outsiders: Comparing hierometer and sociometer theories of self-regard. *Frontiers in Psychology*, *7*(MAR). https://doi.org/10.3389/fpsyg.2016.00334

Major, B., & O'Brien, L. T. (2005). The social psychology of stigma. *Annual Review of Psychology*, *56*, 393–421. https://doi.org/10.1146/annurev.psych.56.091103.070137

Malhotra, N. K., Kim, S. S., & Agarwal, J. (2004). Internet users' information privacy concerns (IUIPC): The construct, the scale, and a causal model. *Information Systems Research*, *15*(4), 336–355. https://doi.org/10.1287/isre.1040.0032

Maltby, John, Day, L., McCutcheon, L. E., Houran, J., & Ashe, D. (2006). Extreme

celebrity worship, fantasy proneness and dissociation: Developing the measurement and understanding of celebrity worship within a clinical personality context. *Personality and Individual Differences*, *40*(2), 273–283. https://doi.org/10.1016/j.paid.2005.07.004

Maltby, John, McCutcheon, L. E., Ashe, D. D., & Houran, J. (2001). The Self-Reported Psychological Well-Being of Celebrity Worshippers. *North American Journal of Psychology*, *3*(3), 441. https://doi.org/Article

Maltby, Julia. (2020). *The Rise of the Creator Economy*. Medium.

Markus, H. R., & Kitayama, S. (2010). Cultures and selves: A cycle of mutual constitution. *Perspectives on Psychological Science*, *5*(4), 420–430. https://doi.org/10.1177/1745691610375557

Marwick, A., & Boyd, D. (2011). To see and be seen: Celebrity practice on twitter. *Convergence*, *17*(2), 139–158. https://doi.org/10.1177/1354856510394539

McCutcheon, L. E., Lange, R., & Houran, J. (2002). Conceptualization and measurement of celebrity worship. *British Journal of Psychology*, *93*(1), 67–87. https://doi.org/10.1348/000712602162454

McLaren, S., Jude, B., & McLachlan, A. J. (2008). Sense of belonging to the general and gay communities as predictors of depression among Australian gay men. *International Journal of Men's Health*, *7*(1), 90–99. https://doi.org/10.3149/jmh.0701.90

Mead, G. H. (1962). *Mind, Self, and Society*. The University of Chicago Press.

Michaels, M., & Acevedo, A. (2019). *25 celebrities who were rich and famous before losing all their money*. INSIDER. https://www.businessinsider.com/rich-famous-

celebrities-who-lost-all-their-money-2018-5

Miller, C. J., Smith, S. N., & Pugatch, M. (2019). Experimental and quasi-experimental designs in implementation research. *Psychiatry Research, March*, 0–1. https://doi.org/10.1016/j.psychres.2019.06.027

Milner, M. (2005). Celebrity culture as a status system. *Hedgehog Review, 7*(1), 66–77.

Milner, M. (2010). Is celebrity a new kind of status system ? *Society*, *47*, 379–387. https://doi.org/10.1007/s12115-010-9347-x

Milner, M. (2012). Human Rights as Status Relations: A Sociological Approach to Understanding Human Rights. In T. Cushman (Ed.), *Handbook of Human Rights* (1st ed., pp. 164–179). Routledge.

Minton, M. (2018). *Lady Gaga, Harry Styles, and Serena Williams to host the 2019 Met Gala*. Page Six Style.

Mohr, J., & Fassinger, R. (2000). Measuring dimensions of lesbian and gay male experiences. *Measurement and Evaluation in Counseling and Development*, *33*(2), 66–90.

Morton, A. (2013). Measuring inherent privacy concern and Desire for Privacy: A pilot survey study of an instrument to measure Dispositional Privacy Concern. *Proceedings - 2013 International Conference on Social Computing*, 468–477. https://doi.org/10.1109/SocialCom.2013.73

Newman, M. L., Pennebaker, J. W., Berry, D. S., & Richards, J. M. (2003). Lying words: Predicting deception from linguistic styles. *Personality and Social Psychology Bulletin, 29*(5), 665–675. https://doi.org/10.1177/0146167203251529

Niederhoffer, K. G., & Pennebaker, J. W. (2002). Linguistic style matching in social

interaction. *Journal of Language and Social Psychology*, *21*(4), 337–360. https://doi.org/10.1177/026192702237953

Pachankis, J. E., Hatzenbuehler, M. L., & Starks, T. J. (2014). The influence of structural stigma and rejection sensitivity on young sexual minority men's daily tobacco and alcohol use. *Social Science & Medicine*, 67–75. https://doi.org/10.1016/j.socscimed.2013.10.005

Page, A. E., Chaudhary, N., Viguier, S., Dyble, M., Thompson, J., Smith, D., Salali, G. D., Mace, R., & Migliano, A. B. (2017). Hunter-Gatherer Social Networks and Reproductive Success. *Scientific Reports*, *7*(1), 1–10. https://doi.org/10.1038/s41598-017-01310-5

Pedersen, D. M., & Breglio, V. J. (1968). Personality correlates of actual self-disclosure. *Psychological Reports*, *22*(2), 495–501. https://doi.org/10.2466/pr0.1968.22.2.495

Pennebaker, J. W., Booth, R. J., Boyd, R. L., & Francis, M. E. (2015). *Linguistic Inquiry and Word Count: LIWC2015*. Pennebaker Conglomerates.

Perse, E. M., & Rubin, R. (1989). Attribution in social and parasocial relationships. *Communication Research*, *16*(1), 59–77. https://doi.org/10.1177/009365089016001003

Petronio, S. (2002). *Boundaries of Privacy: Dialects of Disclosure.* State University of New York Press.

Pollstar. (2017). *2017 Year End Top 20 Worldwide Tours*. Pollstar.

Postman, N. (1984). *Amusing Outselves to Death*. Viking.

Quinn, D. M., & Chaudoir, S. R. (2009). Living with a concealable stigmatized identity: The impact of anticipated stigma, centrality, salience, and cultural stigma on

psychological distress and health. *Journal of Personality and Social Psychology*, *97*(4), 634–651. https://doi.org/10.1037/a0015815.Living

R Core Team. (2013). *R: A language and environment for statistical computing. R Foundation for Statistical Computing*.

Raskin, R., & Terry, H. (1988). A principal-componenets analysis of the NArcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, *54*, 890–902.

Respers France, L. (2018). *Voter registration reportedly spikes after Taylor Swift post*. CNN Entertainment.

Revelle, W. (2018). *psych: Procedures for personality and psychological research*. Northwestern University.

Richins, M. L., & Dawson, S. (1992). A Consumer Values Orientation for Materialism and Its Measurement: Scale Development and Validation. *Journal of Consumer Research*, *19*(3), 303. https://doi.org/10.1086/209304

Robinson, J. D., Skill, T., & Turner, J. W. (2004). Media usage patterns and portrayals of seniors. In J. F. Nussbaum & J. Coupland (Eds.), *LEA's communication series. Handbook of communication and aging research.* (pp. 423–446). Lawrence Erlbaum Associates Publishers.

Rubin, A. M., Perse, E. M., & Powell, R. A. (1985). Loneliness, parasocial interaction, and local news television viewing. *Human Communication Research*, *12*(2), 155–180.

Rubin, R., & McHugh, M. P. (1987). Development of parasocial interaction relationships. *Journal of Broadcastinng & Electronic Media*, *31*, 279–292.

Sansone, R. A., & Sansone, L. A. (2014). “I’m your number one fan” - a clinical look at celebrity worship. *Innovations in Clinical Neuroscience*, *11*(1–2), 39–43.

Sapolsky, R. M. (2005). The influence of social hierarchy on primate health. *Science*, *308*(5722), 648–652. https://doi.org/10.1126/science.1106477

Scardino, D. (2009). *30 Rock: Kidney Now!* NBC.

Schaller, M. (1997). The Psychological Consequences of Fame: Three Tests of the Self-Consciousness Hypothesis. *Journal of Personality*, *65*(2), 291–309. https://doi.org/10.1111/j.1467-6494.1997.tb00956.x

Schickel, R. (1986). *Intimate strangers: The culture of celebrity*. Fromm International.

Schimmelpfennig, C., & Hunt, J. B. (2019). Fifty years of celebrity endorser research: Support for a comprehensive celebrity endorsement strategy framework. *Psychology and Marketing*, 1–18. https://doi.org/10.1002/mar.21315

Sermat, V., & Smyth, M. (1973). Content analysis of verbal communication in the development of relationship: Conditions influencing self-disclosure. *Journal of Personality and Social Psychology*, *26*(3), 332–346. https://doi.org/10.1037/h0034473

Shaffer, D. R., & Tomarelli, M. M. (1989). When Public and Private Self-Foci Clash: Self-Consciousness and Self-Disclosure Reciprocity During the Acquaintance Process. *Journal of Personality and Social Psychology*, *56*(5), 765–776. https://doi.org/10.1037/0022-3514.56.5.765

Sherrill, S. (2001, December). The Year in Ideas: A to Z; Acquired Situational Narcissism. *The New York Times Magazine*.

Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: uses in assessing rater

reliability. *Psychological Bulletin*, *86*(2), 420–428. http://www.ncbi.nlm.nih.gov/pubmed/18839484

Stever, G. (2019). *The Psychology of Celebrity*. Routledge.

Stieglitz, S., Mirbabaie, M., Ross, B., & Neuberger, C. (2018). Social media analytics – Challenges in topic discovery , data collection , and data preparation. *International Journal of Information Management*, *39*(October 2017), 156–168. https://doi.org/10.1016/j.ijinfomgt.2017.12.002

Stirling, A. (2014). *Discipliinary dilemma: Working across reseearch silos is harder than it looks*. The Guardian.

Sullivan, H. S. (1953). *The Interpersonal Theory of Psychiatry*. Norton.

Tausczik, Y. R., & Pennebaker, J. W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology*, *29*(1), 24–54. https://doi.org/10.1177/0261927X09351676

Temple, E. (2017). *8 notable attempts to hack the New York Times Bestseller list*. LitHub.

Todorova, Z. (2014). Consumption as a social process. *Journal of Economic Issues*, *48*(3), 663–678. https://doi.org/10.2753/JEI0021-3624480304

Twenge, J. M., Abebe, E. M., & Campbell, W. K. (2010). Fitting In or Standing Out: Trends in American Parents' Choices for Children's Names, 1880-2007. *Social Psychological and Personality Science*, *1*(1), 19–25. https://doi.org/10.1177/1948550609349515

Twenge, J. M., & Campbell, W. K. (2003). "Isn't it fun to get the respect that we're going to deserve?" Narcissism, social rejection, and aggression. *Personality and Social Psychology Bulletin*, *29*(2), 261–272.

https://doi.org/10.1177/0146167202239051

Veblen, T. (1899). *The TTheory of the Leisure Class*. Macmillan.

Villicana, A. J., Delucio, K., & Biernat, M. (2016). “Coming out” among gay latino and gay white men: Implications of verbal disclosure for well-being. *Self and Identity*, *15*(4), 468–487. https://doi.org/10.1080/15298868.2016.1156568

Vondracek, S. I., & Vondracek, F. W. (1971). The manipulation and measurement of self-disclosure in preadolescents. *Merrill-Palmer Quarterly of Behavior and Development*, *17*(1), 51–58.

Walters, A. S., & Burger, B. D. (2013). “I Love You, and I Cheated”: Investigating Disclosures of Infidelity to Primary Romantic Partners. *Sexuality and Culture*, *17*(1), 20–49. https://doi.org/10.1007/s12119-012-9138-1

West, D. (2005). American politics in the age of celebrity. *The Hedgehog Review*, *7*, 59–65.

Yang, C., Shi, X., Luo, J., & Han, J. (2018). I know you’ll be back: Interpretable new user clustering and churn prediction on a mobile social application. *Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, 914–922. https://doi.org/10.1145/3219819.3219821

Young, J. H., Nunes, J. C., & Drèze, X. (2010). Signaling status with luxury goods: The role of brand prominence. *Journal of Marketing*, *74*(4), 15–30. https://doi.org/10.1509/jmkg.74.4.15

Young, M. S., & Pinsky, D. (2006). Narcissism and celebrity. *Journal of Research in Personality*, *40*(5), 463–471. https://doi.org/10.1016/j.jrp.2006.05.005

Z, R. (2018). *Turning to the Dark Side: Questions about Industry Options for PhD*

Candidates. MIT Graduate Admissions.