NARRATIVE CONTENT AFFINITY AND APPEAL: HOW THE SOCIAL-NEED STATES OF MEDIA USERS AND THE SOCIAL AFFORDANCES OF MEDIA JOINTLY IMPACT SELECTION AND PREFERENCE

Ву

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ABSTRACT

The social influences and media use model (SIMU; Grady et al., 2022) discusses how narratives that reflect a media user's real-world experience might influence subsequent social encounters. The SIMU considers this relevance as an important social affordance of media *content* as opposed to media technology (Grady et al., 2022). In this paper, I draw parallels between this conceptualization of a narrative's social affordances and understandings of affinity within Mood Management Theory (MMT; Zillmann, 1988a, 1988b).

MMT holds that content affinity (or disaffinity) to a user's experience plays an important role in media selection, as well as media's potential to intervene in a user's mood state. Yet the contribution of content-based affinity (usually referred to as semantic affinity) to mood-based selections and preferences has been both under-defined and under-studied (Reinecke, 2016; Eden, Hahn et al., 2018). Here, I argue that content has both behavioral and semantic components, where behavioral affinity is defined in terms of the actions and behaviors shared between users and content, and semantic affinity in terms of the basic psychological needs and intrinsic motives shared between user and content.

This project contributes to communication research by proposing a multi-dimensional definition of content affinity that adds precision to Zillmann's concept (1988a; 1988b), and suggests ways to experimentally test how different forms of affinity affect media selection and preference within and beyond MMT. It also seeks to examine how the appeal of affinity and other social affordances may vary depending on the need states of users.

Two experiments test the appeal of various perceived social affordances in different social-need states, including affordances of both media technology (RQ1) and message content (RQ2). Results reveal that social-need states can impact the appeal of different social affordances previously described in CMC research (partially supporting H1). Experiences of ostracism and rejection impacted people's interest in self-disclosing their media preferences online, showing that ostracized people and rejected people gravitate toward different patterns of self-disclosure after experiencing social need threat. Beyond this, the proposed dimensional approach to content affinity reveals two things. First, behavioral and semantic components of content can be reliably manipulated and examined as independent predictors of narrative appeal. Second, semantic affinity with recent social media experiences (particularly rejection) impacted narrative appeal—but behavioral affinity had no effect on appeal (informing H2). This raises questions about the importance of semantic and behavioral affinity as predictors within mood management theory, and the role of content affinity in media selections based on alternative goals beyond managing moods, such as vicarious need satisfaction through media use and media-based coping strategies.

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INTRODUCTION

Most research on the social affordances of media focuses on how media technology can offer opportunities for interpersonal interaction and positive self-presentation (see Grady et al., 2022). However, there is value in considering the social affordances of non-interactive media as well (Eden, Ewoldsen, et al., 2018). The social influences and media use model (SIMU; Grady et al., 2022) illustrates how considering the social affordances of other forms of media can draw together disparate areas of study that all examine how users deploy varied media opportunities for social ends (Figure 1). In particular, Grady et al. (2022) identify several ways that narratives that can benefit social interaction, including content features that may be particularly important to a narrative's perceived social utility. For example, they describe how narratives that reflect and connect with a media user's real-world experience (and therefore might inform and influence subsequent social encounters) can be viewed as an important social affordance of media *content* as opposed to media technology (Grady et al., 2022).

In this paper, I draw parallels between this conceptualization of a narrative's social affordances and understandings of affinity within Mood Management Theory (MMT; Zillmann, 1988a; 1988b). The theory holds that content affinity (or disaffinity) to a user's experience plays an important role in the selection of that content as well as its potential to intervene and manage a media user's subsequent mood state. Yet the contribution of content-based affinity, (usually referred to as semantic affinity in MMT literature) to mood-based selections and preferences has been both under-defined and under-studied to date (Eden, Hahn et al., 2018). Here, we posit that any affinity between media content and media users has both behavioral and semantic components, where behavioral aspects are defined in terms of the actions and

behaviors depicted, and the semantic aspects are defined in terms of the basic psychological needs and intrinsic motives represented. These definitions of behavioral and semantic content dimensions therefore presuppose that affinity between user and content may be shared along either or both of these dimensions. In this case, behavioral affinity is where media depicts actions and interactions similar to the users' own life, while semantic affinity represents shared needs and motives between user and content. In this study, semantic affinity is specifically considered the match between the need-motives of media users and the need-motives of narrative characters. This more precise understanding of content semantics allows scholars to manipulate and examine the impact of need-motive portrayals on selective exposure in detail.







Note. "Three social factors (seen across the top of the model) recursively influence media use. Each of them impacts media choices, experiences, and outcomes individually and in combination (e.g., the social environment and users' social needs might interact to impact media use). The feedback loops delineate the recursive influence of media processes on these social factors. Notably, each of the social forces and media variables can operate at both individual and group levels, and may be examined in terms of its micro and/or macro processes. For example, we might examine how an individual's social needs impact their specific media selections, or we might examine ...

Figure 1 (cont'd)

...how a group's social needs influence aggregate patterns of selective exposure among members—or a mixture of these. Importantly, all three social influences also include structural and perceptual features, indicating, for example, that it is not only the concrete objective structures of one's social environment which impacts media use, but also how that environment is subjectively perceived and experienced" (Grady et al., 2022, p. 2).

This approach to content affinity and its distinct behavioral and semantic components is important for two reasons. First, it attempts to disentangle behavioral and semantic aspects of content to better delineate and test how these dimensions of affinity operate as predictors of selective exposure within the confines of mood management theory. In this understudied area within MMT, these dimensions are often conflated and separating them and adopting a more specific definition of semantic-level features may be of considerable use in furthering MMT. Second, differentiating behavioral and semantic components of content raises questions about the role of content affinity in media processes driven by other forces than mood. Defining semantic affinity in terms of the intrinsic needs and motives represented in content prompts us to wonder: can media exhibiting semantic affinity play an important role in self-regulation and repair? The current study attempts to delineate semantic and behavioral dimensions of affinity and examine their ability to predict selective exposure in keeping with MMT. Reflection on the need-satisfying capacity of media that shares semantic affinity with users' lived experience is saved for the discussion section and considerations for future research.

MMT research has paid little attention to content affinity and primarily focused on the other predictors of selection: valence, arousal, and absorption potential (Eden, Hahn, et al., 2018). Similarly, literature on the social affordances of media has also seemingly overlooked the role of content affinity and the potential social opportunities it may afford. The current paper builds on the belief that narrative content can afford functional opportunities of personal and

social benefit, and that the affinity between user experience and narrative content can play an important role in this process. In this sense, we reason that the perceived social affordances of narrative content include its portrayal of and connections to the user's own social experience —and that several dimensions of affinity may play a role to this process.

This project therefore contributes to mass communication research in three ways. First, this work considers how narrative content may afford valuable information and opportunities relevant to the social experiences to media users. Second, it provides a multi-dimensional definition of content affinity that adds precision to Zillmann's conception (1988a; 1988b) and suggests ways to experimentally test how different forms of affinity affect media selection and preference. Finally, it seeks to examine how the appeal of affinity and other perceived social affordances may vary depending on the social-need state of users, directly testing predictions proposed by the SIMU (Grady et al., 2022). The model proposes that user need-state can influence media preference and appeal, but that this may happen through several different mechanisms. Most pertinently to this study, media users may seek to satisfy a threatened social need through media use, or they may seek to distance themselves from the need-threatening experience and intervene in the negative mood state it elicits. In either case, selective exposure is directly influenced by a media users' current need-state.

Beyond this direct effect, Grady et al. (2022) also propose that media affordances and users' need states can interact to affect selection. In other words, need states may impact how appealing and useful different perceived affordances are believed to be¹. Although the SIMU focuses on social needs and affordances, the interaction of affordances and user needs predicted by Grady et al. (2022) is agnostic to the types of affordances in question. The

experimental research reported here therefore test this expectation (that preference for different media affordances varies as a function of need state) using four distinct forms of perceived social affordances. The first two are a commonly understood social features of social media technology that can afford privacy and personalization (Fox & McEwan, 2017). The last two are features of narrative content that can afford semantic and behavioral affinity, specifically in line with this study's unique conception of semantic affinity.

The paper proceeds as follows. First, previous conceptualizations of media's perceived social affordances and the role of users' social needs in selection and preferences are outlined, leading to questions regarding the appeal of specific affordances (privacy and personalization) in various social-need states. After this, an argument is put forth to also consider narratives through an affordances lens, in particular by exploring how media content's affinity with users' lived experience may afford important opportunities relevant to social interaction. Finally, the logic that affinity serves a social affordance of narratives is considered in the context of mood management theory, leading to the presentation of a new, multi-dimensional understanding of content affinity. This clarification of affinity's various dimensions allows more precise tests of affinity's impact on media selection and preference and interrogates this relationship, both within and beyond MMT.

After this discussion, I present two experiments designed to examine the social affordances of both media technology and message content. Both experiments start by inducing social need satisfaction/frustration using a validated social media activity. The impact of social-need states on the appeal of various social affordances is then tested by examining how the induced needs states impact the appeal of privacy/visibility and the personalization

potential of subsequent messages. Beyond the traditional social affordances outlined in CMC research, I also test how different types of narrative content are appraised after experiences of social need threat. In particular, I explicate how media content might have affinity with users' lived experience along a number of dimensions, and then test how these different types of affinity contribute to media selection and preference, particularly in response to different types of social threat.

THE COMBINED IMPACT OF MEDIA'S SOCIAL AFFORDANCES

AND USERS' SOCIAL NEEDS ON MEDIA USE

How media's perceived social affordances impact preference and appeal

Media can offer users a variety of social opportunities for interaction, and this functionality is an important predictor of media selection and preference (Fox & McEwan, 2017). The interaction between media's functional features and a user enacting those features are often discussed in terms of *affordances*. Affordances can be defined as what options does media provide to users (e.g., Sundar, 2008), and also, what opportunities do users perceive the media can offer them (e.g., Fox & McEwan, 2017). Most scholarship surrounding media's social affordances examines computer-mediated communication avenues such as social networking sites (e.g., boyd, 2011; Bradner, 2001, Butcher & Helmond, 2018). Yet some scholars argue that an affordances framework is applicable to a range of media beyond CMC (Eden et al., 2018; Grady et al., 2022). The social influences of media use model (SIMU, Grady et al., 2022) in particular, discusses how the perceived social affordances of media may be particularly important for the selection and implementation of media toward a users' particular social goals. This logic draws from Fox and McEwan's work (2017) identifying ten perceived social affordances of various CMC channels, and outlining how media are evaluated and selected based on these perceptions.

Although several perceived social affordances were identified in that work, we focus on two particular affordances for this set of studies: the privacy of users and the message's personalization potential. *Privacy/visibility* within a mediated context is the extent to which messages are apparent to others (e.g., Treem & Leonardi, 2013), and recent theoretical work

emphasizes the importance of an individual media user's subjective sense of control over this level of visibility (Trepte, 2021). Fox and McEwan (2017) point out that some channels are inherently more private than others (e.g., a phone call vs posting on a public website). Yet we would also argue that within a particular channel, users may set the privacy of their posts by various means. For example, on many social networking sites (e.g., Facebook) users may set the visibility of their posts to selected subsets of their network, or disclose information in different elements of a SNSs functionality (e.g., disclosure in a profile vs. posting in a stream vs. sending a direct message to another user, Bayer et al., 2020). Some channels even allow users to set certain posts as private (Rainie et al., 2013). Importantly, privacy/visibility is a spectrum rather than a binary. While utter privacy and absolute public visibility are two extremes, visibility within smaller subsets and social networks is also possible. These moderate levels of visibility are qualified by both the qualities and quantities of others to whom one is visible; for example, being visible to a large group of close friends or a small group of strangers. This coincides with another perceived social affordance identified by Fox and McEwan (2017), personalization where specific receivers can be identified and targeted.

Privacy (ability to dictate visibility) and personalization (ability to dictate specific message recipients) are both relevant to self-disclosures made in online spaces. People often associate different channels with different relational goals (Miczo et al., 2011). Within a single relationship, people often select specific channels based on the level of intimacy and disclosure the channel is normatively associated with (Eden & Velsker, 2016), and even weave between channels based on evolving goals and needs (McEwan, 2021). Yet previous research generally considers affordances like privacy and personalization at the channel-level (e.g., comparing the

degree of privacy perceived in FtF vs SNS settings), rather than within elements of the same channel or through other comparisons (Bayer et al., 2020).

Apart from features of the technology itself, the *perceptual* nature of these affordances, requires that we grapple with the individual making these assessments. We might ask: Are these social affordances equally appealing and self-relevant to individuals at all times and in all contexts? It seems likely that privacy and personalization may be perceived as more relevant and valuable in some situations than others—and this will directly impact how messages are created and disseminated, as well as how channels are selected and used. In particular, the SIMU expects that current social needs of users will be an important factor in their assessment of mediated opportunities for disclosure, and ultimately, what function users hope that media may offer (Grady et al., 2022).

How Media Users' Social Needs Impact Preference and Appeal

Defining Social Needs

A long history of communication scholarship describes how the social needs of media users play an important role in selective exposure (e.g., Rubin & Rubin, 1985; Palmgreen, 1984). Yet the broad umbrella of social needs within these frameworks are often disconnected and without sufficient precision for directional hypotheses and predictive modeling (Katz, 1987; Rubin, 2002). In an attempt to redress this, the SIMU (Grady et al., 2022) narrows its focus specifically to defining needs in terms of fundamental intrinsic needs, such as the basic psychological needs drawn from self-determination theory (Deci & Ryan, 2000)². SDT states that relatedness, competence, and autonomy are basic intrinsic needs of all humans, and therefore a universal and perpetual motivator of behaviors (Deci & Ryan, 2000). The current

study focuses on relatedness, as it is of particular importance as a social need motivating a range of behaviors, including media use.

Relatedness is the intrinsic need for acceptance and belonging. Feelings of relatedness are integral to human well-being and flourishing and a lack, frustration, or denial this need can be detrimental (Baumeister & Leary, 1995; Vansteenkiste et al., 2020). A great deal of psychological research has examined how frustrating relatedness needs impacts individuals. For example, meta-analyses reveal that experiences of social ostracism and rejection both have robust effects on peoples' mood, subjective sense of belonging, and self-esteem (Blackhart et al., 2009; Hartergink et al., 2015) as well as subsequent behaviors. Hundreds of studies demonstrate that experiences of ostracism and rejection serve to frustrate a sense of belonging (Blackhart et al., 2009, Gerber & Wheeler, 2009; Hartergink et al., 2015). Yet these investigations often conflate social rejection and social ostracization as similar forms of social need threat (as in Blackhart et al., 2009), or consider one type of threat subservient to another (Williams et al., 2000). Central to the present investigation, more recent scholarship differentiates these types of social exclusion. Wesselmann & Williams (2017) outlines how rejection is the experience of negative and directed attention which conveys judgment that the target is unwanted, whereas ostracism is the experience of being ignored or excluded. While both are forms of social need threat that might frustrate a sense of relatedness, these alternative forms of social threat may impact subsequent choices and patterns of media use in different ways, a distinction that will be revisited in more detail below.

Using Media to Satisfy These Needs

Several areas of research show that media can be used to satisfy basic needs like relatedness. At its most general, scholars propose that media may be used as a source of social connection when that connection is unavailable by other means (e.g., Finn & Gorr, 1988), and this need for social connection can drive entertainment use (Cohen & Metzger, 1998). More directly, research shows that interactive and social media are often used as a way to mitigate recent experiences of need-threat (Masur et al., 2014, Przybylski et al., 2010; Rigby & Ryan, 2011). Video game play in particular has been shown to reliably impact peoples' subjective experience of these most basic needs (Reinecke et al., 2012).

Some evidence suggests that media use is employed in this manner to satisfy the need for relatedness after need-threat^{3.} For example, experiences of social exclusion motivate social media use (Knowles et al., 2015), and people suffering from chronic loneliness are both more active in online social networks and more likely to follow celebrity accounts. Knowles et al. (2015) suggest this propensity for online engagement with one-sided targets can build parasocial relationships to satisfy social needs unmet in one's own social networks (see also lannone et al., 2018). Additional research suggests that using media to address relatedness needs can occur with other forms of media as well. For example, listening to music has been shown to serve as a substitute when social interaction is absent (Schäfer & Eerola, 2020), and feelings of loneliness can be reduced by exposure to favorite television programs (Derrick et al., 2009).

How Media Users' Social Needs and the Affordances of Media Interact

Taken together, this body of evidence suggests that media may be sought out for its need-satisfying potential, particularly when those needs are unmet. Yet prior work has considered media or media use as a monolith, and has shied away from examining or predicting how specific media *content* or particular media *affordances* may be used as a way to satisfy needs. The perceived social affordances of media discussed above may be more appealing (and more useful) when relatedness needs have been threatened than when these needs have been satisfied, yet predictions have been scant regarding what kind of media delivered with which perceived affordances can serve this function. Thus, little work has examined this potential interaction between need states and affordances on media preferences and use.

The social-need threats of rejection and ostracization are both linked to lower moods and a decreased sense of belonging (Molden et al., 2009; Lutz & Schneider, 2021), however they lead to divergent patterns of subsequent behavior. Research in social psychology shows that people who have been ignored and ostracized continue to pursue social engagements, while people who have been actively rejected tend to withdraw from subsequent encounters (Molden et al., 2009). More recent communication scholarship has replicated this pattern of effects in a social media setting (Lutz & Schneider, 2021). Using a fake social networking activity (adapted from Wolf et al., 2015), this work demonstrated that rejected people tend to avoid continued interaction with the people who rejected them, but ostracized people continue to engage with the network. The authors suggest that the ostracized users attempt to create and maintain bonds online to repair their negative social experience while rejected users retreat from further encounters. Through the lens of affordances, visibility seems to be more appealing

to ostracized people whereas rejected people prefer privacy. This suggests the appeal of privacy/visibility as a functional offering of media varies depending on the social-need state of media users.

Previous research on self-disclosure and self-presentation online shows that people share their media preferences as a means to maintain social bonds. Disclosing your own media preferences is one way to signal affiliation and social value (Johnson & Ranzini, 2018). Based on the findings of Lutz and Schneider (2021), we might therefore expect the appeal of sharing personal media preferences to vary between ostracized and rejected people. In particular, a user's interest in the affordance of privacy/visibility may vary depending on their social-need state. Given the influence of need states on media preferences, Grady et al. (2022) posit that specific social affordances of media can be particularly appealing in differing need states. For example, people who have recently experienced social need threat may value certain media affordances as functional opportunities for repair and self-regulation. We therefore expect that:

H1 When given the choice between sharing their media preferences or keeping them private, ostracized people will be more interested in sharing their media preferences than (a) rejected people and (b) included people.

The impact of social needs on the appeal of other perceived social affordances is less clear. Lutz and Schneider's (2021) study only allowed media users to interact with a group of strangers in an online social media simulation. This allowed Lutz and Schneider to observe how various social-need states impacted interaction with this particular network, but it did not shed light on how social-need states might impact a user's attempt to tailor messages to other

potential audiences through personalization. Tandoc et al. (2019) found that media users swing between different channels to share messages with different potential audiences and/or for sharing different kinds of content. In particular, media users who maintain accounts on multiple social media platforms clearly delineate that different tools are used to interact with different audiences and different social groups. This suggests that the ability to personalize a message and specify different potential audiences for media use disclosures may be valuable. But it is unclear how the social needs of users might impact the appeal of different target audiences. Given the choice, with whom would socially threatened individuals choose to share a message? Thus, we ask if the personalization preferences among these three groups will vary based on social needs:

RQ1: Does the target audience for sharing media preferences vary based on social-need state?

THE SOCIAL AFFORDANCES OF NARRATIVE CONTENT

A wealth of research examines the perceived affordances of social networking sites and even video games (e.g., Fox & McEwan, 2017; Eden, Ewoldsen, et al., 2018). Yet there may be other social affordances of media which have not been explored (Grady et al., 2022). As noted above, affordances are the functional offerings media makes to users. Among these, social affordances are those offers relevant to social interaction (Fox & McEwan, 2017). Focusing on high-level functions and perceptions of media in this way (rather than its technological parameters) allows for more meaningful comparisons across different types of media and interfaces (Bayer et al., 2020). These affordances are almost exclusively studied in CMC contexts, however some scholars advocate adopting an affordances perspective across a wider range of media (e.g., Eden et al., 2018; Grady et al., 2022).

In particular, Grady et al. (2022) advocates for considering how non-interactive media might be considered from an affordances perspective. They state that narratives provide functional utility to users in several ways, consistent with a social affordances perspective. These include (but are not limited to) the important role of observing social others through narratives. Narratives depict characters and interactions through which media users glean social cues and intuit the intentions and emotions of other people. These 'social simulations' can serve as tools for honing social cognition (Boyd, 2009; Grady, 2020; Mar & Oatley, 2008), including being abstracted and applied during real social interactions.

Observing social others through narratives can serve as a source of social information, as well as provide avenues for social comparison (e.g., Tsay-Vogel & Krakowiak, 2019) and even companionship via imagined social interactions with media personae (Gerrig, 1993; Hoffner &

Cantor, 1991; Horton & Wohl, 1956; Tolbert & Drogos, 2019). The functional utility of observing the social actions, interactions, and outcomes depicted in narratives, however, may be bounded by the relevance and connection of these depictions to a media user's own social reality. Extensive literature shows that media users seek out media they perceive to be relevant to themselves. For instance, people generally prefer media with characters who share important characteristics with themselves (e.g., Ellithorpe & Bleakley, 2016; Trepte, 2006). They also gravitate toward content (a) deemed appropriate for their own social groups/categories and/or (b) to portray in-group members in a positive light (Knobloch-Westerwick & Hastall, 2010; Kryston & Eden, 2021; Park et al., 2021).

Similarly, entertainment is often chosen based on its portrayal of issues and themes of particular interest to viewers. For example, Knobloch et al. (2004) demonstrate that students dissatisfied with their romantic situation spent more time listening to sad love songs than happy ones, suggesting the reflection of their experience in the lyrics was a valuable component of the songs' appeal. Indeed, some media is selected primarily because it is perceived to be of social value, or as a means of increasing social capital. For example, when people anticipate a certain topic will arise in future social interactions, they are more likely to seek content out which focuses on these topics as a means of preparation (Atkin, 1985). These disparate lines of inquiry all underline the fact that media content is regularly sought for its personal relevance and social utility. This relevance is often discussed in terms of similarity between viewer and content (Knobloch-Westerwick, 2015, see chapter 11). Another way we might view this relevance between viewer and content is as a form of affinity.

Narrative Affinity: Explicating and Extending MMT

Affinity research in media selection has fallen primarily within work on mood management (Zillmann, 1988a; 1988b). Mood management theory (MMT) stipulates that media selections are made to alter or maintain moods based on four factors: arousal level, valence/affect, semantic affinity, and absorption/intervention potential (Zillmann, 1988a; 1988b; Zillmann & Bryant, 1985). The theory suggests users gravitate toward content which can help maintain or reestablish homeostasis, by perpetuating positive states or intervening to disrupt negative ones. For example, in the context of arousal, when users are over-stimulated they seek calming media, and when under-stimulated they seek arousal (e.g., Bowman & Tamborini, 2015). In the context of affinity, behavioral similarity to noxious experiences are avoided. For example, when men have been socially threatened, they avoided hostile comedies and instead gravitated toward non-hostile comedies (Zillmann et al., 1980).

Although mood management is one of the most commonly used and cited theories in mass communication research and teaching (Reinecke, 2016), evidence supporting its claims have been mixed (see Gong et al., 2023). And notably, among the four tenents of MMT, semantic affinity is the least studied. A recent systematic review of mood management and repair research (Eden, Hahn, et al., 2018) identified 124 journal articles reporting 138 studies related to mood adjustment through entertainment media use. Only a handful of these papers considered content features as a factor in their design, and only one study explicitly tested the role of affinity in content selection. In fact, recent efforts to computationally model and test the propositions in mood management theory have ignored semantic affinity by necessity: There

simply is not enough data or consensus on its critical features to formalize a model of its impact (Gong et al., 2023).

This dearth of rigorous research on the role of content affinity in media selection and appeal may be due to the vagueness of its conceptualization and definition within MMT. The seminal book chapter proposing selective exposure as a means of mood management (Zillmann & Bryant, 1985) does not even define what affinity is. In outlining its propositions, the authors merely state that "it is proposed that persons in acutely aversive states will display a preference for stimuli that exhibit minimal, if any, behavioral affinity with their experiential state. In contrast, persons experiencing gratification are expected to prefer stimuli high in behavioral affinity, should they elect to expose themselves to distracting stimulation at all"[p. 160].

Although early MMT literature gives no formal definition of what affinity may constitute, one experimental study manipulated affinity through frustration and/or provocation to see how these experiences impacted interest in hostile or non-hostile comedy content (Medoff, 1979, reported in Zillmann 1988), and later suggested that a person "confronted with a hostile social environment, for instance, might find comfort in presentations that depict kindness in social exchanges" (p. 182). Unfortunately, this ambiguity was exacerbated a few years later, when Zillmann began referring to this aspect of MMT as semantic affinity instead of behavioral affinity (Zillmann, 1988a; 1988b). Thus, it is not entirely surprising that affinity has not been studied in as much detail as its more clearly and precisely defined companions within mood management theory. However, a brief review of how affinity has been conceptualized in recent years may shed light on current scholarly thinking about this topic.

Affinity in MMT refers to content-level features (rather than valence, arousal or absorption potential). This is often referred to as the 'overlap' between media content and the media user, such as where 'messages contain strong references to the current mood' (Reinecke, 2016), or where 'a storyline is related to the source of the negative emotional experiences' (Kim & Oliver, 2011). Yet this relationship between content and media users' experience can take many forms. For example, Masters et al. (1983) demonstrated that some children in a hostile social environment choose nurturing content over documentaries. They reasoned that while both films were non-hostile, the social nature of the nurturing statements is more appealing than other unrelated non-social content. This suggests that the social nature of the content shared important affinity with the stressor, leading to its preference. By comparison, Zillmann et al. (1980) reported that men avoid hostile comedies after being threatened, and instead gravitate toward non-hostile comedies. The authors interpret this as evidence in support of semantic affinity as a predictor of appeal: Low semantic affinity in the non-hostile comedy served as a way to interrupt the negative experience and alter their mood. Similarly, Kim and Oliver (2011) demonstrated that students believe that during a break-up, romantic films will be less appealing than other types of films because of their similarity to the negative event.

Taken together, there is considerable conceptual ambiguity surrounding our understanding of content's affinity with user experience. What constitutes this similarity between user and content, and how can it be more cleanly controlled, manipulated, and tested? To address these questions, we propose a more precise definition of affinity as a multi-

dimensional construct, and explicate two of these dimensions to inform our investigation on the role of content affinity in narrative appeal.

This paper builds on existing work to distinguish semantic and behavioral affinity as unique dimensional components of content affinity. Behavioral affinity is defined here as the extent to which the specific behaviors, actions, and physical circumstances in media matches the users' experience (i.e., if you are preparing to take an exam, and the media character is also preparing to take an exam this content would exemplify high behavioral affinity). Semantic affinity operates at a higher conceptual level. It occurs regardless of whether the behavioral specifics vary between a narrative character and the user. Instead, it represents the extent to which there is a match between a character's and a user's underlying intuitive motivation for behavior (i.e., the basic intuitive needs tied to the behavior). For example, during the COVID-19 pandemic, enjoying apocalyptic stories of alien invasions or zombies was found to be associated with a greater sense of preparedness for disaster and a lower sense of psychological distress (Scrivner et al., 2021). Clearly, the behavioral aspects of content depicting a zombie horde are far outside the reality of viewers' lives. But the semantic level desire to feel competent, capable, and prepared in the face of danger and chaos share strong similarities across these contexts. In this case, there is a symbolic, semantic match between user and narrative content, regardless of whether the precise behaviors or circumstances within which they occur match.

Although research on intuitive motivation is broad, the current study builds on the understanding of basic universal human needs and drives described in SDT: competence, autonomy, relatedness (Deci & Ryan, 2000). We argue that semantic affinity can be understood as the extent to which a narrative character's underlying motivations match a user's

competence, autonomy, and relatedness needs. Because many different activities and events can satisfy these broad needs, a variety of specific behaviors can speak to the same motivational domain. For instance, if in our example above a person is preparing to take an exam and the media character is preparing for a championship sports match, these are different behaviors but both motivated by achieving success through competence and mastery.

Media content may share affinity with users' experience in either or both of these behavioral or semantic dimensions. On a practical level, this distinction separates the concrete materiality of narrative events (i.e., what happens) from the motivations and thematic underpinnings associated with them (i.e., what drives these actions). We might therefore expect that preferences for various media offerings will vary based on their distinct semantic and behavioral affinity with users' lived experience. While beyond the scope of the current study, this approach also suggests that each dimension of affinity is a spectrum: content may be high in behavioral affinity, low in behavioral affinity, or somewhere in between, depending on the number and range of behavioral features that are shared between user and content. A similar spectrum of affinity should exist for semantic-level content features.

Importantly, differentiating behavioral affinity and semantic affinity is consistent with prior mood management research, but goes some way to clarifying some of its previous ambiguities. Masters et al., (1983) found that children gravitated toward nurturing content rather than other types of media after experiencing hostility. The definition of affinity proposed here suggests that the semantic-level need for belonging and acceptance was of paramount importance in these decisions. By comparison, Kim and Oliver (2011) showed a disinclination for romantic content after a breakup. While this also might be interpreted as representing the

semantic-level need for belonging, the need to belong could be exemplified in many different ways. In their studies, content was focused specifically on the behavioral depiction of romantic partnerships rather than any other form of social connection. Yet this raises an interesting question: Was it the semantic level features (relatedness), the behavioral features (dating partners), or some combination that led to this disinterest in romantic content? By extension, were we to replicate Medoff et al.'s (1979) study examining media choices in a hostile environment, it would be important to stipulate the specifics of how participants were initially frustrated (in both semantic and behavioral terms)—and the behavioral and semantic features of the content options presented afterward. This would help extrapolate how affinity between hostile situations and media preference truly operate.

A clear distinction between behavioral and semantic affinity is important for two reasons. First, affinity isn't well defined or comprehensively studied, and introducing a more precise framework for manipulating and testing the role of content affinity would aid in developing much needed work in this area of mood management research. Second, a dimensional definition of content affinity raises new questions. If there are multiple dimensions of affinity, do they all operate to impact selective exposure similarly? MMT says that affinity is universally avoided after a negative experience (e.g., Zillmann & Bryant, 1985). Yet might there be instances where some types of affinity are valued? Recent research shows that cheating spouses are more interested in narratives depicting cheaters than other viewers (especially when they regret this decision; Nabi et al., 2006). The authors interpret this in light of affinity, suggesting these stories hold particular interest for viewers because of their personal relevance. If people who regret cheating on their spouses gravitate toward stories about

infidelity, that suggests some types of content affinity may serve important functional goals for media users. Yet importantly, the functional goal of these cheaters is not to reduce a negative mood state. In fact, the experiment examined the appeal of these narratives in forced exposure rather than through a traditional selective exposure paradigm.

Content affinity (either behavioral, semantic, or both) may also be important in other media selection and effects processes beyond mood management theory. For example, updated discussions of MMT suggest telic hedonism as one potential explanation for why people forgo immediate emotional gratification for the promise of longer-term, more satisfying emotional resolutions (Zillmann, 2000). Perhaps the drive to satisfy deep-seated basic psychological needs can outweigh more immediate and proximal mood-based preferences. The permanent and perpetual nature of our most basic needs would certainly suggest this is the case. Yet the role of behavioral or semantic affinity in supporting these longer-term goals is unclear.

The ambiguity surrounding current conceptualizations of affinity with MMT, and evidence suggesting that content affinity may be valuable for other goals beyond mood management, underline an important gap in this area of work. A dimensional approach to content affinity would better help us understand the constraints within which mood management is a meaningful and valuable predictor of selective exposure and media appeal, and may also open new avenues of inquiry regarding content affinity's relationship to motives for selective exposure beyond temporarily managing moods (such as using media to satisfy basic psychological needs). With this in mind, the current study aims to examine how semantic and behavioral dimensions of affinity impact narrative selection and preference after a social-

need induction. While MMT would suggest all types of affinity would be avoided, research on need-satisfying media suggests that semantically related content may be of particular use to individuals seeking to mitigate their recent frustration. The empirical work discussed above supports both of these positions. Given that these two bodies of work seem to predict different outcomes, this leads us initially to a general research question:

RQ2: If need satisfying media research predicts people will seek out media focused on the satisfaction of threatened needs, while MMT predicts people will avoid content reminding them of the threatening event, how do experiences of social need threat impact the subsequent preference for media exhibiting affinity with a recent social media experience?

Although we begin with this research question, we also consider a line of reasoning that might explain why the data supports different outcomes. Specifically, it seems possible that under some conditions, people might seek need satisfaction through media use, while under other conditions, they might seek intervention potential to reduce the impact of the threatened need. In other words, the mechanisms purported to produce these different media preference outcomes may be operational under different conditions, suggesting separate but not competing hypotheses.

H2a: Participants who have been rejected and excluded will show higher preference for content that is *semantically* related to belonging and acceptance than included participants.

H2b: Participants who have been rejected and excluded will show lower preference for content that is *behaviorally* related to recent social interactions than included participants.

The studies presented here do not directly test the processes through which media's intervention potential or ability to vicariously satisfy threatened needs can influence selection outcomes. Rather, they examine only how media technology's privacy/personalization sharing affordances and media content's behavioral/semantic affinity with user experience may impact outcomes associated with media preferences. These studies also offer insights into how semantic and behavioral affinity may jointly impact these preferences. Based on MMT and need satisfaction processes suggested, we might expect that content semantically related to user's needs but behaviorally unrelated to the cause of those needs may be particularly important for people experiencing social need threats. Specifically, if a user is experiencing need frustration, content portraying the satisfaction of the domain of frustration (high semantic affinity) may support need satisfaction goals. Yet content portraying the behavioral specifics of the stressor (high behavioral affinity) may be particularly unappealing as it perpetuates rather than intervenes in the negative experience. It therefore seems possible that media which offer high semantic affinity but low behavioral affinity would be particularly useful in meeting both needsatisfaction and mood intervention goals simultaneously. In which case:

H2c: In order to mitigate negative effects, people experiencing threat to a social need will find (a) content with behavioral affinity to the source of their stress unappealing, and (b) content with semantic affinity to that source more appealing than people not experiencing the threat.

Project Overview

The current project has two goals. The first is to examine the interaction of user's (temporary) social needs and the social affordances of media on selection and preference by manipulating social-need states and observing subsequent media preferences. The second is to consider content affinity as an affordance of media, and therefore test the relative importance of both semantic and behavioral affinity on narrative appeal in different need states.

To achieve these goals, two experiments test the interaction between social needs and perceived social affordances as predictors of media preferences. Social needs are manipulated at the beginning of both experiments using a CMC induction of social ostracization, inclusion, and rejection. Two different groups of social affordances (narrative affinity and user privacy and personalization) are examined as predictors of media selection. Narrative affinity with the induction is manipulated through a series of stories which vary in their similarity to the user's experience in terms of both (a) behavioral and (b) semantic affinity. Privacy/personalization is offered by giving participants the opportunity to make their narrative selections visible to various user groups or remain private. By conducting these experiments, we hope to gain a greater understanding of media selection as a function of semantic and behavioral affinity via need satisfaction.

STUDY 1

Study 1 Method

Sample

A sample of undergraduates at a large Midwestern university received course credit for participation (see Table 1 for demographic details of both studies). The final sample included 208 students, after removing participants who failed the attention check (n = 25) or recognized that the social-need induction was fake (n = 12), which is consistent with the drop rate in prior studies using this paradigm (see online supplement, Lutz & Schneider, 2021).

Sample Characteristics								
	Age	%Women	%White	% Black/	%Asian	% Other/		
	M (SD)			Af. Amer.		undisclosed		
Study 1	20.18 (2.46)	55.8%	80.00%	10.00%	5.20%	4.80%		
(Students)								
Study 2	38.36 (12.40)	37.80%	73.50%	12.30%	8.80%	4.40%		
(Prolific)								

Procedure

Table 1

All participants gave written consent to participate and all procedures and materials were approved by the institutional review board. Participants were led to believe they would be participating in two distinct studies to mask our intent. They were told the first study was a social networking activity and the second study was rating potential movie plots. They were debriefed on this deception and the induction manipulation after completion.

Induction: Manipulating Social Need-State Using Ostracism Online

In order to manipulate social-need state, Ostracism Online was adopted. It is a validated open source research tool to examine the effects of social ostracization on individuals in digital spaces (e.g., Lutz & Schneider, 2021; Wolf et al., 2015). This social networking site interface was developed as an extension of Cyberball, an online ostracization tool used in hundreds of studies to induce feelings of isolation versus inclusion (see Hartgerink et al., 2015; Williams et al., 2000).

Ostracism Online differs from Cyberball in that the digital interactions are not a game of catch, but instead take place on a social networking site (Wolf et al., 2015). Study participants are asked to create a user profile by choosing a cartoon avatar and writing a short bio for themselves. Their profile is then displayed on a page with several other profiles (see Figure 2). Participants are led to believe these profiles belong to other real-time users, but they are pre-programmed content. Participants then have 3 minutes to read and interact with others' posts, as well as receiving pre-programmed "likes" on their own profiles. Likes received on social media are considered relationally-based feedback, where Likes convey that the responder cares about the poster (Sumner, Ruge-Jones, & Alcorn, (2018). We built an open-source English-language version of the Ostracism Online tool based on Wolf et al. (2015) and Lutz and Schneider (2021): https://bit.ly/ostracismonline.

Participants were randomly assigned to one of three conditions: included, ostracized, and rejected. Participants in the social inclusion condition receive the same number of likes as the other profiles (6, meaning half of all avatar profiles will like their post) and no dislikes. Participants in the ostracized condition receive one like and one dislike, which is significantly fewer likes and dislikes than the other avatar profiles receive. The rejection condition, added by Lutz and Schneider (2021), received 6 dislikes, mirroring the quantity of feedback in the inclusion condition. Based on past research, these three conditions were most likely to vary relational need satisfaction in users.

Figure 2 Ostracism Online Induction (Sample)



Note. The profile in the upper left is generated by the participant. The number of likes and dislikes they receive is dictated by their experimental condition included = 6 likes, ostracized= 1 like + 1 dislike, rejected = 6 dislikes). The 11 profiles and all other page content is identical across conditions.

Narrative Stimuli

Creating Stimuli Varying in Semantic and Behavioral Affinity with the Induction. After

the social-need induction, participants were shown four short film synopses. These were

designed to systematically vary both semantic and behavioral affinity with the induction.

We defined behavioral affinity as a strong match between the behaviors, actions, and

interactions experienced by participants and those experienced by narrative protagonists.

Stories representing high behavioral affinity with the social-need induction were therefore depicted in stories where protagonists (a) were online meeting and interacting with strangers and (b) making evaluations. Low behavioral affinity is depicted in stories where protagonists were (a) alone in non-digital contexts (not online) and (b) observing inanimate objects without making evaluations (for example, mapping or counting things).

Semantic affinity is defined as a strong match between the motivations, goals and needs of participants and story protagonists. In the case of our induction, high semantic affinity would be depicted in stories where protagonists were seeking relatedness need satisfaction through social connection and acceptance. Low semantic affinity is depicted in stories where protagonists were motivated by other goals unrelated to relatedness need satisfaction. In particular, stories depicted a protagonist motivated by material gain (such as money or assets) unrelated to social interactions.

Each participant rated a set of four stories which each varied in semantic and behavioral affinity to the induction. In other words, each person saw a story that was (1) high in both semantic and behavioral affinity, (2) high in semantic affinity but low in behavioral affinity, (3) low in semantic affinity but high in behavioral affinity and (4) low in both. Presentation order of the four affinity combinations was randomized across participants.

With these operational definitions of semantic and behavioral affinity in mind, content that exactly replicated the induction scenario (a story about liking and disliking stranger profiles on a new SNS while your own profile is being judged by those same users) would naturally have the highest degree of affinity. However, this match might be apparent to participants, which could bias responses. We therefore pretested a range of story scenarios, each of which was

manipulated into four versions, one to represent each affinity combination. We will present the analyses from this pretest below, but first will outline how the story manipulations were designed to be consistent with our conceptualization of semantic and behavioral affinity. To obscure the premise of our study and avoid redundancy between the story options presented to users, we designed several story stems which could be manipulated to represent any of these four combinations of affinity. For example, a story stem about a character playing a game could be manipulated to show the character playing either online or alone (behavioral affinity) and motivated by a desire either to connect with others or to win prizes (semantic affinity) To ensure all story stems could be manipulated to represent our various combinations of affinity while controlling for other key factors, we pretested all four versions of each story stem.

Narrative Stimuli Pilot Testing. Twenty stories were created: Five story stems were manipulated to portray each possible combination of semantic (hi/lo) and behavioral affinity (hi/lo). The five story stems focused on the protagonist playing a new game; going Geocaching; taking an art class; using a new local recommendation service, or being on a reality tv show. Each of these stems were manipulated to represent the four combinations of affinity (hi semantic-hi behavioral; hi semantic-lo behavioral; lo semantic-hi behavioral; low semantic-low behavioral). For example, in the video game story, the high-behavioral and high-semantic affinity version depicts a protagonist who plays an online multi-player game and wants to make friends through the game, and the low-behavioral and low-semantic affinity version depicts her playing a solo board game to win prize money. All stories were edited to be of similar length. Full text of all tested stimuli can be found in Appendix A.
Narrative Pilot Method and Procedure. To identify the four story stems that best represented our intended manipulations, participants in a pilot study read and rated five stories designed to represent the same affinity manipulation (e.g., the high behavioral high semantic affinity version of all story stems; *N*_{participants}=251, *N*_{ratings}=1255). Participants were led to believe they would be giving feedback on several potential movie plots within the same genre. They were then randomly assigned to one of four affinity manipulation groups. For example, a participant assigned to the hi-hi condition read five stories, all designed to be high in both semantic and behavioral affinity. Each story portrayed strangers meeting online and a main character desiring social connection in different contexts. Stories were randomized in this way to compare behavioral and semantic content ratings across different story stems using between subjects analysis.

Two behavioral items asked what happened in the story, rating whether the story showed someone online (i.e., high behavioral affinity with the induction) and whether it showed someone alone (i.e., low behavioral affinity with the induction). Semantic items asked about the character's motives, for example rating whether the protagonist wanted to make connections with other people (i.e., high semantic affinity with Ostracism Online) or if they protagonist wanted to gain wealth/resources (i.e., low semantic affinity with Ostracism Online).

Additional items were used to compare these story manipulations across other pertinent factors. In particular, testing other known factors in MMT (excitement, valence, and interest in the story) to check if our manipulations adequately control for these. We also asked if the stories portrayed the other basic psychological needs of SDT beyond relatedness

(competence and autonomy). All items were Likert-style statements rated on a 5-point scale. The pilot instrument and all items can be found in Appendix A.

Participants in an online sample via Prolific rated five stories each and were paid prorated minimum wage for their time (\$2 for 10 minutes). Participants were all residents of the United States with an average age of 36 (*SD*=13.31). Demographics indicate the sample was evenly split by gender (48.4% men, 46.4% women and 4.8% other genders or non-disclosing) and primarily White (76.6% White, 7.9% Black, 12.7% Asian, 2.8% other races and ethnicities).

*Narrative Pilot Results*⁴. Story ratings were compared across randomly assigned affinity conditions using between subjects ANOVAs with Bonferroni corrections to compare means. Data showed that the stories were perceived to portray behavioral and semantic affinity with the planned social-need induction as intended. Participants perceived the protagonists in the hi-behavioral affinity stories were online more (F(3,1252) = 185.16, p<.001) and involved in evaluations more (F(3,1252) = 49.08, p<.001) than protagonists in the lo-behavioral affinity stories. By contrast, protagonists in the lo-behavioral affinity stories were perceived to be alone more than those in the hi-behavioral affinity stories (F(3,1252) = 33.05, p<.001). Similarly, the high semantic affinity stories were perceived to depict people motivated by social connections and relationships (F(3,1252) = 483.29, p<.001 and F(3,1252) = 570.73, p<.001 for these measures, respectively), while the low semantic affinity stories were perceived to depict people motivated by wealth (F(3,1252) = 730.66, p<.001).

Some stems, but not all, also suggested an interaction between semantic and behavioral components. That is, while the stories designed to have high semantic affinity with relatedness were perceived as intended to be *most* motivated by social relationships and connection, the

low semantic affinity story with high behavioral affinity (where the protagonist was motivated by wealth, but was online with other people) were consistently rated as higher on relatedness measures than the story with low semantic and low behavioral affinity. Across all story stems, participants perceived the low-semantic affinity content (wealth stories) as more motivated by competence (F(3,1252)=65.99, p<.001) and autonomy (F(3,1252)=128.98 p<.001) than the highsemantic affinity content (relatedness stories). Because gaining wealth is an achievement and can be associated with a greater degree of freedom, this is not entirely surprising, and their potential effects will be addressed in more detail in both studies below⁵. While the pattern of means was very similar across all five story stems, the app story showed the least consistent pair-wise differences across behavioral items. The remaining four story stems (game play, geocaching, an art class and a reality ty show) were therefore used in the main study.

In the experiment, participants would see four stories, one of each story stem. Each story would depict a different affinity combination (for example, a participant might see the hihi game story with the lo-lo geocaching story). Affinity manipulations were randomized without replacement, ensuring each person saw all four affinity combinations, but these would appear across different story stems for each participant. As a result, all participants rated a fullycrossed choice set of affinity manipulations presented in a random order.

Benavior Rating	g Wieuns (SL) by	story stern und	Ajjiiiity Conditio	
	Hi Behavioral –	Hi Behavioral –	Lo Behavioral –	Lo Behavioral –
Behaviors	Hi Semantic	Lo Semantic	Hi Semantic	Lo Semantic
Is Online				
Game	4.73 (.13) ^a	4.84 (.13) ^a	2.35 (.13) ^b	2.52 (.13) ^b
Geocaching	4.27 (.16) ^a	4.07 (.16) ^a	3.02 (.16) ^b	2.32 (.16) ^c
Art Class	4.11 (.16) ^a	3.97 (.16) ª	2.69 (.16) ^b	2.45 (.16) ^b
Reality Show	4.13 (.15) ^a	4.26 (.15) ª	2.17 (.15) ^b	2.07 (.15) ^b
Mean	4.30 (.15)	4.28 (.15)	2.78 (.15)	2.50 (.15)
Is Alone (R)				
Game	4.08 (.11) ^{a,b}	3.89 (.11)	4.32 (.10) ^{b,c}	4.66 (.11) ^c
Geocaching	3.55 (.16) ª	3.55 (.16) ª	4.06 (.16) ^b	4.27 (.16) ^b
Art Class	3.58 (.13) ^{a,b}	3.24 (.13) ^a	3.74 (.13) ^b	3.61 (.13) ^{a,b}
Reality Show	3.39 (.14) ^a	2.81 (.14) ^b	4.06 (.13) ^c	4.15 (.14) ^c
Mean	3.62 (.13)	3.31 (.13)	3.99 (.13)	4.05 (.13)
Evaluations Occur				
Game	3.79 (.14) ^a	4.21 (.14) ^a	2.86 (.14) ^b	2.53 (.14) ^b
Geocaching	3.29 (.15) ^a	3.29 (.15) ^a	2.89 (.15) ª	2.89 (.15) ^a
Art Class	3.89 (.13) ^{a,b}	4.29 (.13) ^a	3.05 (.13) ^{b,c}	3.48 (.13) ^c
Reality Show	4.05 (.14) ^a	4.13 (.14) ^a	3.63 (.13) ^{a,b}	3.37 (.14) ^b
Mean	3.77 (.14)	3.93 (.14)	3.11 (.14)	3.06 (.14)
	•••• (•=•)		•·== (·= ·)	
	Hi Behavioral –	Hi Behavioral –	Lo Behavioral –	Lo Behavioral –
Semantics	Hi Behavioral – Hi Semantic	Hi Behavioral – Lo Semantic	Lo Behavioral – Hi Semantic	Lo Behavioral – Lo Semantic
Semantics Want Connection	Hi Behavioral – Hi Semantic	Hi Behavioral – Lo Semantic	Lo Behavioral – Hi Semantic	Lo Behavioral – Lo Semantic
Semantics Want Connection Game	Hi Behavioral – Hi Semantic 4.58 (.10) ^a	Hi Behavioral – Lo Semantic	Lo Behavioral – Hi Semantic 4.66 (.10) ^a	Lo Behavioral – Lo Semantic
Semantics Want Connection Game Geocaching	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a	Lo Behavioral – Lo Semantic 1.82 (.10) ° 2.27 (.11) °
Semantics Want Connection Game Geocaching Art Class	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a 4.60 (.12) ^a	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a	Lo Behavioral – Lo Semantic 1.82 (.10) ^c 2.27 (.11) ^c 3.29 (.12) ^b
Semantics Want Connection Game Geocaching Art Class Reality Show	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a 4.60 (.12) ^a 4.61 (.11) ^a	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b 3.18 (.11) ^b	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a	Lo Behavioral – Lo Semantic 1.82 (.10) ° 2.27 (.11) ° 3.29 (.12) ^b 2.52 (.11) °
Semantics Want Connection Game Geocaching Art Class Reality Show Mean	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a 4.60 (.12) ^a 4.61 (.11) ^a 4.60 (.11)	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b 3.18 (.11) ^b 3.18 (.11)	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a 4.73 (.11)	Lo Behavioral – Lo Semantic 1.82 (.10) ° 2.27 (.11) ° 3.29 (.12) ^b 2.52 (.11) ° 2.55 (.11)
Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a 4.60 (.12) ^a 4.61 (.11) ^a 4.60 (.11)	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b 3.18 (.11) ^b 3.18 (.11)	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a 4.73 (.11)	Lo Behavioral – Lo Semantic 1.82 (.10) ^c 2.27 (.11) ^c 3.29 (.12) ^b 2.52 (.11) ^c 2.55 (.11)
Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship Game	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a 4.60 (.12) ^a 4.61 (.11) ^a 4.60 (.11) 0s 4.68 (.10) ^a	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b 3.18 (.11) ^b 3.18 (.11) 2.44 (.10) ^b	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a 4.73 (.11) 4.59 (.10) ^a	Lo Behavioral – Lo Semantic 1.82 (.10) ^c 2.27 (.11) ^c 3.29 (.12) ^b 2.52 (.11) ^c 2.55 (.11) 1.60 (.10) ^c
Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship Game Geocaching	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a 4.60 (.12) ^a 4.61 (.11) ^a 4.60 (.11) 0s 4.68 (.10) ^a 4.53 (.11) ^a	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b 3.18 (.11) ^b 3.18 (.11) 2.44 (.10) ^b 3.08 (.11) ^b	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a 4.73 (.11) 4.59 (.10) ^a 4.63 (.11) ^a	Lo Behavioral – Lo Semantic 1.82 (.10) ° 2.27 (.11) ° 3.29 (.12) ^b 2.52 (.11) ° 2.55 (.11) 1.60 (.10) ° 2.11 (.11) °
Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship Game Geocaching Art Class	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a 4.60 (.12) ^a 4.61 (.11) ^a 4.60 (.11) 0s 4.68 (.10) ^a 4.53 (.11) ^a 4.60 (.11) ^a	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b 3.18 (.11) ^b 3.18 (.11) 2.44 (.10) ^b 3.08 (.11) ^b	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a 4.73 (.11) 4.59 (.10) ^a 4.63 (.11) ^a 4.72 (.11) ^a	Lo Behavioral – Lo Semantic 1.82 (.10) ° 2.27 (.11) ° 3.29 (.12) b 2.52 (.11) ° 2.55 (.11) 1.60 (.10) ° 2.11 (.11) ° 3.07 (.11) b
Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship Game Geocaching Art Class Reality Show	Hi Behavioral – Hi Semantic $4.58 (.10)^{a}$ $4.57 (.11)^{a}$ $4.60 (.12)^{a}$ $4.61 (.11)^{a}$ 4.60 (.11) OS $4.68 (.10)^{a}$ $4.53 (.11)^{a}$ $4.60 (.11)^{a}$ $4.60 (.11)^{a}$	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b 3.18 (.11) ^b 3.18 (.11) 2.44 (.10) ^b 3.08 (.11) ^b 3.08 (.11) ^b 2.97 (.12) ^b	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a 4.73 (.11) 4.59 (.10) ^a 4.63 (.11) ^a 4.72 (.11) ^a	Lo Behavioral – Lo Semantic 1.82 (.10) ° 2.27 (.11) ° 3.29 (.12) b 2.52 (.11) ° 2.55 (.11) 1.60 (.10) ° 2.11 (.11) ° 3.07 (.11) b 2.34 (.12) °
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Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship Game Geocaching Art Class Reality Show Mean Want Wealth	Hi Behavioral – Hi Semantic $4.58 (.10)^{a}$ $4.57 (.11)^{a}$ $4.60 (.12)^{a}$ $4.61 (.11)^{a}$ 4.60 (.11) OS $4.68 (.10)^{a}$ $4.53 (.11)^{a}$ $4.60 (.11)^{a}$ $4.60 (.12)^{a}$ 4.60 (.11)	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b 3.18 (.11) ^b 3.18 (.11) 2.44 (.10) ^b 3.08 (.11) ^b 3.08 (.11) ^b 2.97 (.12) ^b 2.94 (.11)	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a 4.73 (.11) 4.59 (.10) ^a 4.63 (.11) ^a 4.72 (.11) ^a 4.67 (.11)	Lo Behavioral – Lo Semantic 1.82 (.10) ^c 2.27 (.11) ^c 3.29 (.12) ^b 2.52 (.11) ^c 2.55 (.11) 1.60 (.10) ^c 2.11 (.11) ^c 3.07 (.11) ^b 2.34 (.12) ^c 2.35 (.11)
Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship Game Geocaching Art Class Reality Show Mean Want Wealth Game	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a 4.60 (.12) ^a 4.61 (.11) ^a 4.60 (.11) 05 4.68 (.10) ^a 4.53 (.11) ^a 4.60 (.11) ^a 4.60 (.11) ^a 4.60 (.11) ^a 4.60 (.11) ^a 4.60 (.11) ^a	Hi Behavioral – Lo Semantic 2.79 (.10) ^b 3.15 (.11) ^b 3.36 (.12) ^b 3.18 (.11) ^b 3.18 (.11) ^b 3.08 (.11) ^b 3.08 (.11) ^b 3.08 (.11) ^b 2.97 (.12) ^b 2.94 (.11) 4.81 (.10) ^b	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a 4.73 (.11) 4.59 (.10) ^a 4.63 (.11) ^a 4.77 (.11) ^a 4.67 (.11) 2.11 (.09) ^a	Lo Behavioral – Lo Semantic 1.82 (.10) ° 2.27 (.11) ° 3.29 (.12) b 2.52 (.11) ° 2.55 (.11) 1.60 (.10) ° 2.11 (.11) ° 3.07 (.11) b 2.34 (.12) ° 2.35 (.11) 4.74 (.10) b
Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship Game Geocaching Art Class Reality Show Mean Want Wealth Game Geocaching	Hi Behavioral – Hi Semantic 4.58 (.10) ^a 4.57 (.11) ^a 4.60 (.12) ^a 4.61 (.11) ^a 4.60 (.11) DS 4.68 (.10) ^a 4.53 (.11) ^a 4.60 (.11) ^a 4.60 (.12) ^a 4.60 (.11) 2.23 (.10) ^a 2.19 (.12) ^a	Hi Behavioral – Lo Semantic 2.79 (.10) b 3.15 (.11) b 3.36 (.12) b 3.18 (.11) b 3.18 (.11) b 3.08 (.11) b 3.08 (.11) b 3.08 (.11) b 3.08 (.11) b 2.97 (.12) b 2.94 (.11) 4.81 (.10) b 4.39 (.12) b	Lo Behavioral – Hi Semantic 4.66 (.10) ^a 4.68 (.11) ^a 4.75 (.11) ^a 4.79 (.11) ^a 4.73 (.11) 4.59 (.10) ^a 4.63 (.11) ^a 4.77 (.11) ^a 4.77 (.11) ^a 4.67 (.11) 2.11 (.09) ^a 2.22 (.11) ^a	Lo Behavioral – Lo Semantic 1.82 (.10) ° 2.27 (.11) ° 3.29 (.12) b 2.52 (.11) ° 2.55 (.11) 1.60 (.10) ° 2.11 (.11) ° 3.07 (.11) b 2.34 (.12) ° 2.35 (.11) 4.74 (.10) b 4.24 (.12) b
Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship Game Geocaching Art Class Reality Show Mean Want Wealth Game Geocaching Art Class	Hi Behavioral – Hi Semantic $4.58 (.10)^{a}$ $4.57 (.11)^{a}$ $4.60 (.12)^{a}$ $4.61 (.11)^{a}$ 4.60 (.11) 55 $4.68 (.10)^{a}$ $4.53 (.11)^{a}$ $4.60 (.11)^{a}$ $4.60 (.12)^{a}$ $4.60 (.12)^{a}$ $4.60 (.12)^{a}$ 4.60 (.11)	Hi Behavioral – Lo Semantic $2.79 (.10)^{b}$ $3.15 (.11)^{b}$ $3.36 (.12)^{b}$ $3.18 (.11)^{b}$ $3.18 (.11)^{b}$ $3.08 (.11)^{b}$ $3.08 (.11)^{b}$ $3.08 (.11)^{b}$ $2.97 (.12)^{b}$ $2.94 (.11)$ $4.81 (.10)^{b}$ $4.48 (.11)^{b}$	Lo Behavioral – Hi Semantic $4.66 (.10)^{a}$ $4.68 (.11)^{a}$ $4.75 (.11)^{a}$ $4.79 (.11)^{a}$ 4.73 (.11) $4.59 (.10)^{a}$ $4.63 (.11)^{a}$ $4.72 (.11)^{a}$ 4.67 (.11) $2.11 (.09)^{a}$ $2.22 (.11)^{a}$ $2.40 (.11)^{a}$	Lo Behavioral – Lo Semantic 1.82 (.10) ° 2.27 (.11) ° 3.29 (.12) b 2.52 (.11) ° 2.55 (.11) 1.60 (.10) ° 2.11 (.11) ° 3.07 (.11) b 2.34 (.12) ° 2.35 (.11) 4.74 (.10) b 4.24 (.12) b 4.53 (.11) b
Semantics Want Connection Game Geocaching Art Class Reality Show Mean Want Relationship Game Geocaching Art Class Reality Show Mean Want Wealth Game Geocaching Art Class Reality Show	Hi Behavioral – Hi Semantic $4.58 (.10)^{a}$ $4.57 (.11)^{a}$ $4.60 (.12)^{a}$ $4.61 (.11)^{a}$ 4.60 (.11) 05 $4.68 (.10)^{a}$ $4.53 (.11)^{a}$ $4.60 (.11)^{a}$ $4.60 (.12)^{a}$ $4.60 (.12)^{a}$ 4.60 (.11) $2.23 (.10)^{a}$ $2.19 (.12)^{a}$ $2.26 (.11)^{a}$ $2.55 (.10)^{a}$	Hi Behavioral – Lo Semantic $2.79 (.10)^{b}$ $3.15 (.11)^{b}$ $3.36 (.12)^{b}$ $3.18 (.11)^{b}$ $3.18 (.11)^{b}$ $3.08 (.11)^{b}$ $3.08 (.11)^{b}$ $3.08 (.11)^{b}$ $2.97 (.12)^{b}$ $2.94 (.11)$ $4.81 (.10)^{b}$ $4.39 (.12)^{b}$ $4.82 (.10)^{b}$	Lo Behavioral – Hi Semantic $4.66 (.10)^{a}$ $4.68 (.11)^{a}$ $4.75 (.11)^{a}$ $4.75 (.11)^{a}$ $4.79 (.11)^{a}$ 4.73 (.11) $4.63 (.11)^{a}$ $4.72 (.11)^{a}$ $4.67 (.11)^{a}$ 4.67 (.11) $2.11 (.09)^{a}$ $2.22 (.11)^{a}$ $2.40 (.11)^{a}$ $2.55 (.10)^{a}$	Lo Behavioral – Lo Semantic 1.82 (.10) $^{\circ}$ 2.27 (.11) $^{\circ}$ 3.29 (.12) b 2.52 (.11) $^{\circ}$ 2.55 (.11) 1.60 (.10) $^{\circ}$ 2.11 (.11) $^{\circ}$ 3.07 (.11) b 2.34 (.12) $^{\circ}$ 2.35 (.11) 4.74 (.10) b 4.24 (.12) b 4.53 (.11) b

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Table 2

Note. The Hi-Behavioral affinity versions were designed to depict someone online and making evaluations with other people (i.e., not alone). Superscripts denote pairwise differences with Bonferroni corrections. Comparisons are horizontal only. The App story, which showed the least consistent differences in behavioral affinity items, was dropped in the main experiments.

Story Protagonist Pilot Testing. Each story also included a randomly assigned protagonist. In a prior study, participants (286 MSU students who received course credit for participation, 62.6% women, 81.5% White) rated the appeal of several potential protagonists. Protagonist profiles were designed to be similar across age, gender, and level of detail provided. They are all American women in their 20s (similar to our student sample and a common film protagonist type). They live in medium-size cities, have creative jobs, active hobbies, and positive personality traits. Creative jobs were drawn from common romcom tropes (TVTropes, n.d.) while common hobbies were drawn from the Global Consumer Survey (Statista, 2022). These profiles and their appeal scores can be found in Appendix A.

In both the narrative stimuli pilot described above and the main studies, the five protagonists with the most similar appeal ratings were used. In both cases, these protagonist profiles were randomized so that different protagonists appeared with each story across participants. In the narrative stimuli pilot test reported above no character effects or character by story stem interactions impacted appeal.

Measures

Measures included an induction check, selection and appeal ratings for both the stories and the social sharing preferences, as well as a range of demographic and individual-level features.

Induction Check. To check our social-need induction worked as planned, we replicated the induction checks used in prior studies. This includes the participants' awareness of manipulation, mood, and subjective ratings of belongingness.

Induction items were taken from Lutz and Schneider (2021: *The feedback I received on my profile description in terms of Likes and Dislikes was* ... -3 (very negative) to +3 (very positive); *I felt ignored*... 1 (strongly disagree) to 7 (strongly agree); *I felt actively rejected*... 1 (strongly disagree) to 7 (strongly agree). Mood is measured through a range of affect prompts (Wolf et al. 2015). A 5-point scale (1 = not at all; 5 = extremely) was used to measure the following affective prompts: *Good; Bad; Friendly; Unfriendly; Angry; Pleasant; Happy; Sad*. Finally, we measured belongingness to mirror other Cyberball and ostracism studies (Van Beest & Williams, 2006; Williams & Nida, 2016; Wolf et al., 2015) on a 5-point scale (1 = not at all; 5 = extremely). Items include: *I felt "disconnected"; I felt rejected; I felt like an outsider; I felt I belonged to the group; I feel the other players would interact with me a lot*. Given the negative wording of the majority of prompts, high scores indicate a lack of belonging. These items showed acceptable reliability ($\alpha = .82$).

Social Sharing. Participants were asked which audience they would prefer to share their movie selection with (You just picked a movie. Who do you most want to share this choice with right now? Response Options included: Close others (partner, family, friends); the people on the social networking site from the previous study; Everyone (make a public post); No one (private)/anonymous). As with narrative preferences, we captured both selection behavior (categorical choice among these options) as well as appeal ratings for each potential audience (*Please rate how much you would be interested in sharing your selection with each of these* groups right now. Ratings were on a scale from 1-not at all interested to 7- very interested.

Story Preference. We examine preference through both selection and appeal measures. To make our DV a realistic and ecologically-valid media selection behavior (as advocated by

Knobloch-Westerwick, 2015), participants read short previews of several narratives and chose the one they wanted to watch (*Click on the film you would most like to see right now*). Clicks were coded as a categorical preference for one story option above all others. Participants then rated the appeal of each story option as a continuous measure of preference (*Please rate how much you would be interested in watching each film right now,* on a scale, from 0- not at all to 100-very interested). Time-to-click on the selection item was passively captured as a proxy measure of deliberation to compare the decision-making duration between induction conditions.

Other Narrative Appraisals. Participants were asked to evaluate each story's portrayal of relatedness, competence and autonomy (e.g., the story shows someone who wants to make friends and connections) as well as the valence of the story (this story has a happy ending, this story is positive for the protagonist). These were all 7-point Likert-style measures. The SDT items from the pilot study were included to illustrate participant perceptions of the basic needs and motives in the story. This was done to check our story manipulations. Valence items were also included as a potential control variable, as valence known to impact selection and preference.

Demographics and Additional Items. A range of demographic and individual characteristics were collected as potential control variables and moderating factors. These include Age, Gender, Race/ethnicity, and prior experience with social networking sites. After the social-need induction, we asked participants about their experience on this social networking site. Participants who believed the site was fake were list-wise deleted before analysis (n=12). Similarly, after selecting their preferred narrative, participants completed an

attention check item. They were given a list of 12 story scenarios, 4 of which matched the story manipulations used in this study (e.g., someone goes Geocaching) and 8 of which were bogus (e.g., someone goes to Japan). Participants who selected more wrong answers than right ones were also list-wise deleted before analysis (n=25).

Study 1 Results

Analyses began with an induction check to test the effect of the social-need induction on participant's subjective experience of belonging and mood using between-subjects ANOVAS comparing induction conditions. After this, primary analyses examined the appeal of different social sharing audiences and story content in two ways. Chi-squares examined the most preferred (selected) audience and story across induction conditions, while between subjects ANOVAs tested differences in the appeal of different audiences and affinity manipulations across induction conditions.

Induction check

The first set of analyses tested whether our induction worked as intended. When asked about the number of likes/dislikes they received during Ostracism Online, participants who had been included reported receiving more likes (M = 2.65, SD = .70) than ostracized people (M = .25, SD = .87)—and both conditions reported receiving more likes than rejected people (M = -2.61, SD = .75; F(2,205)=804.68, p<.001, d=2.79). Subjective ratings of this experience also varied across conditions as anticipated. Ostracized and rejected people reported feeling more ignored than included people, and all three differ in their experiences of rejection and belonging (Table 3).

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Study 1	Included	Ostracized	Rejected	
Likes Received	2.65 (.70) ^a	0.25 (.87) ^b	-2.61 (.75) ^c	F(2,205)=804.68, p<.001, d=2.79
Felt Ignored	1.77 (.90) ª	3.93 (1.61) ^b	3.86 (1.72) ^b	F(2,205)=49.76, p<.001, d=.70
Felt Rejected	1.62 (.82) ª	3.19 (1.43) ^b	5.36 (1.52) ^c	F(2,205)=148.28, p<.001, d=1.20
(Lack of) Belonging	1.90 (.63) ª	3.01 (.75) ^b	3.59 (.83) ^c	F(2,205)=96.07, p<.001, d=.97

 Table 3

 Need-states by Induction Condition (Study 1)

Note. Pairwise differences with Bonferroni corrections are horizontal. Different superscripts are significant at p < .05. Likes Received was measured on a 7-point scale from -3 to +3 (many dislikes to many likes). Ignored and Rejected were onto a 7-point scale 1 to 7 (disagree to agree; Lutz & Schneider, 2021). Belonging is a composite score of 5 items on a 5-point scale from Wolf et al., 2015.

Mood items showed a similar pattern: rejected people felt less positive and more negative than included people on all measures, and the ostracized group fell between these two extremes. For example, rejected participants reported feeling more angry than both ostracized and included people ($M_{included} = 1.42 SD = .77$, $M_{ostracized} = 1.50 SD = .85$, $M_{rejected} = 1.93$ SD = .98; F(2,205)=7.07, p<.001, d = .26. Based on these differences, the Ostracism Online tool provoked different social-need states in our induction conditions as planned (see Appendix B

for all mood items).

Social Sharing

Based on Lutz and Schneider (2021), H1 predicted that ostracized people would be more interested in sharing their media preferences than the other groups, and that rejected people would be particularly disinterested in disclosing this information. To examine these social sharing effects, we once again looked at both preference ratings (How interested are you in sharing your film section with various groups) and categorical selection (Which of these groups would you most like to share your selection with?). The preferred audience selected by users were tested first using a 4x3 chi square (4 sharing audiences x 3 induction conditions). When looking at all four audiences (close others, the social network from the induction, a public audience, and total privacy), the chi-square indicated no significant differences between induction conditions ($\chi^2(6) = 8.90, p = .18$). While we might have followed this was one-way chi-squares examining the appeal of each audience separately, some expected cell counts were too low (<5) for this test.

Comparing the mean appeal ratings for each potential audience was more informative. One-way ANOVAs examining the appeal of each audience revealed no differences between induction conditions for most social-sharing audiences (for example, everyone was equally interested in sharing with close friends and family). However, participants who were rejected during the social-need induction were less interested in sharing their choices with these new acquaintances than people who had been included or ostracized during the induction ($M_{included}$ = 3.90 SE = .21, $M_{ostracized}$ = 3.94 SE = .21 vs. $M_{rejected}$ = 3.29 SE = .21, p = .03; F(2,242) = 3.01, p=.05). Though not surprising, this lends partial support to H1, which predicted that rejected people are less interested in sharing their selections than ostracized people—at least with some audiences.

Story Appeal

Somewhat more surprising were the findings for story appeal. Once again, differences among the induction conditions were examined with a chi-square examining the distribution of participants' most preferred story and this was followed by ANOVAs comparing story appeal scores across affinity manipulations. H2 predicted that experiences of social frustration (ostracism and rejection) would interact with story affinity to impact selection. As stated in the stimuli pilot test, the manipulated affinity conditions varied in their similarity to the social-need induction as planned. They were perceived to represent the intended (1) need-motive of relatedness (semantic affinity with the induction), (2) and behavior of meeting strangers online (behavioral affinity), (3) both types of affinity, or (4) neither. This created a fully-crossed choice set of stories, with two levels of semantic affinity (hi/lo) and two levels of behavioral affinity (hi/lo). Analyses examined preferences among these story options for both the whole sample and by induction condition. The impact of the affinity and social-need state interaction on story appeal (H2), was examined with two separate analyses: chi-squares on story selection, and an ANOVA examining story appeal.

Table 4

Storv Selection Counts based on Semantic and Benaviord
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Induction Condi	tion	Hi Semantic	Lo Semantic	Total	
Included	Hi Behave	10a	26a	36	χ ² (1)=2.46, <i>p</i> =.12
	Adj Res	-1.60	1.60		
	Lo Behave	16a	19a	35	
	Adj Res	1.60	-1.60		
	Total	26	45	71	
Ostracized	Hi Behave	15a	26a	41	χ ²(1)=42, <i>p</i> =.52
	Adj Res	-0.60	0.60		
	Lo Behave	12a	15a	27	
	Adj Res	0.60	-0.60		
	Total	27	41	68	
Rejected	Hi Behave	15a	14a	29	χ ² (1)=.31, <i>p</i> =.58
	Adj Res	0.6	-0.6		
	Lo Behave	18a	22a	40	
	Adj Res	-0.6	0.6		
	Total	33	36	69	
All	Hi Behave	40a	66a	106	χ ² (1)=1.16, <i>p</i> =.28
	Adj Res	-1.1	1.1		
	Lo Behave	46a	56a	102	
	Adj Res	1.1	-1.1		
	Total	86	122	208	

The first analysis examined preferred story selections with four chi-squares. When asked which story among these participants that they would most like to watch, there was no significant difference between induction conditions (see Table 4).

The second analysis examined preference ratings for all stories in a 3 x 2 x 2 ANOVA (social-need induction x semantic affinity hi/lo x behavioral affinity hi/lo). No significant findings were found for the two-way or three-way interactions between the induction and behavioral or semantic affinity. H2's prediction that people might avoid behavioral affinity but seek out semantic affinity as a way to manage social-need frustration was not supported in Study 1.

Table 5

The Impact of Social-Need Induction & Affinity Manipulations on Story Appeal Test statistics

Social-need induction	F(2,830)=.52, p<.60
Semantic Affinity	F(1,831)=16.21,
Behavioral Affinity	<i>F</i> (1,831)=.41, <i>p</i> =.52
Behavioral x Semantic	F(1.831)=2.83, p=.09
Induction x Semantic	F(2,830)=.62, p<.54
Induction x Behavioral	F(2,830)=.30, p<.74
Induction x Behavioral X Semantic	F(2,830)=.03, p<.97

In addition to examining the predicted interactions, main effects were also examined. No effect of the social-need induction was observed on story preference (F(2,830)=.52, p=.60). Similarly, there is no effect of behavioral affinity on appeal (F(1,831)=.41, p=.52). Means for all comparisons can be found in Table 6. However, there was a main effect of semantic affinity on story preference (F(1,831)=16.21, p<.001). Stories designed to represent low semantic affinity with the induction were more appealing (collapsed M=50.05 SE=1.88) than stories designed to represent high semantic affinity (collapsed M=42.48, SE=1.88)⁶.

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	Behavior-Hi	Behavior-Lo	Behavior-Hi	Behavior-Lo
	Semantic-Hi	Semantic-Hi	Semantic-Lo	Semantic-Lo
	M (SE)	M (SE)	M (SE)	M (SE)
Induction Condition				
Included	40.78 (3.22)	43.94 (3.22)	53.80 (3.22)	51.90 (3.22)
Ostracized	41.02 (3.29)	44.45 (3.29)	50.47 (3.29)	46.56 (3.29)
Rejected	39.09 (3.27)	45.61 (3.27)	48.84 (3.27)	48.74 (3.27)
Total	40.29 (1.88)	44.66 (1.88)	51.03 (1.88)	49.07 (1.88)

 Table 6

 Semantic & Behavioral Affinity's Impact on Story Appeal (Study 1)

Discussion Study 1

This study was successful in several of its goals. The results demonstrated that the social-need induction had a robust effect on participants, and this led to differential effects on some social sharing preferences. This is consistent with H1 and informs RQ1. The story appeal findings were counter to hypotheses, however. Participants avoided stories with high semantic affinity in all induction conditions, which was somewhat surprising.

We reasoned that content with high semantic affinity with the induction would be particularly appealing to people who had recently been socially frustrated (H2). This stems from the logic suggesting that vicariously sharing in a media character's experience can satisfy our needs, and therefore relatedness frustration might beget interest in relatedness content as a means of repair. While we did not test need satisfaction after narrative exposure, differences in narrative appeal based on their degree of affinity with the social-need induction suggested that semantic-level features do play an important role in preference and selection. Study 1 showed that participants in all conditions were more interested in content with low semantic affinity (in this case, preferring stories about wealth over stories about relatedness). We considered several possible explanations for this pattern of findings in post hoc analysis.

Post Hoc Analysis

The first explanation stemmed from our observation that all social-need induction conditions preferred low semantic affinity stories to high semantic affinity stories, regardless of if the induction was socially satisfying or frustrating. Without a baseline it is difficult to be certain the included group is a true comparison case for the two social threat conditions (ostracization and rejection). Perhaps the social-need induction made relatedness needs salient to all participants—whether these needs were satisfied or frustrated. If so, this may have washed out any between condition effects, and led all participants to prefer low semantic affinity stories.

A second explanation considered that the low semantic affinity stories (which were designed to emphasize other motives than relatedness) were able to satisfy another competing need. Our low relatedness stories highlighted wealth as an alternative positive outcome for the protagonist (thereby controlling for story valence). These stories showed a woman who was struggling to make ends meet come into some money. As such, when protagonists had low relatedness motivations, they also had high wealth motivations. These two needs were therefore confounded in our story manipulations. This begs the question, were stories designed to be low in semantic affinity (i.e., relatedness) unappealing, or were the low behavioral affinity stories appealing because they highlighted wealth gain? And if the latter is true, was wealth a specifically appealing outcome, or would any alternative to relatedness be preferred?

Notably, the narrative stimuli pilot test showed that the low-relatedness, high-wealth stories were also reliably perceived as high in autonomy (see Table 7). It is not entirely surprising that gaining wealth and resources is associated with perceptions of freedom and

autonomy. Moreover, interpersonal research often shows a natural tension between

relatedness and autonomy, as these goals can sometimes be in conflict (Baxter, 1990; Guisinger

& Blatt, 1994).

Table 7

Perceptions of Character Needs as Motives in Story Manipulations (Study 1)

Relatedness Ratings		Semantic Affinity		-	Autonomy Ratings		Semantic Affinity	
		Hi	Lo	_			Hi	Lo
Behavioral Affinity		6.37 (.09)	4.04 (.09)	-	Behavioral Affinity		3.82 (.10)	5.04(.10)
	Lo	6.25 (.09)	3.44 (.09)	_			4.10 (.10)	5.37 (.10)

Note. As intended, the stories designed to be high in semantic affinity with the **social-need induction** were rated high in relatedness and low in autonomy. The contrast stories (about wealth gain) designed to be low in semantic affinity were appropriately low in relatedness and high in autonomy.

With this in mind, it is difficult to know whether the stories designed to be low in semantic affinity were appealing because of their depictions of relatedness, wealth, and/or autonomy. Although Study 1 did not measure perceptions of wealth, it did measure perceptions of relatedness and autonomy motives in the stories. Post hoc analysis therefore examined if perceptions of these needs could explain unique variance in story appeal ratings.

Importantly, there were no differences in perceptions of these needs based on induction conditions. That is, participants across all conditions perceived the representation of these needs in our various story manipulations in very similar ways (see Appendix C for analysis). This suggests that participants did not perceive stories to be more or less likely to portray relatedness (or any other need) based on their recent experiences of rejection, ostracization, or inclusion. Rather, it suggests that where difference in appeal is observed, participants *value* these portrayals differently.

Therefore, to probe how need perceptions impact story preference, a step-wise OLS regression predicted story appeal based on participant ratings of all SDT needs (relatedness,

competence, and autonomy) in the stories. The first step included the three SDT needs: competence, autonomy, and relatedness. The second step added dummy variables for our social-need induction. Finally, interactions between induction conditions and the need measures were entered.

Overall, findings suggest that perceptions of autonomy rather than relatedness are impacting story preferences. In the first step, perceptions of relatedness motives do not significantly predict story appeal ($\beta = .03 p = .42$). By contrast, perceptions of autonomy in the story did significantly predict appeal ($\beta = .16 p < .001$). Adding the induction conditions and interactions did not improve the explanatory power of the model (see Table 8 for variance explained). However, the interaction between the rejection condition and perceptions of autonomy negatively predicted appeal ($\beta = .29, p = .04$). In other words, people in the rejection condition who perceived strong autonomy motives in the story were less likely to find this appealing than other induction conditions. All coefficients can be found in table 8.

This is particularly notable as other work on rejection and ostracism has demonstrated that when people have been rejected they often prioritize control over their lives more than potentially restorative relational outcomes (see Gerber & Wheeler, 2009; Gerber et al., 2017). Prior work has argued that a sense of control (i.e., autonomy) can have a restorative effect which mitigates the experience of social threat. Yet our results suggest, at least in the context of narrative exposure, stories about autonomy are *less* appealing to rejected people⁷.

	Model			Model			Model		
	1	Adj. R ² =	.03	2	Adj. R ² =.	.03	3	Adj. R ² =.	03
	в	t	Sig.	в	t	Sig.	в	t	Sig.
Relatedness	0.03	0.81	0.42	0.03	0.84	0.40	0.08	1.38	0.17
Competence	0.06	1.65	0.10	0.06	1.58	0.11	0.05	0.83	0.41
Autonomy	0.16	4.07	0.00	0.16	4.10	0.00	0.27	3.94	0.00
Ostracized				-0.04	-0.96	0.34	0.14	0.62	0.54
Rejected				-0.02	-0.60	0.55	0.42	1.82	0.07
OstracizedxRelatedness							-0.03	-0.20	0.84
RejectedxRelatedness							-0.20	-1.61	0.11
OstracizedxCompetence							0.02	0.10	0.92
RejectedxCompetence							0.01	0.05	0.96
OstracizedxAutonomy							-0.19	-1.25	0.21
RejectedxAutonomy							-0.29	-2.04	0.04

Story Appeal based on Perceptions of Basic Needs as Character Motives (Study 1)

Table 8

Note. Relatedness, Competence, and Autonomy are subjective ratings of these constructs within the stories (rated 1-7), specifically as motives for the main protagonist. Ostracized and Rejected are induction conditions based on the social-need induction (the included group is used as the baseline).

While this post hoc analysis requires replication, the main effect of autonomy perceptions on appeal, and the potential interaction of autonomy perceptions and experiences of rejection on appeal are informative. These suggest that semantic-level content (the motivations and needs portrayed) do impact story appeal under some circumstances—and that this link may be moderated by the media users' current social-need state. If experiences of social rejection can decrease the appeal of content portraying autonomy needs, this supports the idea that the semantic features in media are important factors in selective exposure—and that their appeal can vary based on whether users are experiencing different social-need states. Specifically, this finding suggests that the match or contrast between the semantic-level needs of users and the semantic-level features in media content is a potentially influential factor in content appeal. While on the surface this is consistent with MMT's suggestion that media users may avoid content which perpetuates negative experiences, the fact that the relationship

observed in Study 1 are between social rejection and perceptions of autonomy in content (and not relatedness or competence) indicate the relationship between personal experience and the semantic features of content may be more complex than MMT describes.

STUDY 2

Study 2 was designed to replicate and extend Study 1 in several ways. First, a larger sample drawn from a more general population helped to increase statistical power and inform the generalizability of the patterns observed.

Second, the possibility that the social-need induction made relatedness salient to all participants (thereby resulting in the low appeal of content representing relatedness) deserved consideration. Study 2 therefore introduced a no-exposure control group that only rated stories and social-sharing audience targets without the induction. This served as a baseline comparison for included, ostracized, and rejected participants. In a similar vein, an over-included condition was also added. Prior work has shown that Cyberball's included group often performs similarly to benign comparison cases (Dvir et al., 2019), suggesting this experience was not negative in the way that the social-threat conditions are, but also that it did not provide a sufficiently positive experience to result in a mood boost. Wolf et al.'s (2015) original Ostracism Online tool includes an additional over-inclusion condition (i.e., receive likes from 11 of 12 avatars, rather than just half of them). In that study, the over-included group and included group showed few differences, except in one case. Over-included participants reported feeling more in control of their lives than just-included participants. Since Study 1 revealed that a story's perceived autonomy may be an important factor in its appeal, we added the over-included condition for further examination.

Third, post hoc analysis revealed that perceptions of autonomy rather than relatedness were impacting story appeal. The story manipulations deliberately provided wealth gain as an alternative positive outcome to relatedness satisfaction in the low semantic affinity stories. The

pilot data had shown, however, that the wealth stories were also perceived to be higher in autonomy. Both the pilot and Study 1 data showed these motives were fully crossed and confounded in the manipulations: High semantic affinity stories were perceived to be high in relatedness and low in wealth and autonomy, and low semantic affinity stories vice versa. However, Study 1 did not measure perception of wealth, making the connection between perceptions of wealth and autonomy in the story hazy. Were autonomy and wealth independently positive predictors of appeal, or was the autonomy item simply capturing the appeal of the wealth stories in the absence of a more direct measure? Study 2 replicated the relatedness, competence, and autonomy perception measures used in Study 1, but added a wealth measure to examine whether autonomy and wealth were independent positive predictors of appeal. The post hoc analysis therefore led to two additional research questions:

RQ3: How do perceptions of (a) relatedness, (b) autonomy and wealth in narratives impact their appeal?

RQ4: Does inducing different social need states impact the relationship between these need perceptions and appeal?

Finally, Lutz and Schneider (2021) observed that ostracized people more readily interacted with the avatars from the induction, whereas rejected people tended to retreat from further interaction. The limited social-sharing effects observed in Study 1 were consistent with this, but led to additional considerations. Given that the social influences on media use model (Grady et al., 2022) emphasizes the serial nature of media selection and effects, more detailed examinations of these interrelated processes were called for, particularly where social-need states may be affecting one or several decisions in sequence. With this in mind, it seemed

reasonable that the placement of social-sharing questions may have impacted the results observed. Specifically, in Study 1, participants were exposed to and rated stories which highlighted relatedness and a contrasting need (wealth) before they responded about their social sharing preferences. Could this experience have impacted their sharing preferences, and more pertinently, washed out any between-induction condition effects on sharing? Were the order reversed, would exposing participants to social-sharing audience items in advance of reading the stories have impacted their appeal? Both of these seem reasonably likely. Presentation order between story exposure and social-sharing audience items were counterbalanced in Study 2 to examine potential order effects, leading to a final research questions:

RQ5: Is the impact of the social-need induction on story appeal and social-sharing preferences impacted by the order in which these choices are presented?

Study 2 Methods

Study 2 replicated all procedures, stimuli, and measures from Study 1 with some additions. *Sample*

Residents of the United States were recruited from Prolific to complete an online version of the study and were paid pro-rated minimum wage for their time. This sample was larger than Study 1 (N = 633), and participants were older (M_{age} = 38.36, SD= 12.40) and included proportionally fewer women (37.80%, other demographics in Table 1)⁸.

Induction

As before, participants were randomly assigned to one of several induction conditions in Ostracism Online. The inclusion, ostracism, and rejection conditions were identical to Study 1.

Additional conditions were added to represent over-inclusion (receiving 11 likes) and a noexposure control, in which participants had no induction prior to reading stories and completing measures related to the stories, sharing preferences and demographics.

Stimuli and Measures

All narratives and measures were identical to Study 1. However, two additional items were included. Study 1 captured perceptions of the three basic psychological needs represented in the stories, each with a 1-7 Likert scale item. An additional item asked about perceptions of wealth in the stories in Study 2. A demographic item was also added to collect household income levels as a potential covariate. The procedure was the same, although half the participants saw the social-sharing items before the stories, and the other half rated stories then sharing options as in Study 1.

Study 2 Results

The Study 2 analysis mirrored Study 1. This started with an induction check, followed by examining the induction's effect on social-sharing preferences (H1). Following this, the induction activity and affinity with the induction were tested as predictors of story preference (H2). This included replicating the post hoc analysis from Study 1, which showed that perceptions of needs in the stories, specifically autonomy, could predict story appeal. In all cases, Study 2 also examined potential order effects: Did these patterns vary when participants responded about their story preferences then social-sharing preferences, or vice versa (RQ5)?

The induction effects matched those observed in Study 1. As before, the included group reported receiving more likes/dislikes than both the ostracized and rejected conditions (*M*_{included}

= 2.54, SD = .72; $M_{ostracized} = -.08$, SD = .80; $M_{rejected} = -2.56$, SD = 1.10; F(3,470)=1178.32,

p<.001)⁹. This pattern is echoed in subjective measures of feeling ignored, rejected and feeling they belong (see Table 9). Interestingly, the over-included group (added in Study 2) received twice as many likes as the included group, but while the pattern observed was in the expected direction, the over-included group did not report significantly more likes than the included group (Table 9). Differences were also observed in subjective feelings of belonging, F(3,470)=265, p<.001. Ostracized people (M=3.34 SE=.94) reported feeling less belonging than over-included (M=1.68 SE=.62) and included (M=1.91 SE=.73) people—and rejected people felt even less belonging (M=3.98 SE=.84).

Induction effects on participant mood were also broadly consistent with Study 1. The induction conditions replicated from Study 1 (included, ostracized, and rejected) show a pattern of means very similar to Study 1 (see Table 2). Because the mood items were not specific to the induction, participants who did not participate in Ostracism Online (the no-exposure group added in Study 2), were also asked about their mood. Across all measures, rejected people reported feeling worse than others (e.g., more 'angry'), and in some instances the two included conditions reported a small mood boost compared to the no-induction condition (e.g., more 'good', see Table 9 for means). For full list of mood effects see Appendix B.

Importantly, ostracized and rejected people consistently reported worse moods than both groups of included participants (see Table 9). Taken together, these effects suggest that the induction manipulated social-need states as intended.

	Over-		No			
	included	Included	Exposure	Ostracized	Rejected	
Online Experie	nce					
# of Likes	2.71 (.69)ª	2.54 (.72)ª		-0.08 (.80) ^b	-2.56 (1.10) ^c	F(3,470)=1178.32,
						<i>p<.</i> 001*
Felt Ignored	1.48 (.84)ª	1.61 (.87)ª		4.66 (1.76) [»]	4.25 (2.13) ^₀	F(3,470)=173.11,
						p<.001*
Folt Poincted	1.44 (.86)	1.47 (.73) ^a		3.72 (1.61) ^b	5.54 (1.84) ^c	F(3,470)=295.01,
Feit Rejected	а					p<.001*
Deleverine	1.68 (.62) ^a	1.91 (.73)ª		3.32 (.94) ^b	3.98 (.84) ^c	F(3,470)=265,
Belonging(Lack)						<i>p<</i> .001*
Mood						
	3.89 (.97)ª	3.69 (1.00)ª	3.52 (1.01) ^b	3.28 (1.08) ^{b,c}	3.08 (1.23) ^c	F(4,628)=12.41,
Good	(-)	()		()	(-)	p<.001*
Llaway	3.74 (.97) ^a	3.54 (1.06) ^{a,b}	3.37 (1.14) ^{b,c}	3.11 (1.13) ^{c,d}	2.93 (1.26) ^d	F(4,628)=11.46,
нарру						<i>p<</i> .001*
	3.85 (.94) ^a	3.66 (1.04) ^{a,b}	3.58 (1.10) ^{a,b}	3.35 (1.12) ^{b,c}	3.02 (1.25) ^c	F(4,628)=11.60,
Pleasant	. ,					p<.001*
	1.15 (.48) ^a	1.23 (.61)ª	1.25 (.62)ª	1.34 (.74) ^a	1.71 (1.02) ^b	F(4,628)=12.67,
Angry	(- <i>i</i>		, - <i>Y</i>	. ,	, - <i>I</i>	p<.001*

Need-states and Mood by Induction Condition (Study2)

Note. Means and standard deviations listed, comparisons are horizontal with Bonferroni corrections. Experience with the induction items were omitted for the no-exposure condition, but mood items were reported in all conditions. Additional mood items can be found in Appendix B.

Social Sharing

Table 9

As in Study 1, participants were asked to choose the audience with whom they

preferred to share their movie selection, and then asked to rate their interest in sharing with

each of these audiences individually.

Audience Selection. A chi-square test (5-indction conditions x 4 potential audiences)

showed that the most preferred audience varied by social-need state ($\chi^2(12)=21.79$, p=.04). To

better understand this bias, we examined preferred audiences in the different presentation

orders separately.

Order effects. Splitting the sample by presentation order suggested that induction

condition was impacting the appeal of different audiences, however some cell counts were very

low (Table 10). We therefore relied on one-way chi-square tests to examine the appeal of specific audiences individually. This revealed that in the sharing first group, participants' interest in sharing with close friends and family varied significantly by induction condition $(\chi^2(4)=22.80, p<.001)$. Specifically, the no exposure group was particularly interested in sharing with close ties (std. res.= 3.58). The potential reasons for this bias will be considered in the discussion.

Table 10

Narrative 1st	Over		No				
	Included	Included	Exposure	Ostracized	Rejected	Total	
Avatars from Induction	5	8	1	10	1	25	
Close Friends/Family	12	18	26	19	27	102	χ ²(4)=7.51,
							p=.11
Public post (anyone)	9	10	13	10	8	50	χ ²(4)=1.40,
							p=.84
Private (no one)	28	29	26	25	34	142	χ ²(4)=1.73,
							p=.79
Total	54	65	66	64	70	319	
Sharing 1st	Over		No				
	Included	Included	Exposure	Ostracized	Rejected		
Avatars from Induction	3	6	4	_			
	5	0	4	2	0	15	
Close Friends/Family	43	31	4 58	2 29	0 21	15 182	χ ²(4)=22.80
Close Friends/Family	43	31	4 58	2 29	0 21	15 182	χ ² (4)=22.80 p<.001*
Close Friends/Family Std Res.	43 (1.09)	31 (09)	4 58 (3.58)	2 29 (-1.23)	0 21 (-2.55)	15 182	χ ² (4)=22.80 p<.001*
Close Friends/Family Std Res. Public post (anyone)	43 (1.09) 6	6 31 (09) 8	4 58 (3.58) 4	2 29 (-1.23) 9	0 21 (-2.55) 4	15 182 31	$\chi^{2}(4)=22.80$ p<.001* $\chi^{2}(4)=3.35,$
Close Friends/Family Std Res. Public post (anyone)	43 (1.09) 6	6 31 (09) 8	4 58 (3.58) 4	2 29 (-1.23) 9	0 21 (-2.55) 4	15 182 31	χ ² (4)=22.80 p<.001* χ ² (4)=3.35, p=.50
Close Friends/Family Std Res. Public post (anyone) Private (no one)	43 (1.09) 6 14	0 31 (09) 8 15	4 58 (3.58) 4 27	2 29 (-1.23) 9 19	0 21 (-2.55) 4 11	15 182 31 86	χ ² (4)=22.80 p<.001* χ ² (4)=3.35, p=.50 χ ² (4)=8.88,
Close Friends/Family Std Res. Public post (anyone) Private (no one)	43 (1.09) 6 14	0 31 (09) 8 15	4 58 (3.58) 4 27	2 29 (-1.23) 9 19	0 21 (-2.55) 4 11	15 182 31 86	<pre> χ²(4)=22.80 p<.001* χ²(4)=3.35, p=.50 χ²(4)=8.88, p=.06</pre>

Social-sharing Audience Selections, split by Presentation Order (Study 2)

Note. Residuals are horizontal comparisons only. Tests only run where expected cell counts were >5.

Preference for Social-sharing Audiences. Following this, a MANOVA examined

continuous preference ratings for all potential audiences (close friends and family, the people from the social-need induction, a general public, or staying private). As in Study 1, participants who were rejected showed significantly less interest in sharing with the people who rejected them (F(3,470)=12.56, p<.001). The appeal of sharing with close friends, a general public, or remaining private shows no differences by induction condition (Table 11).

Order effects. However, whether people made these decisions immediately after the social-need induction or after rating stories impacted some preferences. In both presentation orders, rejected people were less interested in sharing with the people from the induction than included people, $F_{sharing1st}(3,221)=7.83$, p<.001; $F_{stories1st}(3,252)=5.60$, p<.001. However, the ostracized participants' preferences varied depending on presentation order. When participants rated stories first, ostracized participants were more interested in sharing with this this audience than rejected people, while there was no difference between the ostracized and included people. By contrast, in the sharing first order, ostracized participants were still more interested in sharing with the people from the induction than rejected people, but were also significantly less interested in this audience than included people (see Table 11). This evidence suggests that although rejection and ostracism are both states of social need frustration, their impact on subsequent media preferences may vary. Ostracized people were consistently more willing to disclose their preferences with new connections than rejected people, but their preferences varied from included individuals only under some conditions.

Whole Sample	Over -included	Included	No Exposure	Ostracized	Rejected	
Avatars in induction	3.86 (1.83)ª	3.88 (1.87)ª	N/A	3.43 (1.89)ª	2.55 (1.82) ^b	F(3,470)=12.56,
Close Friend/Family	4.57 (1.87)	4.78(1.73)	4.76 (1.83)	4.46 (1.88)	4.55 (1.99)	<i>p</i> <.001*
Public post (w/any)	3.27 (1.74)	3.51 (1.91)	3.17 (1.77)	3.21 (1.85)	3.13 (1.99)	p=.56 F(4,628)=.82,
Private (w/ no one)	4.56 (1.81)	4.52 (1.87)	4.48 (1.79)	4.45 (1.95)	4.88 (1.91)	<i>p</i> =.31 <i>F</i> (4,628)=.96, <i>n</i> = 43
Sharing 1 st	Over- included	Included	No Exposure	Ostracized	Rejected	p=.+5
Avatars in induction	3.98 (1.75) ^a	3.97 (1.79) ^a	N/A	3.24 (1.67) ^b	2.47 (1.61) ^c	F(3,221)=7.83,
	· · · ·	, , , , , , , , , , , , , , , , , , ,		()	, , , , , , , , , , , , , , , , , , ,	p<.001*
Close Friend/Family	5.26(1.57)	5.30(1.47)	5.11(1.56)	4.86 (1.78)	5.17 (1.56)	F(4,309)=.69,
						<i>p=</i> .60
Public post (w/any)	3.36(1.68)	3.77 (1.80)	3.16 (1.64)	3.36(1.77)	3.25 (1.84)	F(4,309)=1.16,
						<i>p=</i> .33
Private (w/ no one)	4.41 (1.78)	4.28 (1.87)	4.37 (1.74)	4.39 (1.81)	4.67 (1.74)	F(4,309)=.27,
						p=.90
	Over-					
Narratives 1 st	included	Included	No Exposure	Ostracized	Rejected	
Avatars in induction	3.70 (1.90)ª	3.80 (1.94)ª	N/A	3.61(2.05)ª	2.50 (1.98) ^b	F(3,252)=5.60,
_						p<.001*
Close Friend/Family	3.72 (1.84)	4.31 (1.80)	4.27 (2.05)	4.09(1.88)	4.23(2.10)	F(4,314)=.86,
						<i>p=</i> .49
Public post (w/any)	3.15 (1.80)	3.28 (1.98)	3.18 (1.94)	3.08 (1.91)	3.07 (2.05)	F(4,314)=.12,
	<u> </u>					<i>p=</i> .97
Private (w/ no one)	4.74 (1.81)	4.74 (1.85)	4.65 (1.83)	4.50 (2.07)	4.99 (1.98)	F(4,314)=.57,
						p=.67

 Table 11

 Social-sharing Audience Preferences (Study 2)

Note. Pair-wise comparisons with Bonferroni corrections noted in superscripts. Tests are horizontal. Participants who were in the no exposure condition were not asked about sharing with the induction's avatars, hence this test has fewer df and no value for the no exposure group.

Story Appeal

The impact of semantic and behavioral affinity on story appeal (H2) were once again examined with two different tests. First, chi-squares tested which story manipulation was most preferred. This was followed by ANOVAs and regressions examining how affinity conditions and the social-need induction interacted to impact story appeal.

Story Selection. As in Study 1, each participant selected their most preferred story. The distribution of these choices (among 4 story manipulations and the 5 induction conditions) was not significant ($\chi^2(12)=9.58$, p=.65). Examining preferences within each induction condition showed no effects and similar patterns to Study 1. Only the included group even approached significance (see Table 12).

Table 12

Induction Condi	ition	Hi Semantic	Lo Semantic	Count	
Over Included	Hi Behave	31a	27a	58	$\chi^2(1)=.40, p=.84$
	Adj Res	0.20	-0.20		
	Lo Behave	32a	30a	62	
	Adj Res	-0.20	0.20		
	Count	63	57	120	
Included	Hi Behave	18a	38a	56	$\chi^2(1)=3.74, p=.053$
	Adj Res	-1.90	1.90		
	Lo Behave	34a	35a	69	
	Adj Res	1.90	-1.90		
	Count	52	73	125	
Ostracized	Hi Behave	27a	30a	57	$\chi^2(1)$ =.15, p=.70
	Adj Res	0.40	-0.40		
	Lo Behave	29a	37a	66	
	Adj Res	-0.40	0.40		
	Count	56	67	123	
Rejected	Hi Behave	25a	30a	55	$\chi^2(1)$ =.20, p=.66
	Adj Res	0.40	-0.40		
	Lo Behave	21a	30a	51	
	Adj Res	-0.40	0.40		
	Count	46	60	106	
No Exposure	Hi Behave	31a	44a	75	χ 2(1)=.01, <i>p</i> =.91
	Adj Res	0.10	-0.10		
	Lo Behave	34a	50a	84	
	Adj Res	-0.10	0.10		
	Count	65	94	159	
All	Hi Behave	132a	169a	301	$\chi^2(1)$ =.11, p=.74
	Adj Res	-0.30	0.30		
	Lo Behave	150a	182a	332	
	Adj Res	0.30	-0.30		
	Count	282	351	633	

Selected Stories by Social-	need inductio	n <i>Group</i>	(Study 2)
Induction Condition	Hi Semantic	Lo Seman	ntic

Order effects. The results were the same in both presentation orders: Behavioral and semantic affinity with the social-need induction had no effect on story selection.

Story Appeal by Affinity Condition. Preference ratings for all stories (0-100) were examined next. Once again, an ANOVA tested how the social-need induction, both types of affinity, and potential order effects impacted story appeal (in a 5 x 2 x 2 x 2). Mirroring Study 1, a main effect of semantic content on preference is observed, F(1,2531) = 5.02, p = .03, but no effect of behavioral content on preference was evident, F(1,2531) = .13, p=.72.

Examining the means (Table 13) suggests that, once again, stories portraying relatedness (designed to have high semantic affinity with the induction, collapsed M=43.39, SE=2.75) were less appealing than stories portraying wealth gain (low semantic affinity, collapsed *M*=46.15, *SE*=2.75).

Table 13

Semantic and Behavi	oral Affinity's Imp	act on Story Appea	nl (M & SE)	
	Behavior-Hi	Behavior-Lo	Behavior-Hi	Behavior-Lo
	Semantic-Hi	Semantic-Hi	Semantic-Lo	Semantic-Lo
	M (SE)	M (SE)	M (SE)	M (SE)
Study 1				
Included	40.78 (3.22)	43.94 (3.22)	53.80 (3.22)	51.90 (3.22)
Ostracized	41.02 (3.29)	44.45 (3.29)	50.47 (3.29)	46.56 (3.29)
Rejected	39.09 (3.27)	45.61 (3.27)	48.84 (3.27)	48.74 (3.27)
Total	40.29 (1.88)	44.66 (1.88)	51.03 (1.88)	49.07 (1.88)
Study 2				
Over-included	48.92 (2.78)	48.06 (2.78)	45.29 (2.78)	50.77 (2.78)
Included	42.10 (2.71)	42.56 (2.71)	45.40 (2.71)	41.38 (2.71)
Ostracized	43.84 (2.73)	43.77 (2.73)	42.82 (2.73)	42.89 (2.73)
Rejected	44.09 (3.10)	39.21 (3.10)	50.50 (3.10)	47.75 (3.10)
No Exposure	40.65 (2.43)	40.68 (2.43)	46.52 (2.43)	48.42 (2.43)
Total	43.92 (2.75)	42.86 (3.75)	46.07 (2.75)	46.24 (2.75)

	Semantic and Behav	vioral Affinity's Imu	pact on Storv A	Appeal ('M & SE)
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The interaction between behavioral and semantic components of the stories was not significant (*F*(1,2531)=.25, *p*=.62). However, a two-way interaction between semantic affinity and induction approached significance (F(4,2528)=2.17, p=.07), and a three-way interaction

between semantic affinity, the social-need induction and presentation order was significant

(*F*(4,2528)=2.97, *p*=.02, see Table 14).

Order effects. To better understand the three-way interaction involving order effects,

separate ANOVAs examined the interaction between semantic content and the social-need

induction for participants who rated stories and participants who rated social audiences first. In

the narrative first group, there are no significant differences associated with the induction,

semantic affinity or their interaction (See Table 14).

Table 14

Semantic and Behavioral Affinity's Impact on Story Appeal (Main Effects & Interactions) Whole Narrative First Sharing First

		italiative inite	enanng mee
Sample	e		
Social-need induction	F(4,2528)=2.50, p=.04*	F(4,1272) =2.04 p=.09	F(4,1252)=1.34, p=.25
Semantic Affinity	F(1,2531)=16.21, p<.001*	F(1,1275)=2.90 p=.09	F(1,1255)=16.21, p<.001*
Behavioral Affinity	F(1,2531)=.13, p=.72	F(1,1275)=1.60, p=.21	F(1,1255)=.55, p=.46
Order of presentation	<i>F</i> (1,2531)=4.02, <i>p</i> =.045*	N/A	N/A
Behavioral x Semantic	F(1,2531)=.25, p=.62	F(1,1275)=.41 p=.52	F(1,1255)=.01, p=.94
Induction x Semantic	F(4,2528)=2.17, p=.07	F(4,1272)=2.11, p=.08	F(4,1252)=2.43, p=.046*
Induction x Behavioral	F(4,2528)=.68, p=.61	F(4,1272)=.40, p=.81	F(4,1252)=.38, p=.82
Induction x Behav. X Seman.	F(4,2528)=.50, p=.78	F(4,1272)=.49, p=.75	F(4,1252)=.27, p=.90
Induction x Seman. x Order	F(4,2528)=2.97, p=.02*	N/A	N/A
Behavioral Affinity Order of presentation Behavioral x Semantic Induction x Semantic Induction x Behavioral Induction x Behav. X Seman. Induction x Seman. x Order	F(1,2531)=10.21, p<.001 F(1,2531)=.13, p=.72 F(1,2531)=4.02, p=.045* F(1,2531)=.25, p=.62 F(4,2528)=2.17, p=.07 F(4,2528)=.68, p=.61 F(4,2528)=.50, p=.78 F(4,2528)=2.97, p=.02*	F(1,1275)=1.60, p=.05 $F(1,1275)=1.60, p=.21$ N/A $F(1,1275)=.41 p=.52$ $F(4,1272)=2.11, p=.08$ $F(4,1272)=.40, p=.81$ $F(4,1272)=.49, p=.75$ N/A	F(1,1255)=10.21, p< F(1,1255)=.55, p= F(1,1255)=.01, p= F(4,1252)=2.43, p=.(F(4,1252)=.38, p= F(4,1252)=.27, p= N

Table 15

Semantic Affinity and Social-Need Induction Jointly Impact Story Appeal (Story 2)

	Hi Semantic	Lo Semantic
	M (SE)	M (SE)
Super-Included	44.08 (2.57)	49.09 (2.57)
Included	43.24 (2.70)	41.13 (2.70)
No Exposure	43.16 (2.17)	46.32 (2.17)
Ostracized	43.81 (2.72)	38.54 (2.72)
Rejected	36.94 (3.48)	49.03 (3.48)
Total	44.82(2.73)	42.25 (2.73)

Note. Means above are for participants (n=314) who reported sharing preferences before film preferences.

By contrast, in the sharing first group, semantic affinity has a significant effect on story

appeal, F(1,1255)=16.21, p<.001. In addition, semantic affinity and the social-need induction

interacted to affect appeal =, F(4,1252)=2.43, p=.046. This suggests that after people

considered their target audiences, the appeal of semantically-related content varies across induction conditions. Examining the means associated with this interaction helps clarify the observed effects. For parsimony, means are reported below without the behavioral affinity component included, as it was shown to have no impact on appeal. Corrected pair-wise comparisons across all tests are not statistically significant. However, the pattern of means is informative, particularly comparing appeal scores in the rejected condition (see Table 15 and Figure 3). Stories with high semantic affinity seem to be much less appealing than stories with low semantic affinity for people in the rejected condition.

To further examine this interaction we regressed semantic affinity (hi/lo) on story appeal for each social-need induction group individually. Analyses showed that semantic affinity had a significant effect on story appeal for participants in the rejected condition but not other conditions (See Table 17). Semantic affinity with the induction had a negative effect on story appeal for participants who had been rejected. However, this effect was not observed in the other induction conditions.

Although this test does not (and no one test can) explain the above interaction between semantic content x induction condition, the pattern for rejected participants differs most notably from the pattern for ostracized participants (Table 16). Specifically, while high semantic affinity had a significant and negative effect on appeal for rejected participants (β = -.20, p=.02), high semantic affinity had its most positive influence (albeit not statistically significant) on appeal for ostracized participants (β =.09, p=.17). As such, the effect of semantic affinity on story appeal appears to differ most strongly across the rejected and ostracized conditions (Figure 3).



Story Appeal based on Semantic Affinty among Social-Need Induction Conditions (Study 2)

Note. error bars denote 95% confidence intervals, appeal ratings on a 0-100 scale.

Table 16

Figure 3

Regression of Semantic Affinity on Story Appeal for each Social-Need Induction Condition

	в	t	р
Super-Included	09	-1.42	.16
Included	.03	.51	.61
No Exposure	06	-1.09	.28
Ostracized	.09	1.38	.17
Rejected	20	-2.41	.02

Note. Coefficients reported are only from participants who rated stories after selecting a social-sharing audience (N=314). The interaction between semantic affinity and induction condition was not significant when stories were rated first.

While these initial results should not be overinterpreted, they do suggest the need for

additional work probing these different forms of social need frustration and their impact on

media use. And importantly, the two-way and three-way effects observed demonstrate that

social-need state and the affinity afforded by narratives do interact to impact story appeal

(RQ2), at least under some conditions. The fact that semantic affinity's appeal varied by user

need state suggests the predictive utility and potential value of defining semantic affinity in

terms of the needs and motives shared between users and media characters.

Story Appeal by Perceptions of Needs Portrayed (Replicating the Post Hoc). The

comparisons above revealed that the low semantic affinity stories (low in relatedness but high in wealth motives) held the most appeal—and seemed particularly appealing for participants who had been recently rejected and were thinking about choosing films to share with particular audiences in mind. To probe these findings further, the post-hoc analysis from Study 1 (examining how perceptions of need motives in the story impacted appeal) was replicated. As in Study 1, induction condition did not affect participant perceptions that story characters were motivated by these needs (see Appendix C). As such, any effects of these character motivations on appeal should be attributed to interest in these needs rather than the degree to which participants noted their presence in content.

In order to determine how perceptions of needs in the stories impacted their appeal (RQ4) and the effect of the social-need induction on this relationship (RQ5), a hierarchical regression examined how perceptions of needs in the stories contributed to story appeal. Study 2's design included a measure capturing participants' perceptions of wealth gain in the stories as well as the three SDT needs to help disentangle the wealth-autonomy link suggested in Study 1. The hierarchical model therefore began with the four need motives in step one (relatedness, competence, autonomy, wealth), followed by dummy codes for each induction condition in step two (using the no-exposure group as the baseline), and finally interactions between the motives and induction conditions in step three.

Results replicate and extend the pattern observed in Study 1. In step one, depictions of autonomy positively predict story preference ($\beta = .23$, p<.001). Depictions of wealth are also a positive predictor of preference ($\beta = .11$, p<.001). Interestingly, there is also a positive

relationship between depictions of relatedness and preference (β = .12, p=.01). Examining the interactions in step three sheds some light on these effects (see Table 17).

People in the included condition find relatedness content more appealing (β =.17, p=.050), while people in the over-included condition find autonomy content less appealing (β = -.18, p=-.03). Given that relatedness and autonomy are inverted in our story (e.g., stories high in relatedness are low in autonomy), this pattern suggests that people in the included conditions were more interested in the high semantic affinity stories (high in relatedness) and less interested in the low semantic affinity stories (high in autonomy). We also see that, overall, people who were rejected also find autonomy motives less appealing (β = -.25, p<.001).

Order effects. The order effects observed above suggested that participants who selected stories first and participants who selected social-sharing audiences first were making slightly different decisions. We therefore ran this regression for each group independently. In the first step, perceptions of character motives contribute to appeal in highly similar ways: relatedness, autonomy and wealth are all positive predictors of appeal in both groups (see Table 17). Interestingly, although the variance explained by these models is the same (*Adj.* R^2 =.039), the relationship between relatedness and appeal is markedly stronger in the group who chose their social-sharing audience first: $\theta_{sharing1st}$ =.17, $\theta_{narrative1st}$ =.10).

We then added the induction conditions and interactions. When participants rated the stories first, these additions do not significantly improve the model (see Table 17 for variance accounted for at each step). By contrast, when participants rated social-sharing audiences first, significant interactions are observed between induction conditions and character motives, accounting for additional variance). This suggests the effects observed in the whole sample are

being primarily driven by the group who were asked about their social-sharing audiences first. Interestingly, the negative relationship between perceptions of autonomy and the rejection condition is similar in the whole sample and the sharing first group (whole sample:

 $\beta_{rejectedxautonomy}$ =-.25, *p*=.004, sharing first: $\beta_{rejectedxautonomy}$ =-.31, *p*=.01).

By contrast, the relationship between perceptions of wealth and appeal only approaches significance in the sharing first group ($\beta_{rejectedxwealth} = .20$, p=.054), and is a positive relationship. This suggests that, at least for rejected people with social-sharing audiences on their mind, perceptions of wealth and autonomy are pulling appeal ratings in different directions. While the independent effects of autonomy and wealth are difficult to disentangle given our design, the differences between these motives in story content may be of particular importance for story appeal among rejected people who have social-sharing audiences front-ofmind.

As with the affinity manipulations above, the interactions observed here lend support to the idea that the social-need states of viewers can interact with various content offerings to impact appeal (H2), at least under some conditions. See Table 17 for all coefficients.

Table 17

Perceptions of Needs as Character	MotivesxOstracism Condition	n Impact Story Appeal (Study 2)

	W	hole sam	ple	S	haring 1s	t		Narrative 2	Lst
Step 1	в	t	р	в	t	р	в	t	p
Relatedness	0.13	5.33	0.00	0.17	4.65	0.00	0.10	2.90	0.00
Competence	0.03	1.32	0.19	0.00	0.08	0.94	0.05	1.73	0.09
Autonomy	0.15	6.54	0.00	0.15	4.61	0.00	0.15	4.67	0.00
Wealth	0.11	3.89	0.00	0.13	3.29	0.00	0.09	2.24	0.03
	F(4,	2527)=27	7.33,						
	D ² – 0	p<.001,	2-040	F(4, 1251))=13.89, j	o<.001,	F(4,12	271)=14.09	, <i>p</i> <.001,
Sten 2	<i>R</i> ² = .0	41, Adj R	-=.040	R*=.04	3, Aŭj K*=	039	<i>K</i> ≁=.	.048, Adj K	-=.039
Relatedness	0.14	5.37	0.00	0.17	4.60	0.00	0.11	2.98	0.00
Competence	0.03	1 17	0.24	0.00	-0.01	1 00	0.05	1 61	0.11
Autonomy	0.05	6.54	0.00	0.15	4.65	0.00	0.14	4.59	0.00
Wealth	0.11	3.96	0.00	0.13	3.24	0.00	0.09	2.36	0.02
Over-included	0.05	2.18	0.03	0.03	0.91	0.37	0.08	2.23	0.03
Included	-0.02	-0.63	0.53	-0.03	-1.07	0.29	0.01	0.18	0.86
Ostracized	-0.01	-0.35	0.72	-0.03	-0.90	0.37	0.02	0.42	0.67
Rejected	0.02	1.01	0.31	-0.02	-0.69	0.49	0.06	1.58	0.12
	$\Delta R^2 =$.004, p=	.051,	$\Delta R^2 =$.003, p=	.34,	ΔF	R² = .006, p	=.12,
	A	<i>dj R</i> ²=.04	2	Ac	<i>lj R</i> ² =.040)		Adj R ² =.04	42
Step 3									
Relatedness	0.10	1.88	0.06	0.13	2.02	0.04	0.05	0.53	0.60
Competence	0.01	0.25	0.81	0.04	0.75	0.45	-0.02	-0.36	0.72
Autonomy	0.24	5.34	0.00	0.26	4.48	0.00	0.22	3.14	0.00
Wealth	0.08	1.31	0.19	0.03	0.44	0.66	0.11	1.16	0.25
Over-included	0.36	2.55	0.01	0.27	1.38	0.17	0.44	2.07	0.04
Included	-0.15	-1.10	0.27	-0.22	-1.18	0.24	-0.15	-0.67	0.51
Ostracized	0.06	0.41	0.68	0.41	1.93	0.05	-0.18	-0.80	0.42
Rejected	-0.06	-0.39	0.70	0.02	0.12	0.90	-0.19	-0.83	0.41
Over-incl*Relatedness	-0.08	-0.93	0.35	-0.01	-0.10	0.92	-0.13	-1.04	0.30
	0.17	1.96	0.05	0.26	2.28	0.02	0.11	0.84	0.40
Ostr*Relatedness	0.07	0.74	0.46	-0.10	-0.84	0.40	0.19	1.38	0.17
Rej*Relatedness	0.06	0.71	0.48	-0.01	-0.07	0.94	0.16	1.18	0.24
	-0.02	-0.21	0.83	-0.14	-1.11	0.27	0.10	0.76	0.45
	0.01	0.09	0.93	-0.17	-1.33	0.19	0.17	1.30	0.19
Boi*Competence	-0.04	-0.41	0.00	-0.05	-0.40	0.05	-0.05	1 02	0.65
	0.17	2.94	0.052	0.08	1.00	0.50	0.25	1.02	0.07
	-0.10	-2.10	0.03	-0.22	-1.00	0.00	-0.10	-1.27	0.20
Ostr*Autonomy	-0.13	-0.85	0.12	-0.15	-1.19	0.24	-0.03	-0.74	0.40
Rei*Autonomy	-0.08 -0.25	-0.85 - 7 01	0.40	-0.19 -0.21	-1.52 -7 77	0.15	-0.03	-0.20	0.85
Over-incl*\Wealth	-0.05	-0.68	0 50	0.13	<u> </u>	0.26	-0.22	-1 89	0.06
Incl*\Wealth	0.05	1 49	0.14	0.27	2.44	0.02	-0.02	-0.15	0.88
Ostr*\Wealth	-0.03	-0 32	0.75	-0 14	-1 79	0.20	0.02	0.62	0.54
	0.05	0.52	0.75	0.14	1.25	0.20	0.00	0.02	0.54
Table 17 (cont'd)

Table 17 (cont d)			. 1			1			
	Whole Sample			Sharing 1st			Narrative 1st		
_	в	t	р	в	t	р	в	t	p
Rej*Wealth	0.11	1.37	0.17	0.20	1.93	0.054	0.05	0.45	0.65
	$\Delta R^2 = .01, p = .01,$		$\Delta R^2 = .03, p=.01,$			$\Delta R^2 = .017, p = .12,$			
	<i>Adj R</i> ² =.048			<i>Adj R</i> ² =.053			<i>Adj R</i> ² =.047		

DISCUSSION

Overview

This project set out with three major goals. First, we sought to examine how media experiences influence social-need states and, as a result, how these need states impact subsequent media preferences. We induced various social-need states (ostracism, rejection, inclusion) using a social media activity: Ostracism Online. This allowed us to examine how online interactions impact mood and experiences of belonging. Second, we explored how these different social-need states alter the appeal of media's social affordances like privacy and personalization. This included examining how social-need state impacted the appeal of various opportunities for social sharing with different audiences.

Finally, this paper proposed a multi-dimensional definition of content affinity. This approach extricates behavioral and semantic components of affinity to examine the appeal of narratives which share common elements with recent experiences of social-need frustration. To do this, we differentiated behavioral and semantic components of content, positing that behaviors and actions depicted in media can be disentangled from the semantic-level motivations which drive them. This led to defining semantic-level features (and therefore the match inherent to semantic affinity) in terms of the motives and needs represented in media. The match between character and audience motivations examined in the current study was limited to a very small set of basic needs. However, conceptually defining semantic affinity in terms of the intrinsic needs can be extended to other essential motives and drives beyond the scope of Self-Determination Theory. The current study tested the individual and combined

impact of behavioral and semantic affinity with a recent social media activity on subsequent narrative appeal.

This approach to conceptually and operationally defining content affinity clarifies the dimensions of affinity as it is discussed in mood management theory. Beyond this, it facilitates efforts to consider how behavioral and semantic affinity may contribute to media processes beyond regulating mood. Two experiments showed that social-need states impacted the appeal of different media affordances and different narratives. Specifically, users' social-need state impacted the appeal of stories depicting different semantic-level needs and motives, at least under some conditions.

Study 2's larger sample and counterbalanced item order revealed that low semantic affinity with the induction was more appealing than high semantic affinity, particularly for people who had been rejected. Moreover, there is some indication that interest in certain semantic-level content features varied between rejected and ostracized people. We also observed that the appeal of particular needs depicted in content (e.g., autonomy) varied by need state. Taken together, these findings are in line with contentions that preference for narrative content high in semantic affinity with recent lived experience varies as a function of a user's need state. While effect sizes are small, the observed effects provide initial evidence that conceptualizing semantic affinity in terms of needs and intrinsic motives can meaningfully contribute to research seeking to understand the predictors of selective exposure—and that the appeal of semantic affinity varies depending on users' need states.

Discussion begins by considering the first two goals: How social media experiences impact social-need states, and how those need states subsequently impact the appeal of

various social affordances. This is followed by a lengthy discussion of the third goal: examining how different dimensions of content affinity (behavioral and semantic affinity) can influence narrative appeal. As part of this, we examine the contexts within which semantic affinity with user need states can aid scholarly understanding of media choice. This includes discussion on the boundaries of mood as a predictor of selective exposure, and alternative contexts in which intrinsic needs may be valuable predictors of such preferences. Discussion concludes with consideration of this study's limitations and future directions.

Social-need states and Perceived Social Affordances Jointly Impact Media Preferences

The first two goals of this project are discussed together: using a social media activity to induce various states of social-need satisfaction/frustration, and then examining how these need-states impact the appeal of various social affordances of media.

Social-Need States and Mood

The relationships between users' social needs and mediated experiences is a flourishing area of research; yet it often lacks precision, either in how needs are defined or how their impacts are felt (see Grady et al., 2022). Similarly, the link between social needs and various moods has been under-examined. The current paper's contribution to each of these issues is discussed in turn.

The current studies are the first time the same induction was used to test how several different social-need states impact multiple media preferences. It combined several existing manipulations (two levels of inclusion, ostracism, and rejection), as well as adding a no-exposure control group to serve as a baseline. Scholars have recently called for more systematic examinations of how ostracism and rejection operate to aid comparative study and future

theorizing on these forms of social need threat (Gerber & Wheeler, 2009). In the current paper, precisely and systematically manipulating these different need states through the same paradigm allowed us to observe how experiences of ostracism and rejection systematically affect people.

Across both studies, we see that experiences of ostracism and rejection both negatively impact feelings of belonging compared to experiences of inclusion—but this negative effect is stronger for rejection than ostracism. This is counter to the claims of some scholars who have argued that ostracization is a more powerful sanction than direct rejection (at least in some contexts), because at least targeted bullying at least recognizes and acknowledges the victim (Williams & Nida, 2009). Understanding how experiences of ostracism and rejection impact belonging is necessary to make any meaningful predictions about how subsequent behaviors (including media use) might be employed to distract from or mitigate these threats to belonging. Their different impact has important implications for media researchers interested in media used for recovery and repair, as the media that functionally supports rejected and ostracized people may vary. It also supports recent calls for additional testing which can differentiate these two forms of frustration to aid further theorizing in the social psychology of belonging and exclusion (as called for by Wesselmann & Williams, 2017).

Turning our attention to experiences of inclusion, over-included participants were programmed to receive almost twice as many likes as the included group. Yet, both conditions reported very similar experiences of belonging. This suggests there may be a minimal threshold of positive feedback that can induce social-need satisfaction. Better understanding the minimally satisfying conditions necessary to elicit a sense of belonging (in this case, the number

of positive interactions) would be useful in a range of practical applications, such as the design of socially supportive online communities or the gamification of digital learning interfaces incorporating social feedback.

The link between social needs and mood has also been under-explicated in prior research. A great deal of scholarship assumes that need satisfaction is a universally positive experience and need frustration is wholly negative (Chen et al., 2015). Yet our findings show that the degree to which needs are satisfied and the ways in which they are thwarted show systematically different effects on mood. Comparing both rejected and ostracized conditions with a no-exposure control revealed that rejected participants (but not ostracized ones) feel angrier, less pleasant, and less happy than the no exposure group. If experiences of ostracization and rejection both threaten subjective experiences of belonging but only rejection impacts mood, is it simply the case that ostracism produces less frustration, limiting its effects on mood? Or are these experiences different in other ways that impact their relationship to mood? Whether or not this is the case, the manner in which these need-derived moods impact subsequent interactions and behaviors may have profound implications for understanding the role of social needs in later aggressive and antisocial actions (as raised by Williams & Nida, 2011). Beyond the negative mood effects of rejection and ostracism, we also observed that the two included groups reported similar feelings of belonging. Yet only over-included individuals receive a mood boost from the experience. If both groups are reporting similar experiences of belonging, what is driving this mood boost?

Taken together, these findings suggest that the positive experiences of need satisfaction and the negative experiences of need frustration have a more complex relationship with

temporary mood states than previous work might suggest. This has important implications if we are to fully explicate need satisfaction/frustration as a mechanism of affective mood states. It is particularly pertinent to the study of mood management and other media selection theories that are based in the premise that mood states and affective emotions can drive media use. One immediate course of action might be to examine the existing mood findings associated with the hundreds of rejection and ostracism studies in social psychology (Hartgerink et al., 2015; Gerber & Wheeler, 2009). Many studies report mood items as an induction check (under the assumption that need threats beget negative moods). Yet previous meta-analyses of the induction effects (e.g. Hartgerink et al., 2015) do not assess the consistency of mood effects across studies. Such secondary analysis might determine whether the patterns observed between social-need induction conditions and mood states observed here are replicated in other literature. This would serve as a useful starting point in ongoing efforts to delineate differences between ostracism and rejection (Wesselmann & Williams, 2017) and their relationships to later patterns of selective exposure.

Social-Need States' Impact on Social-Sharing

After successfully manipulating social-need states, we examined how these experiences impacted the appeal of subsequent media opportunities, directly testing Grady et al.'s (2022) prediction that social-need states and the social affordances of media might interact to impact selection and preference. Results revealed that experiences of rejection, ostracization, and inclusion on a social networking site did not influence interest in privacy, but it did impact peoples' proclivity to share with different online audiences. These findings contribute to recent scholarship outlining different perceived social affordances of media (Fox & McEwan, 2017) by specifying how these affordances, particularly personalizing messages to specific audiences, may be more or less appealing depending on recent online interactions. It also aligns with research on self-presentation and self-disclosure in online settings. Johnson and Ranzini (2018) demonstrated that differing motives for self-presentation impact what media content people shared.

The current studies tested how social-need state affected participants' preference for technology that affords message privacy/visibility and personalization by examining the appeal of social-sharing with a variety of potential audiences. First, people who had recently been rejected avoided additional exposure to the social network that rejected them. This retreat was not observed in ostracized participants. This is consistent with Lutz and Schneider's (2021) finding that people who have been recently rejected tend to retreat from social interaction with their rejectors.

Counterbalancing the order of measures in Study 2 helped us probe this finding in more detail. In Study 2, ostracized *and* rejected participants were less interested in sharing with the people from the social networking site than included people, but only if these items were asked immediately after the experience. If other items (story preferences) were asked between the induction and sharing preferences, rejected participants were still disinterested in sharing with the people from the social networking site, but there was no difference between ostracized and included participants.

It is unclear why ostracized participants are less interested in sharing with this audience only if these items are immediately after the induction, but rejected people avoid this audience regardless of item order. Perhaps experiences of ostracism decay more quickly than active

rejection. However, it could also be the case that reading the story synopses between the social-need induction and the social-sharing items impacted the ostracized group but not the rejected group in some way. If this is the case, it is unclear if the story content specifically, or just a distractor task in general, led to the diminished effect in the ostracized group. While the current data cannot speak to these alternative interpretations, they suggest future avenues of study which examine (a) the duration of social-need frustration, (b) the role of distractors in diminishing this frustration and (c) what media best suits a distraction or repair function. For example, if after the induction some participants had rated stories and others had done nothing, would the ostracized group be just as disinterested in sharing with the induction network, or would they once again converge with included participants? If the groups converged even without story exposure, we might surmise that the diminished effect was unrelated to the stories and was perhaps just a natural decay over time. Were this the case, it would point to additional work necessary to examine the duration of rejection versus ostracism effects on mood and behavior. However, if ostracized participants had little interest in sharing with the induction group even when they had with a similar time delay and no story exposure, this would suggest something about the stories themselves (or at least, the act of rating them) was serving as a distraction or mood repair mechanism, raising several new avenues for inquiry.

These findings demonstrated that ostracized participants were more interested in sharing with the people who ignored them than rejected people, and that under some conditions, this interest is still markedly less than people who have been included. Clearly, rejection and ostracism both impact media preferences and intended use, and in slightly different ways. This shows that different forms of social-need frustration inform how people

navigate media environments, self-disclose personal information online, and select from among various audiences and social networks. This is consistent with the predictions in the SIMU (Grady et al., 2022). Understanding how social need threats generally, and rejection and ostacization in particular, impact how people perceive and use mediated opportunities for social connection and potential repair promises to be a fruitful avenue for continued study. This has important implications for how media may be used to navigate and mitigate different forms of social threat in contexts such as online support groups and mediated intergroup contact scenarios. If included, ostracized, and rejected people prefer to self-disclose differently based on these experiences, that has important ramifications for a range of social networking contexts. But perhaps most interestingly, prior work suggests that rejected people withdraw from social exchange and can even tend toward antisocial behavior (Molden et al., 2009). The current findings suggest this is an incomplete understanding of how people react to social rejection. Examining the potential for personalization to different audiences reveals that rejected people are not retreating from *all* social interaction, but instead they tend to withdraw from the social group that threatened them. While rejected participants were markedly less interested in sharing messages with their rejectors, no such differences were observed among other potential audiences. This suggests that withdrawal serves a protective function that is bounded: Rejected people are not uniformly antisocial, but instead exclusively withdraw from threatening social encounters. We observed no impact of rejection on the appeal of sharing with close ties or even strangers, although future work should continue to pursue how various alternative audiences may be perceived or contacted in response to different forms of social threat.

The Role of Content Affinity in Narrative Appeal

The third goal of this project was to propose and test a multi-dimensional definition of content affinity, and examine the roles of both semantic and behavioral affinity in narrative appeal. This was done with specific interests in both forwarding a definition of semantic content-affinity rooted in basic needs and intuitive motivations, and testing the influence of various states of need threat or satisfaction on the appeal of content sharing affinity with those salient needs.

This paper put forth a new multi-dimensional approach to content affinity. Our approach distinguishes behavioral and semantic features as separate aspects of content, and suggests a new, more precise, understanding of semantic affinity, defined in terms of needs and intuitive motivations. This allowed us to consider how semantic and behavioral dimensions of media and their affinity with users' lived experience can impact narrative appeal. In this section, we (a) consider the utility of defining semantic affinity in terms of needs and motives to predict media preferences, (b) note that the interaction between semantic affinity and user need states point to interesting new directions of research on affinity's role in media use, and (c) reflect on the fact that behavioral affinity had no effect in the current study and consider explanations for why this may have been the case. After this, we consider how the current findings contribute to research on affinity within MMT, and also the potential of this need-based definition of semantic affinity in selective exposure research beyond the scope of mood management.

The appeal of semantic affinity/disaffinity (defined in terms of needs) [main effects].

Mood management theory posits that a match between user and content after a negative event is universally avoided, since any resemblance to the stressful event would be a

deterrent to mood repair. Yet what constitutes this match has been ambiguously defined and inconsistently operationalized. The multi-dimensional approach to content affinity proposed in this study defined semantic and behavioral affinity as distinguishable aspects of content. Media can depict behaviors and actions that match viewers' lives (behavioral affinity), the motives and basic psychological needs which drive those actions (semantic affinity), or some combination of these.

This dimensional approach attempts to advance understandings of how content affinity can influence media selection and exposure outcomes by organizing and clarifying existing research on affinity within and beyond mood management. Viewing past MMT findings with this definition in mind highlights that some studies manipulate semantic affinity as defined in the present study (e.g., nurturing content in Masters et al., 1983), while in other cases it is unclear whether both semantic and behavioral similarities have been manipulated (e.g., Medoff et al., 1979). In another vein, this approach to semantic-level features and their affinity with media users' lives may go some way to specifying content offering a 'resonant connection' to media users (Vorderer & Halfmann, 2019). This would be consistent with Rosa's (2019) conceptualization that resonance is the connection between ourselves and the world, particularly described in terms of how intrinsic interests of an individual coincide with the sphere and relationships in which they are embedded. If, as Rosa argues, strong resonance is paramount to 'a life well lived', understanding how affinity between users and media content plays a role in selection and use may help elucidate the potential for positive media use. In particular, the dimensional framework of affinity may be useful in understanding how various

dimensions of affinity contribute to use, and (in the long run) how these various forms of affinity relate to different media outcomes.

This may be critical to distinguishing different mechanisms of media use for coping and recovery. For example, some media may be used to support repair (where high-affinity content focuses on a threatened semantic-level need). By contrast, other media might is used to support compensation (where low-affinity content focuses on *other* semantic-level needs than the need which was threatened).

The definition of semantic-level affinity proposed here allows us to examine these potential pathways more explicitly than has been previously possible, and the current findings suggest some avenues for additional inquiry. Across both studies, we found that semantic affinity between users and content impacted narrative appeal (though not in the predicted direction). Overall, stories high in semantic affinity (high in relatedness/low in wealth) were less appealing than stories low in semantic affinity (low in relatedness/high in wealth) and behavioral affinity had no impact on appeal. This provided initial evidence that defining and manipulating semantic affinity in terms of needs and motives was a meaningful predictor of narrative preference, and that was independent of the behavioral specifics of the narratives. Considering behavioral and semantic aspects of content independently, and the latter in terms of needs and motives portrayed, is therefore a useful contribution to understanding how affinity impacts media preferences. However, in these studies the confound of low relatedness with high wealth in stories made it difficult to parse how specific semantic-level needs represented in content contributed to appeal.

Users' perceptions of various semantic-level needs helped shed further light on the relationship between semantic affinity and narrative appeal. Perceptions of relatedness, autonomy, and wealth in the narratives all had a positive effect on story appeal in Study 2. Perhaps equally important, feelings of competence (another basic psychological need, though one not manipulated in our stories) did not contribute to appeal. It would be unreasonable to conclude that competence is never an important aspect of media's appeal. Portrayals of competence and prowess seem central to many forms of media and entertainment, including interactive media, as well as sports and action genres focused on success in the face of seemingly insurmountable odds. Rather, it seems that in the context of our studies, competence held no particular appeal. This suggests that not only are semantic-level features an important part of narrative appeal, but that the appeal of content highlighting certain needs and not others may be best understood as contextually situated.

Taken together, these findings suggest that (a) separating semantic and behavioral affinity in this way is useful for predicting media preferences and (b) defining needs and motives as the basis of semantic affinity can predict narrative preferences. This approach contributes to mood management research, where the role of semantic affinity in media use is underdefined and understudied (Reinecke, 2016; Eden, Hahn et al., 2018). It also suggests some important future directions examining how different needs and motives depicted in media content might impact their selection and preference.

The Appeal of Semantic Affinity Varies based on Users' Social-Need State

While there was a general preference for stories portraying low semantic affinity with the social-need induction (i.e., stories high in wealth and low in relatedness were most

appealing), the interactions between user's social-need states and the appeal of semantic-level content were more illuminating. When we examine the appeal of semantic affinity by social-need induction condition, rejected people preferred content low in semantic affinity over content high in semantic affinity—but this was not the case for ostracized and included people, or the no-exposure control group. This finding suggests that experiencing social rejection (even temporarily and from strangers) is impacting the appeal of narrative content depicting relatedness as opposed to other needs.

Examining how the perceptions of various needs portrayed in the story impacted appeal sheds further light on this relationship. While the whole sample exhibited a positive relationship between perceptions of autonomy in the story and narrative appeal ($\beta_{autonomy}$ =.24, p<.001), rejected participants find stories about autonomy particularly unappealing ($\beta_{rejected*autonomy}$ = -.31, p=.01). This might seem confusing, since rejected people clearly preferred low semantic affinity stories (low relatedness/high wealth/high autonomy) over high affinity stories (high relatedness/low wealth/low autonomy). The observed interaction between rejection and perceptions of wealth suggests one possible explanation. While only reaching p=.054, this interaction is in the opposite direction: stories about wealth gain are *more* appealing to rejected people than other participants. And this difference is in spite of the fact perceptions of wealth and autonomy were correlated (*r*=.42).

Although only a tentative explanation, it seems possible that rejected people were more interested in wealth stories and less interested in autonomy stories. Interpersonal research often highlights the dialectical tension between the needs for relatedness and autonomy (Baxter, 1990, Guisinger & Blatt, 1994). So perhaps rejected individuals are avoiding autonomy content which might highlight and perpetuate this tension. In which case a separate, unconnected need like wealth may be serving as a valuable distraction. This explanation would be consistent with MMT, but more work is needed to independently manipulate autonomy and wealth in content to test this premise.

Interestingly, the interaction between social need state and perceptions of autonomy on narrative appeal observed in rejected participants was not evident in the ostracized group. This suggests that different *forms* of social-need frustration can lead to different media preferences, particularly in terms of the media's semantic affinity with that frustration. Not only does this provide support for considering semantic affinity in terms of needs and motives, but demonstrates that the connection between semantic-affinity in content and the social needs of users is a potentially valuable indicator of content's appeal. This has important implications for researchers attempting to understand how affinity impacts media selection. If different types of need frustration foster interest in content portraying different needs, this opens a range of additional questions about how media's representation of semantic-level features may impact media preferences.

By extension, the combined effects of needs and other predictors in MMT are unclear. For example, semantic-level needs and content valence may interact in important ways to impact media use. The current study used stories that manipulated semantic-level needs in stories but controlled for valence by explicitly stating that those motives were satisfied in the story's conclusion. This demonstrated that rejected people find content about satisfying autonomy unappealing. Future studies might manipulate whether the needs portrayed in

content are satisfied, frustrated, or remain ambiguous in the story resolution to examine how story valence and semantic affinity may jointly operate to impact appeal.

It is important to note two additional things regarding the interaction between users' social needs and semantic affinity. First, participant's perceptions of needs in the stories did not vary across induction conditions. Second, the interaction between user social-need state and semantic affinity was only observed in some presentation orders. The implications for each of these is considered in turn.

Participants in all induction conditions perceived that the stories represented relatedness, wealth, and autonomy similarly. Yet these various need portrayals were differentially appealing, depending on users' social-need states. It is not that rejected people were perceiving the needs depicted in content any differently than people in other social-need states. Rather, the appeal of stories depicting these needs varied depending on the recent social experiences of users. Understanding how semantic-level content may be differentially appealing based on users' social-need state in this way may help us better understand the considerable within-subject variation in media preferences (Gui et al., 2021).

Regarding order effects, it is important to consider how raising the issue of potential audiences before content selections made may have impacted these narrative preferences and contributed to the interaction between social-need state and semantic affinity observed in Study 2. The interaction between the social-need induction and a narrative's semantic affinity with that induction was only observed when the story ratings were made *after* participants had been asked about potential audiences with whom they would share these choices. Perhaps asking participants about social-sharing preferences immediately after the induction primed

participants to think about their social ties and networks, and in so doing strengthened the induction's effect. Examining the social-sharing preferences in the no exposure condition lends some support to this line of reasoning. When participants were asked about social-sharing audiences before reading any stories, participants who did not do the induction overwhelmingly selected sharing with their close friends and family (Table 18). This suggests close ties are top-of-mind when considering sharing, and that asking about social-sharing items may have made these close ties more salient.

Social Sharing Audience Selec	tions in the No Exp	osure Group, Split b	Presentation Order
	When Sharing 1st	When Narratives 1st	
Social network from Induction	4	1	

Social network from Induction	4	1
Close Friends & Family	58	26
Public post (share w/ anyone)	4	13
Private (share w/ no one)	27	26
Total	93	66

Table 18

Note. Columns show social-sharing audience selections in two presentation orders: when these items are asked immediately after the induction, and when they are asked after selecting a film option. Frequencies for all other induction conditions with test statistics and residuals can be seen in Table 12.

If this is the case, rejected participants who were thinking about their close ties were

particularly disinterested in content depicting autonomy. Perhaps rejected people do not want to expose themselves to autonomy-focused content in light of these relationships, and/or perhaps participants particularly do not want to share autonomy-focused content with these social ties. While the main purpose of this study was not to examine the interactions among media preferences and different social-sharing audiences, the order effects here may point to future avenues of inquiry in which the interplay of these two media choices are more explicitly examined. This may inform recent inquiries into the way different forms of media are shared to meet self-presentation goals (Johnson & Ranzini, 2018) and the ways in which public media choices can vary from private ones (Krause et al., 2014). The interactions observed in Study 2 provide initial evidence that semantic-level features are more or less appealing depending on media users' current need state, suggesting that defining semantic-level features in terms of basic needs and intuitive motivations is a potentially useful avenue for explaining media's appeal in different contexts and under different conditions.

The Appeal of Behavioral Affinity

While the interaction effects observed shed light on the potential role of semantic affinity in story appeal, it is also important to note that behavioral affinity with the induction had no effect on appeal in either study. This may be because behavioral factors are less important than semantic ones, or behavioral features were unimportant in the specific context used in this study. Clearly, the behavioral characteristics of content do matter to viewers. For example, Nabi et al., (2006) found that people who had cheated on their partners in the past were more interested in storylines about partner cheating—but that this was moderated by regret: people who regretted their past behavior were most interested in storylines about adultery. Partners who did not regret cheating reported lower interest in content depicting these behaviors.

Yet if behavioral affinity *can* be an important predictor of appeal, why was that not the case here? Two potential explanations spring to mind. First, behavioral factors may be weaker predictors of selection than semantic factors. Some scholars have proposed that attributional thinking (including making inferences about characters motivational states) is a critical

component of narrative processing and appeal (Rhodes & Hamilton, 2006; Tamborini et al., 2019). By contrast, specific behaviors and actions may be of more fleeting interest and relevance, or at least more idiosyncratic across viewers. Alternatively, perhaps behavioral aspects of these story manipulations were not relevant to the particulars of this investigation. In the experiments reported here, social-need frustration was induced through a fake social networking activity with strangers. Presumably, continued interaction with these people was unlikely, and there would be little functional utility in addressing this social threat. This may have resulted in the behavioral specifics of the induction being deemed functionally irrelevant in this context.

In other contexts, perhaps behavioral affinity with the problem may be a much larger factor in people's media preferences. For example, if rejection is repeated and/or received from close ties with whom regular interaction is anticipated, behavioral affinity may be more appealing for its perceived utility. Indeed, qualitative work shows that sad music is often sought because the song's message was perceived to be particularly relevant to the listener's situation (Van Den Tol & Edwards, 2011). This line of reasoning might suggest that behavioral affinity is only relevant in certain contexts, specifically when it serves some functional purpose for later interaction.

The Importance of Content Affinity in Future Selective Exposure Research

One takeaway from this project concerns its contribution to mood management literature. The unique approach to behavioral and semantic affinity suggested here, particularly it definition of semantic affinity in terms of basic needs and intuitive motivations, may help

clarify the limited affinity research in MMT, and provides new avenues to extend and advance this area of scholarship.

Prior MMT theorizing stated that content affinity was universally avoided, since any resemblance to the stressful event would be a deterrent to mood repair. Study 2 shows a negative impact of semantic affinity on narrative appeal for people in the rejection condition. This in and of itself is consistent with MMT logic. However, this was not the case for participants who were ostracized, despite this also being a form of social threat that negatively impacted feelings of belonging. This distinction between different forms of social need threat points to the importance of understanding the mechanisms behind a noxious mood state, as clearly different forms of social exclusion impact the appeal of semantic affinity differently. Although we see some negative effects of semantic affinity on narrative appeal, there were no effects of behavioral affinity on appeal. While it is unclear why at this early stage, it would be unwise to assume behavioral affinity in narrative content never impact appeal, and this points to an important gap in MMT research. Taken together, the evidence presented here suggests that there are limits and conditions to MMT's prediction that affinity is uniformly avoided. It suggests further work is needed to understand the individual and combined impact of the various forms of affinity explicated here.

Perhaps even more importantly, however, defining semantic affinity in terms of needs and motives may be relevant to other areas of selective exposure research beyond MMT. While MMT is one of the most commonly cited theories in the mass communication research (Reinecke, 2016), many scholars have pointed out that mood is not the only factor impacting selective exposure (e.g., Knobloch-Westerwick, 2015). The impact of social-need states on both

social media sharing preferences and narrative content described here suggests that understanding how, when, and for whom media is used to successfully manage their most basic needs may be a much larger and more complex process than simple hedonic principles of homeostasis can accommodate. While decades of research provide support for some aspects of MMT (for review see Reinecke, 2016), recent work also underlines important limitations. For example, Gong et al. (2023) used computational models across three experiments to demonstrate that mood is a poor predictor of preference for valence or arousal levels in content. This raises important questions about the boundary conditions of mood management's predictive utility.

Mood may be a predictor of selective exposure, but only under certain circumstances. Understanding and delineating the boundaries within which MMT is a meaningful predictor of media selection is an important contribution to the theory and its development. More broadly, understanding alternative models and explanatory factors beyond mood than drive selective exposure are also essential to furthering mass communication scholarship.

The current studies suggest that manipulating social-need states impacts media users' mood and their media preferences. Considering needs as mechanisms that drive mood and mood-based media use may better clarify when mood is an adequate predictor of selection, and when it is not. In the latter case, such work could help us better understand how needs may drive selection independent of mood. Zillmann (2000) acknowledged that the hedonic principles of homeostasis described by MMT were insufficient to account for all selections. As an alternative, he described telic hedonism, where short term hedonic gains were sacrificed for more satisfying (if delayed) emotional resolutions. Zillmann's acknowledgement here indicates

that media selected for such longer term utility are no longer operating in the realm of immediate mood management. Rather, MMT is bounded by temporary and transient mood states, and that in some contexts, other forces beyond mood may be better predictors of selection. Through this lens, we might consider media that promises to satisfy our most enduring basic psychological needs (as in Reinecke et al., 2012) or plumbs the depths of how regretted past actions (as in Nabi et al., 2006) are serving a valuable function beyond mood management. Given the ongoing interest in the potential for media to satisfy thwarted needs and support repair and recovery (e.g., Reinecke, 2009; Reinecke et al., 2014, Reinecke & Eden, 2017), it is important to understand how different types of narrative content, and the needs they portray, may be more or less appealing (and more or less useful) in these different need states. We suggest that the multi-dimensional conception of content affinity offered here can help toward this goal.

Related to this, the current research focused exclusively on the basic psychological need for relatedness as the semantic-level need being manipulated in content. The induction manipulated participants' sense of belonging, and stories varied in the portrayal of relatedness or an alternative need (wealth) as a character motivation. This precise match between the induced need states of users and the need portrayed in content was necessary to examine how semantic affinity affected story appeal. However the patterns observed here should not be considered exclusive to relatedness. While the basic needs such as those outlined in selfdetermination theory are a useful framework for examining the appeal of semantic affinity in various contexts, other needs and motives should also be considered in future research.

A dimensional approach to quantifying and clarifying the ways in which media shares affinity with media users' lived experience is one potentially powerful way to better explicate how media can be used to meet a variety of functional ends. Based on the initial evidence observed here, considering how needs and motives portrayed in content share affinity with users' own experience shows promise. Beyond this, future work should examine how both behavioral and semantic affinity contribute to media's ability to support a variety of functional outcomes. Chief among these are ongoing questions regarding content affinity's role in (a) regulating temporary mood states (Zillmann 1988 a, b), (b) vicariously satisfy the basic needs of media users (as in Tamborini et al., 2021), and (c) supporting various media-based coping strategies (Eden et al., 2020; Wolfers & Schneider, 2020). Considering content affinity from the multi-dimensional perspective proposed here may inform a variety of media research and provide is a rich area for continued exploration.

Limitations

The methods and instruments employed, and the analyses undertaken in these studies, are not without their limitations. First, story content was manipulated to vary semantic affinity (high or low) in term of the protagonist's relatedness-need motivation; the need most semantically similar to the Ostracism Online social-need induction. Stories designed to be low in semantic affinity deliberately included an alternative need to motivate characters and define story conclusions distinct from relatedness. In the high-affinity condition, the protagonist was described as having strong relatedness-need motivations. In the low-affinity condition, the protagonist was described as having strong wealth-need motivations. (In both versions, the need-motive was satisfied to control for story valence.) This confound was deliberate and was

reflected in participant perceptions of relatedness, wealth and (unintentionally) autonomy as motives in the stories. While this had a number of benefits, it also had some drawbacks. Because low semantic affinity stories portrayed wealth gain (and were perceived to be high in autonomy), additional work is needed to disentangle the unique and combined influence each of these need-motives might have on story appeal. Results indicated that autonomy was particularly unappealing when participants have been rejected. However, separating individual needs—and even separating the needs that serve as character motives from the needs that are satisfied in the story resolution—might better elucidate how semantic features contribute to story appeal, and how social-need states impact this relationship.

Second, Study 1's sample of undergraduates was underpowered for detecting the interactions of interest with confidence. Study 2 rectified this by drawing from a larger, online sample. However, the additional power gained also necessitated changing formats: Study 1 took place in a lab and Study 2 happened online. This change in format may have impacted some aspects of the study, such as how much attention participants paid or how plausible they found the social-need induction. However, variance caused by such differences should impeded Study 2's ability to replicate Study 1. The fact that the same general pattern of effects was observed across both studies for both social-sharing preferences and narrative appeal suggests that the processes under examination here were largely unaffected by these differences.

Third, one could question the mundane validity of methods used in this study to measure both story choice and social-sharing choice. Although participants did actively choose which story they wanted to watch and the audience with whom they most wanted to share (a behavioral indicator of preference, as advocated by Knobloch-Westerwick, 2015), these actions

are somewhat removed from the specific behaviors of actually posting online or seeing a film. Although reading and selecting a film synopsis bears some resemblance to film exposure, additional tests that explore the outcomes from prolonged exposure to the chosen content and/or actual posting behavior after a social-need induction would be helpful. These might be particularly informative given the fact that the categorical choices participants made (their preferred movie and social-sharing audience) did not, in the main, show significant effects, while their preference ratings for these films and audiences did. Because participants both rated their preference for and made a selection among a set of narratives varying in their degree of affinity, this required participants to read and rated multiple stories. The order and combination of protagonist profiles, affinity manipulations, and story stems were randomized across participants in an effort to mitigate other factors impacting appeal. However, the fact that participants read several stories that varied in their affinity with the induction is an important limitation of this approach. Future studies might expose participants be four versions of the same story stem, manipulated to vary both semantic and behavioral affinity (high/low) to more cleanly control for these factors.

Fourth, while the findings presented here do provide some evidence that peoples' social-need states and the semantic content of media interact to impact its appeal, it is important to note that these findings were initially observed in post hoc analyses, and even when replicated in Study 2, effect sizes were very small (often only accounting for 1-3% of the variance explained in story appeal). Some might question the value of studying such small effects. However, they are important for several reasons. First, any effect is remarkable when the media selection is so distal and the manipulation so subtle. Second, the approach to affinity

dimensions outlined here is new. As a first attempt, it suggests the potential to inform better, more nuanced tests of semantic and behavioral affinity as predictors of selection: In particular, it may help us understand how the semantic elements of media affect selection and preference in other frameworks beyond mere mood.

Finally, the strength of the need-state induction was also inherently weak. Rejection from close ties would be a stronger induction than rejection from the unseen strangers in Ostracism Online. However, there are ethical and logistical complications to experimentally studying this. Given the effects observed here, it seems reasonable that rejection experienced in real world social settings may similarly affect media preferences but to a greater degree than could be observed in this manipulation. Other non-experimental research designs might examine chronic or extreme threats to social needs (e.g., physical isolation, divorce, grief) to determine whether the effects observed are more robust in response to stronger, more realistic forms of social threat. However, even the effects observed here are of meaningful value: the smallest form of rejection, like the experimental induction used here, can impact how users' intend to use social media and how they evaluate narrative content. In normal life, people experience a great many social interactions in the course of a single day. Similarly, even a small shift in selective exposure preferences may accrue over a large number of media activities. Through this lens, a temporary social-need induction and brief media activity are likely to beget a small effect size, but the predictive utility of this relationship may be of substantive value in understanding the cumulative effects of real-world experiences on media use (Abelson, 1985; Götz et al., 2021).

Future Directions and Conclusion

This project had many connected and overlapping goals. Each of them makes unique contributes to media and mass communication research and points to new areas of development. Most notably, perhaps, this work offered a multi-dimensional definition of how media content might share affinity with a user's lived experience, Moreover, its findings suggest that this conception of content affinity can be understood as an affordance of narrative media. After exposure to stories that systematically varied in their behavioral and semantic affinity with a social-need induction, a small but significant effect showed that user need-state and semantic affinity of media content interacted to impact narrative appeal. This finding suggests the potential utility of this study's unique approach to defining semantic affinity in terms of intuitive motivations.

Additionally, we successfully manipulated the social needs of users in a variety of ways to examine how various social-need states impact subsequent media preferences and use by adapting an existing paradigm, Ostracism Online. Combining all previously published induction conditions in one place for the first time is informative and methodologically helpful. From a more theoretical standpoint, this work replicated and extended Lutz and Schneider's (2021) finding that ostracized and rejected individuals tend toward different patterns of subsequent media use. These predicted differences were rooted in Grady et al.'s (2022) contention that social-need states and the perceived social affordances of media can interact to impact media selection and subsequent use—a proposition that warrants replication with other affordances and other types of media.

Although not a designed goal, another potential outcome from this study is in examining and determining boundary conditions of mood management theory. Our findings suggest that the basic needs of users may outweigh mood as a driver of selective exposure, and hint at some of the ways in which the depictions of semantic-level needs in narratives may impact their appeal. Future work is necessary to improve our understanding of how basic needs can be portrayed within the semantic-level features of content, and how portrayals of these needs can contribute to appeal. Additional work will also be needed to test the outcomes of these processes, including research examining the effect of media exposure after the induction of different social needs. For example, if ostracized and rejected people are interested in watching content depicting different semantic-level content, are they also affected differently by exposure to this content? In other words, would a relatedness-focused story serve a meaningful repair function for either rejected and/or ostracized people reporting a low sense of belonging, or would the impact of these stories vary? Rejected people report low interest in relatedness content, but it remains to be seen how exposure to this content might impact them. The current study focused solely on preferences for various types of narrative content and potential social-sharing audiences after experiences of rejection and ostracization. Future work should test if (a) content that depicts different types of affinity and/or (b) disclosures to particular social networks can serve to soothe users' frustrated social needs.

ENDNOTES

1 This project is specifically focused on media preference rather than use. Considerable scholarly debate surrounds the conceptualization of affordances. Here we adopt Grady et al.'s (2022) suggestion that we attempt to disentangle the temporal dimension of affordances enacted. That is, if in the Gibsonian tradition, an affordance is an interaction between user and media, the functionality underlying this capacity must be *perceived* (at least on a sub-conscious level) before it can be enacted. With this in mind, understanding how users perceive possible affordances may be an important avenue for understanding their appeal, assumed utility, and subsequent use. In the current studies we only examine existing perceived social affordances from the literature and consider how content affinity may be a perceived social affordance of narratives. Because the primary goal of this study is to examine preference, selection and appeal, the *perceptions* of affordances prior to deployment are therefore of particular interest here. Discussion of actual and enacted affordances and their potential with user need-states is outside the purview of this work.

2 The SIMU discusses the value of defining social needs as predictors of media selection and use, but does not limit these social needs to relatedness exclusively. While relatedness is a well-established need with clear social ramifications, that makes it a useful test case of the SIMU's predictions, but is not intended to be a comprehensive definition of social needs. Grady et al. (2022) point out that other needs would also be consistent with the model's framework, for example the need for social influence and power. For the purposes of this paper, however, we narrow our focus specifically to the manipulation of belongingness as a contributing factor in relatedness need satisfaction and frustration.

3 Another line of work discusses basic needs such as relatedness as an opportunity for temporarily expanding the boundaries of the self (Slater et al., 2014). In TEBOTS, media, specifically narratives, are theorized to provide an escape from the demands on the self that are imposed by everyday life. In TEBOTS logic, it is difficult to satisfy our needs for relatedness, competence, and autonomy in daily life, and narratives provide a chance to escape these threats and explore alternative experiences and identities, unencumbered by our physical and contextual limitations. However, as Slater et al. (2014) point out: "It is important here to emphasize that TEBOTS does not argue that use of stories will necessarily restore depleted selfcontrol resources or resolve tensions and anxieties regarding identity threat after the conclusion of engagement in the narrative experience" (p. 448).

The expansive experiences provided by narratives in TEBOTS are deliberately set apart from the trials and tribulations of daily life within this framework. As such, this framework does not address how, when and under what conditions narratives may be able to satisfy threatened needs. TEBOTS's deliberate focus on separating one's self-concept and narrative experiences is evident in its subsequent empirical tests. Research testing the propositions from TEBOTS do not examine the need-satisfying potential of narratives, but rather how individuals experiencing high external demands or lower self-control have stronger narrative experiences (e.g., Johnson et al., 2015).

The SIMU, in contrast, is interested in how media may be of functional utility to media users attempts to manage their own need-states. Through this view, media use is not only an opportunity to remove the constraints of daily life through escapism, but a potential

opportunity to redress these threats. Of particular interest is the idea that narrative media may be able to alleviate or repair need-states after experiences of threat or frustration.

4 Story manipulations were pilot tested twice. The same logic and pilot study design initially tested affinity manipulations and story ratings among university students, but the manipulations failed across several measures. Stories were extensively changed to strengthen their representation of behavioral and semantic features and the pilot study was then re-run, this time with an online paid sample. This second pilot data is what is reported in text.

5 Story manipulations showed no difference in their level of absorption or excitement (F<1 in both cases). However, among the four stems used in the main study, the reality show manipulations did display some minor differences in valence (for instance, overall happiness of the story varied by stem, F(3,1252)=6.21, p<.001). Pairwise comparisons between the means revealed that, within the reality show manipulations, the Hi-Behavioral and Lo-Semantic Affinity story (where she meets people but wants money, M=3.98 SE=.11) was considered a less happy story than the Lo-Behavioral Affinity High-Semantic version (where she is competing alone but ultimately makes friends, M=4.39 SE=.11). Given that the main study would randomly display different versions of the reality story to each participant, if this difference in valence contributed to story appeal scores, it would be randomly distributed across participants and therefore constitute additional error in our main results. The alternative would have been to include only one story stem (and its four affinity manipulations) in the main study to avoid this complication, but the ecological validity of having participants rate four ostensibly different stories rather than four versions of the geocaching story was preferable. There was no guarantee subtle manipulations between the four versions of the same stem would be read

carefully enough to allow us to observe the expected effects. The studies here therefore include four story stems and future plans are underway to more tightly control for this in additional studies.

Interestingly, this valence difference was only observed in the reality show stem, and indicated that high semantic affinity is more positive. Yet the results of both experiments will reveal that stories with high semantic affinity are less appealing than stories with low semantic affinity. This finding will be discussed further below, but it is important to note that it is in the opposite direction than the valence finding in the pilot test, suggesting that any valence differences across the story stems were unlikely to impact the observed relationship between semantic affinity and appeal.

6 The initial analysis plan proposed using conjoint analysis to examine the unique and combined influence of different types of affinity on story appeal. However, given that behavioral affinity had no significant effect on preference, there value scores would add little to our understanding of these data. This test is therefore omitted from the main analysis.

7 Notably, induction condition had no effect on perceptions of these needs in the stories. Participants in all groups rated the depictions of relatedness, competence, and autonomy very similarly (see Appendix C). This suggests that although participants in all induction conditions perceive the stories depict relatedness in a similar way, the appeal of this emphasis varies by induction condition.

8 Gender was observed to correlate with the appeal of the video game story stem (r=-.09) and interest in certain social sharing audiences (r_{public} =-.10 $r_{private}$ =.09). Similarly, income level correlated with perceptions of autonomy in the stories (r=.05) While statistically

significant, these correlations are rather weak, and lack direct theoretical relevance. Therefore they were therefore not included in analyses.

9 For several induction check items, the variance among induction groups was remarkably diverse. This was a cause for some concern, as many statistical tests assume equal variance among groups. Significant differences in variance among groups can lead to inflated likelihood of Type-I errors, particularly when group sizes are unequal (Blanca et al., 2018). To examine this potential issue in more detail, I turned to Blanca et al.'s (2018) work on the robustness of ANOVA and *F*-test statistics under these circumstances. The variance ratio of a variable is the ratio of the largest group variance divided by the smallest one, essentially capturing the proportional difference in variance among groups on the same measure. Variance ratios are often around 2, though a ratio of 8 or 9 is not unheard of in real data (Ruscio & Roche (2012). As Blanca's test parameters points out, large variance ratios becomes a greater problem when the differences in group size are large, showing that *F*-tests are robust with variance ratios of 9, so long as the smallest group is at least 66% the size of the largest group, but tests are overly liberal when group size varies more than this.

In the current study, some induction measures had a relatively high variance ratio: $VR_{rejection}=4.57 VR_{ignored}=6.49$. Examining sample sizes sheds some light on this, however: The smallest group (the rejection condition n=106) has a significantly larger standard deviation than the other induction groups. This is to be somewhat expected, as fewer data points will naturally entail a wider deviation. Blanca et al. (2018) consider this a positive pairing: in that the scale of the variance differences is consistent with sample size differences. Among our induction conditions, the smallest group (rejection) is still 84.8% of the size of the largest group

(included). So although the variance ratio on some items is large, the low difference in group size and the positive pairing of variance size and group size gives us greater confidence that ANOVA results will be no more prone to type-I error here than in other contexts.

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APPENDIX A: NARRATIVE STIMULI AND PILOT RESULTS

Character Profiles

Nine character profiles were rated in a previous study to ensure they were equally appealing and would not unduly affect story preference and selection. All protagonists were written as American women in their 20s (similar to our student sample and common film protagonist type). They live in medium-size cities with a creative job, active hobby and positive personality trait. Creative jobs were common romcom tropes. Hobbies were drawn from Statista.

The pilot and both experiments used the four characters who were considered most similar in appeal (on a scale from 1-5, unappealing to very appealing):

- **Riley** is a curator at a small museum in San Diego. She's an avid hiker in her free time, and has a wild imagination which sometimes runs away with her. *M*_{appeal}= 4.34 *SE* = .09
- **Rowan** is a photographer in Denver. She loves to cook, and has a magnetic energy that shows up in everything she makes. *M*_{appeal}= 4.45 *SE* = .09
- **Kylie** is a local news producer in Atlanta. She is an avid do-it-yourself-er who is always making new contraptions and loves to exhibit them. *M*_{appeal}= 4.50 *SE* = .09
- Jamie writes a newspaper column in Salt Lake City. She loves music and on weekends explores the city, hunting for rare editions of her favorite albums. M_{appeal} = 4.45 SE = .10

We found no significant pair-wise differences in appeal for the lowest and highest scored protagonists (Kylie and Riley: t(285)=-1.50, p=.14)

In the pilot these protagonists were randomly presented with different stories and showed no main effects or interactions with our different story stems and manipulations on any outcomes.

Story Stems and Affinity Manipulations

Below are five different story stems (about different scenarios), each manipulated into four versions (to match our various combinations of behavioral and semantic affinity).

	Semantic Hi	Semantic Lo
Behavioral Hi	 meeting several strangers online and evaluating each other positively/ negatively motivated to gain social acceptance and connection from other people 	 meeting several strangers online and evaluating each other positively/ negatively motivated by goals unrelated to social connection: wealth.
Behavioral Lo	 working alone to observe inanimate objects motivated to gain social acceptance and connection from other people 	 working alone to observe inanimate objects motivated by goals unrelated to social connection: wealth

Table A1

Operational design of story content sharing affinity with Ostracism Online

Using Multiple Story Stems

To obscure the premise of our study and avoid redundancy between the story options presented to users, we designed several story stems which could be manipulated to represent any of these four combinations of affinity. For example, a story stem about a character playing a game could be manipulated to show the character playing either online or alone and motivated by a desire either to connect with others or to win prizes. To ensure all story stems could be manipulated to represent our various combinations of affinity while controlling for other key factors, we pretested all four versions of each story stem.

Color coding highlights altered text between conditions. Behavioral elements of online/not online, with others/alone and containing evaluations/not are coded in *italics* and <u>underlines</u> respectively. Semantic elements pertaining to character motivations related to relatedness/wealth are in **bold**.

Stimuli are clustered by affinity manipulation below.

High Behavioral Affinity & High Semantic Affinity

Video Game Stem

She just received a brand new *online video game*. She is really lonely, and hopes that playing the game will help her make new relationships with other players who regularly meet-up online to play together. The story follows her *entering the multi-player game* and observing other <u>players</u> whose game-play skills will be evaluated. She really wants to feel appreciated. In the end, she is welcomed into a close-knit group of friends.

Geocaching Stem

She recently moved to a new city all the way across the country. She really wants **to make friends and build a community with people who share** her hobby: Geocaching. She *joins an online group of people who also Geocache,* where you seek out 'caches' hidden around town. Often, these are little trinkets which can be fun, but have no real cash value. She plans to photograph her finds for the site's photo library, where image quality is rated by other users. She hopes she can **make some close friends** through the Geocaching community. The story ends with her **meeting some wonderful people this way, and builds bonds with them**.

Art Class Stem

She had to temporarily relocate for work and **doesn't know anybody**. She has always loved taking art classes. She sees art classes as an opportunity to **build new friendships with likeminded people who love art as much as she does.** One day, she decides to *enroll in a popular online art class*. It takes place once a week with a local artist for an instructor. Each week students <u>create new works of art and have their portfolios evaluated</u>. She really wants to **connect with other people who love art.** At the end of the story, she settles into her new town and **becomes really tight with some other art lovers**.

App Stem

She has been really **lonely**. She signs up for a localized *online app* called Go!. She would like to use Go! **to meet new people and enjoy their company**. On it, users can find *people who live in the area*. The app posts about promos at local businesses to encourage people to <u>meet up inperson and review local products</u>. These reviews can then be judged by other users. The story follows her as she explores Go! to **meet new people** and <u>rate</u> new places and products. She

believes it'll be a good way to get close to people. After a while, she finds some great people and builds close relationships with other Go! users.

Reality Show Stem

She was recently selected to be on a reality tv show. She's been feeling pretty **isolated lately**. She saw how the players last season **made some really close friends with the other contestants** on the show. Now, she hopes **she'll make new friends**, too. The show features a game played by *meeting other players online*. There are **small tools** hidden around the game play arena. The story follows her efforts to <u>influence other players as they evaluate her skills</u> so she can remain in the game. She wishes to **feel accepted by making new friends**. The ending shows her **connecting with some other players and they become really close, staying connected long after the show ends**.

High Behavioral Affinity & Low Semantic Affinity

Video Game Stem

She just received a brand new *online video game*. She is really **broke**, and hopes that playing the game will let her **uncover hidden in-game coins that she can cash out for real money**. The story follows her *entering the multi-player game* and observing <u>other players whose game-play skills</u> will be evaluated. She is looking everywhere to collect the **coins**. She really wants to **make money**. In the end, she **finds so many coins her money problems disappear**.

Geocaching Stem

She recently moved to a new city all the way across the country. She really wants **to dig up a high-value stash in one of her digs** as part of her hobby: Geocaching. She *joins an online group of people who also Geocache,* where you seek out 'caches' hidden around town._Often, these are little trinkets, **but sometimes there are valuable surprises.** She plans to photograph her finds <u>for</u> <u>the site's photo library, where image quality is rated by other users.</u> She hopes she can **find something valuable** through Geocaching. The story ends with her digging up **a rare artifact that is worth a ton of money**.

Art Class Stem

She had to temporarily relocate and is low on **money**. She has always loved taking art classes. She sees art classes as an opportunity to hone her eye to help her **make a lot of money exhibiting and selling new art work.** One day, she decides to *enroll in a popular online art class*. It takes place once a week with a local artist for an instructor. Each week students <u>create new</u> <u>works of art and have their portfolios evaluated</u>. She really wants to **make money selling art**. At the end of the story, she settles into her new town and makes a huge **commission on the first painting she sells**.

App Stem

She has been really **short on cash**. She signs up for a localized *online app* called Go!. She wants to use Go! to **get in on all the discounts and freebies at local businesses**. On it, users can find *people who live in the area*. The app posts about promos at local businesses to encourage people to <u>meet up in-person and review local products</u>. These reviews can then be judged by other <u>users</u>. The story follows her as she explores Go! to **score freebies** and <u>rate</u> new places and products. She believes it'll be **a good way to save money and get free stuff**. After a while, she **gets some great giveaways and sells some for a profit** to improve her financial situation.

Reality Show Stem

She was recently selected to be on a reality tv show. She's been feeling like **she can't make ends meet** lately. She saw how the players last season **found and took home some serious money** over the course of the show. Now, she hopes **to find as much cash as possible**. The show features a game played by *meeting other players online*. There are **cash and prizes** hidden around the game play arena. The story follows her efforts to <u>influence other players as they</u> <u>evaluate her skills</u> so she can remain in the game. She wishes to **secure a ton of cash**. The ending shows her **discovering some big prizes and they are really valuable, solving all her money problems**.

Low Behavioral Affinity & High Semantic Affinity

Video Game Stem

She just received a brand *new solo board game*. She is really **lonely**, and hopes that playing the game will **help her make new relationships with other players who regularly meet-up at the local Game Convention** to play together. The story follows her *setting up the single-player game* and trying to play through *her solo journey* across the realms. She really **wants to feel appreciated**. In the end, she is **welcomed into a close-knit group of friends**.

Geocaching Stem

She recently moved to a new city all the way across the country. She really wants **to make friends and build a community with people who share** her hobby: Geocaching. She *heads out for a solo Geocaching expedition in her local area,* where you seek out 'caches' hidden around town. Often, these are little trinkets which can be fun, but have no real cash value. She plans to photograph her finds in her private photo library to document her solo explorations and <u>adventures.</u> She hopes she can **make some close friends** through the Geocaching community. The story ends with her **meeting some wonderful people this way, and builds bonds with them**.

Art Class Stem

She had to temporarily relocate for work and **doesn't know anybody**. She has always loved taking art classes. She sees art classes as an opportunity to **build new friendships with likeminded people who love art as much as she does.** One day, she decides to *enroll in a self-guided art class* that gets sent out once a week by a local artist. Each week she <u>learns about notable</u> <u>artists and the period in which they lived.</u> She really wants to **connect with other people who love art.** At the end of the story, she settles into her new town and **becomes really tight with some other art lovers**.

App Stem

She has been really **lonely**. She signs up for a local *mailing list* called Go!. She would like to use Go! **to meet new people and enjoy their company**. On it, users can find *products made in the area*. The list posts about promos at local businesses to encourage people who subscribe to become new customers <u>and try local products</u>. The story follows her as she explores Go! to **meet new people** and see new places. She believes it'll be **a good way to get close to people**. After a while, she **finds some great people and builds close relationships** with other Go! users.

Reality Show Stem

She was recently selected to be on a reality tv show. She's been feeling pretty **isolated lately**. She saw how the players last season **made some really close friends with people who watched the show**. Now, she hopes **she'll make new friends**, too. The show features a game played by *living in the woods alone*. There are **small tools** hidden around the game play arena. The story follows her efforts to <u>build a campsite</u> so she can remain in the game. She wishes to **feel accepted by making new friends**. The ending shows her **connecting with some other players and they become really close, staying connected long after the show ends**.

Low Behavioral Affinity & Low Semantic Affinity

Video Game Stem

She just received a brand *new solo board game*. She is really **broke**, and hopes that playing the game will let her **uncover hidden in-game coins that she can cash out for real money**. The story follows her *setting up the single-player game* and trying to play through *her solo journey* across the realms. She is looking everywhere to collect the **coins**. She really **wants to make money**. In the end, she **finds so many coins her money problems disappear**.

Geocaching Stem

She recently moved to a new city all the way across the country. She really wants **to dig up a high-value stash in one of her digs** as part of her hobby: Geocaching. She *heads out for a solo Geocaching expedition in her local area,* where you seek out 'caches' hidden around town. Often, these are little trinkets, **but sometimes there are valuable surprises.** She plans to photograph her finds in her private photo library to document her solo explorations and adventures. She hopes she can **find something valuable** through Geocaching. The story ends with her digging up **a rare artifact that is worth a ton of money**.

Art Class Stem

She had to temporarily relocate for work and is low on **money**. She has always loved taking art classes. She sees art classes as an opportunity to hone her eye to help her **make a lot of money by exhibiting and selling new art work.** One day, she decides to *enroll in a self-guided art class* that gets sent out once a week by a local artist. Each week she <u>learns about notable artists and the period in which they lived</u>. She really wants to **make money selling art**. At the end of the story, she settles into her new town and makes a huge **commission on the first painting she sells**.

App Stem

She has been really **short on cash**. She signs up for a local *mailing list* called Go!. She wants to use Go! to **get in on all the discounts and freebies at local businesses**. On it, users can find *products made in the area*. The list posts about promos at local businesses to encourage people who subscribe to become new customers. The story follows her as she explores Go! to **score freebies** and <u>try local products</u>. She believes it'll be **a good way to save money and get free stuff**. After a while, she **gets some great giveaways and sells some for a profit** to improve her financial situation.

Reality Show Stem

She was recently selected to be on a reality tv show. She's been feeling like she **can't make ends meet** lately. She saw how the players last season **found and took home some serious money** over the course of the show. Now, she hopes **to find as much cash as possible**. The show features a game played by *living in the woods alone*. There are **cash and prizes** hidden around the game play arena. The story follows efforts to <u>build a campsite</u> so she can remain in the game. She wishes to **secure a ton of cash**. The ending shows her **discovering some big prizes and they are really valuable, solving all her money problems**.

Stimuli Pilot Test

Participants were led to believe they would be giving feedback on several potential movie plots within the same genre. They were then randomly assigned to one of four affinity manipulation groups (e.g., a person would see five stories designed to have high-semantic and high-behavioral affinity with our induction, or see five stories which had low affinity in both dimensions). For example, a participant assigned to the hi-hi condition will read five different

story stems, all designed to be high in both semantic and behavioral affinity, where each story portrayed strangers meeting online and a main character desiring social connection across various contexts and scenarios.

Sample

Participants were recruited using Prolific and pro-rated paid minimum wage for their time (\$2 for 10 minutes). They were all residents of the United States with an average age of 36 (*SD*=13.31). Demographics collected at the end of the survey indicate the sample was evenly split by gender (48.4% men, 46.4% women and 4.8% other genders or non-disclosing) and primarily White (76.6% White, 7.9% Black, 12.7% Asian, 2.8% other races and ethnicities). **Stimuli: Story Stems**

Five story stems were created with the intention of dropping at least one stem after the pretest depending on analysis. They focused on the protagonist playing a new game; going Geocaching; taking an art class; using a new local recommendation service, or being on a reality tv show. Each of these stems were manipulated to represent the four combinations of affinity (hi semantic-hi behavioral; hi semantic-lo behavioral; lo semantic-hi behavioral; low semantic-low behavioral). For example, in the video game story, the high behavioral and high-semantic affinity version depicts the protagonist playing an online multi-player game and wants to make friends through the game, where the low-behavioral and low-semantic affinity version depicts her playing a solo board game to win prize money. Full text of all tested stimuli can be found in Appendix A. All stories were edited to be of similar length.

Measures

In the pretest, participants rated all stories on the same dimensions. Several of these were specifically about the manipulated story features. Behavioral items asked what happened in the story, for example if the story showed someone online (i.e., high behavioral affinity with the Ostracism Online induction); if the story showed someone alone (i.e., low behavioral affinity with Ostracism Online). Semantic items asked about the character's motives, such as if the protagonist wanted to make connections with other people (i.e., high semantic affinity with Ostracism Online and if they protagonist wanted to gain wealth and resources (i.e., low semantic affinity with Ostracism Online).

Additional items were used to compare these story manipulations across other pertinent factors. In particular, testing other known factors in MMT (excitement, valence and interest in the story) to check if our manipulations adequately control for these well-known other factors impacting selection within MMT, We also asked if the stories portrayed the other basic psychological needs of SDT beyond relatedness (competence and autonomy). All items were Likert-style statements rated on a 5-point scale:

- Behavioral affinity with induction

- Online with strangers vs alone
 - The story shows a person who meets strangers.
 - This story shows a person online.
 - The story shows a person who is spending time alone.
- Making evaluations vs observing objects
 - The story shows evaluations taking place.
 - The story shows people being evaluated.

- The story shows skills being evaluated.
- Semantic affinity with induction (Relatedness & wealth)
 - Relatedness
 - This story shows a person who wants to make connections
 - This story shows a person who wants to form social relationships.
 - o Wealth
 - This story shows a person who wants to gain wealth and resources.

- Other semantic motivations

- Competence
 - This story shows a person who wants to gain skills and achieve success.
- o Autonomy
 - This story shows a person who wants to be independent and free.

- Other MMT factors

- o Arousal
 - This story is exciting
- o Valence
 - The story is a positive experience for the protagonist
 - The story is a happy one
- Absorption
 - This story is interesting enough to hold my attention

Analysis & Results

We initially ran ANOVAs to examine the main effects and potential interactions among 3 factors: the characters appearing with each story, the story stem being rated (e.g., the video game stories vs the art class stories), and the affinity manipulations (or experimental condition).

Across all variables, the various characters showed no main effects or interactions with the story options to impact any measures. We therefore concentrated our attention on the effect of the affinity conditions on our behavioral, semantic, and control variables.

Behavior ratings. ANOVAs showed significant differences by affinity condition for the online, alone and evaluation measures. The item asking if the story depicted meeting strangers did not show significant differences between conditions. In retrospect, the relatedness manipulation (of a character motivated by and making friends) interfered with this item: even a low-behavioral affinity story that establishes the protagonist as alone will meet people in the process of making friends. While this is unfortunate, the rest of our behavioral manipulations worked as intended.

Specifically, participants perceived the protagonists in our Hi-behavioral affinity story versions were online more (F(3,1252)=185.16, p<.001) and involved in evaluations more (F(3,1252)=49.08, p<.001) than protagonists in our Lo-behavioral affinity story versions. By contrast, protagonists in the Lo-behavioral affinity stories were perceived to be alone more than those in the Hi-behavioral affinity stories (F(3,1252)=33.05, p<.001). Examining the means

in pair-wise comparisons with Bonferroni corrections, this pattern was consistent across story stems, see Table 1. This pattern was also repeated across additional evaluation items that asked about evaluations of people and skills specifically.

Behavior Rating Means (SE) by Story Stem and Affinity Condition					
	Hi Behavioral –	Hi Behavioral –	Lo Behavioral –	Lo Behavioral	
	Hi Semantic	Lo Semantic	Hi Semantic	Lo Semantic	
Is Online					
Game	4.73 (.13)ª	4.84 (.13) ª	2.35 (.13) ^b	2.52 (.13) ^b	
Geocaching	4.27 (.16) ^a	4.07 (.16) ª	3.02 (.16) ^b	2.32 (.16) ^c	
Art Class	4.11 (.16) ^a	3.97 (.16) ª	2.69 (.16) ^b	2.45 (.16) ^b	
Арр	4.24 (.16) ^{a,b}	4.29 (.16) ^a	3.68 (.16) ^{b,c}	3.16 (.16) ^c	
Reality Show	4.13 (.15) ^a	4.26 (.15) ^a	2.17 (.15) ^b	2.07 (.15) ^b	
Mean	4.30 (.15)	4.28 (.15)	2.78 (.15)	2.50 (.15)	
Is Alone					
Game	4.08 (.11) ^{a,b}	3.89 (.11)	4.32 (.10) ^{b,c}	4.66 (.11) ^c	
Geocaching	3.55 (.16) ª	3.55 (.16) ª	4.06 (.16) ^b	4.27 (.16) ^b	
Art Class	3.58 (.13) ^{a,b}	3.24 (.13) ª	3.74 (.13) ^b	3.61 (.13) ^{a,b}	
Арр	3.50 (.14) ^{a,b}	3.08 (.14) ^a	3.79 (.13) ^b	3.55 (.14) ^b	
Reality Show	3.39 (.14) ^a	2.81 (.14) ^b	4.06 (.13) ^c	4.15 (.14) ^c	
Mean	3.62 (.13)	3.31 (.13)	3.99 (.13)	4.05 (.13)	
Are Evaluations					
Game	3.79 (.14) ª	4.21 (.14) ^a	2.86 (.14) ^b	2.53 (.14) ^b	
Geocaching	3.29 (.15) ^a	3.29 (.15) ª	2.89 (.15) ª	2.89 (.15) ª	
Art Class	3.89 (.13) ^{a,b}	4.29 (.13) ª	3.05 (.13) ^{b,c}	3.48 (.13) ^c	
Арр	3.82 (.15) ^a	3.74 (.15) ª	3.14 (.15) ^b	3.03 (.15) ^b	
Reality Show	4.05 (.14) ^a	4.13 (.14) ^a	3.63 (.13) ^{a,b}	3.37 (.14) ^b	
Mean	3.77 (.14)	3.93 (.14)	3.11 (.14)	3.06 (.14)	

Table A2

Note. The Hi-Behavioral affinity versions were designed to depict someone online and making evaluations with other people (i.e., not alone). Superscripts denote pairwise differences with Bonferroni corrections, horizontal only.

Semantic Ratings: Relatedness & Wealth. Semantic affinity manipulations also worked as intended. The high semantic affinity stories were perceived to depict people motivated by social connections and relationships (F(3,1252)=483.29, p<.001 and F(3,1252)=570.73, p<.001 for these measures, respectively), while the low semantic affinity stories were perceived to depict people motivated by wealth (F(3,1252)=730.66, p<.001).

We do however observe an interaction between semantic and behavioral aspects of the story text on both relatedness items. That is, while the stories designed to have high semantic affinity with relatedness were perceived to be *most* motivated by social relationships and connection, the low semantic affinity story that showed high behavioral affinity (the protagonist was motivated by wealth, but was online with other people) were consistently rated as higher on these measures than the story which had neither semantic nor behavioral affinity.

For example, in the video game story, participants perceived the two High-semantic versions portrayed someone who wanted to make connections (M=4.58 SE=.10 and M=4.66 SE=10, respectively) as intended. However, the story where the person was playing an online

multiplayer game but wanted to make money (hi behavioral affinity, low semantic affinity, M=2.79 SE=.10), was rated significantly higher on connection than the story where the player was alone playing a solo board game and wanted to make money (lo behavioral affinity, lo semantic affinity, M=1.82, SE=.10).

Table A3

Semantic Rating Means (SE) by Story Stem and Affinity Condition

cinantie nating	Wicuns (SE) by S	iory stern and i	gjinney contantion	1
	Hi Behavioral –	Hi Behavioral –	Lo Behavioral –	Lo Behavioral –
	Hi Semantic	Lo Semantic	Hi Semantic	Lo Semantic
Want				
Connection				
Game	4.58 (.10) ^a	2.79 (.10) ^b	4.66 (.10) ^a	1.82 (.10) ^c
Geocaching	4.57 (.11) ª	3.15 (.11) ^b	4.68 (.11) ª	2.27 (.11) ^c
Art Class	4.60 (.12) ª	3.36 (.12) ^b	4.75 (.11) ª	3.29 (.12) ^b
Арр	4.66 (.11) ^a	3.44 (.11) ^b	4.75 (.11) ª	2.82 (.11) ^c
Reality Show	4.61 (.11) ª	3.18 (.11) ^b	4.79 (.11) ª	2.52 (.11) ^c
Mean	4.60 (.11)	3.18 (.11)	4.73 (.11)	2.55 (.11)
Want				
Relationships				
Game	4.68 (.10) ^a	2.44 (.10) ^b	4.59 (.10)ª	1.60 (.10) ^c
Geocaching	4.53 (.11) ^a	3.08 (.11) ^b	4.63 (.11) ^a	2.11 (.11) ^c
Art Class	4.60 (.11) ^a	3.08 (.11) ^b	4.72 (.11) ª	3.07 (.11) ^b
Арр	4.61 (.11) ª	3.13 (.11) ^b	4.66 (.11) ª	2.61 (.11) ^c
Reality Show	4.60 (.12) ª	2.97 (.12) ^b	4.77 (.11) ª	2.34 (.12) ^c
Mean	4.60 (.11)	2.94 (.11)	4.67 (.11)	2.35 (.11)
Want				
Wealth				
Game	2.23 (.10) ^a	4.81 (.10) ^b	2.11 (.09) ^a	4.74 (.10) ^b
Geocaching	2.19 (.12) ª	4.39 (.12) ^b	2.22 (.11) ª	4.24 (.12) ^b
Art Class	2.26 (.11) ^a	4.48 (.11) ^b	2.40 (.11) ^a	4.53 (.11) ^b
Арр	2.31 (.11) ^a	4.47 (.11) ^b	2.43 (.11) ^a	4.42 (.11) ^b
Reality Show	2.55 (.10) ^a	4.82 (.10) ^b	2.55 (.10) ^a	4.73 (.10) ^b
Mean	2.31 (.11)	4.59 (.11)	2.34 (.10)	4.53 (.11)

Note. The Hi-Semantic versions (columns 1 and 3) were designed to depict someone who wants connection and relationships, while the Lo-Semantic versions (columns 2 and 4) were designed to depict someone who wanted money. Superscripts denote pairwise differences with Bonferroni corrections, horizontal only.

Competence & Autonomy. We also measured how much each story represented the other basic psychological needs: competence and autonomy. Across all story stems, participants perceived the low-semantic affinity content (wealth stories) as more motivated by competence (F(3,1252)=65.99, p<.001) and autonomy (F(3,1252)=128.98 p<.001) than the high-semantic affinity content (relatedness stories, see Table 3). Because gaining wealth is an achievement and can be associated with a greater degree of freedom, this is not entirely surprising, although it should be further examined in the main study, as we will discuss below.

competence & Autonomy Ruting Means (SE) by Stem & Ajjimity Condition							
	Hi Behavioral –	Hi Behavioral –	Lo Behavioral –	Lo Behavioral –			
	Hi Semantic	Lo Semantic	Hi Semantic	Lo Semantic			
Want							
Competence							
Game	3.40 (.13) ^{a,b}	4.26 (.13) ^c	3.05 (.13) ª	3.82 (.13) ^{b,c}			
Geocaching	3.18 (.13) ª	4.05 (.13) ^b	3.11 (.13) ª	3.71 (.13) ^b			
Art Class	3.76 (.10) ª	4.66 (.10) ^b	3.49 (.10) ª	4.73 (.10) ^b			
Арр	2.92 (.14) ª	3.77 (.14) ^b	2.77 (.13) ª	3.48 (.14) ^b			
Reality Show	3.73 (.12) ^{a,b}	4.07 (.12) ^a	3.55 (.12) ^b	3.98 (.12) ^{a,b}			
Mean	3.40 (.13)	4.16 (.13)	3.19(.12)	3.95 (.13)			
Want							
Autonomy							
Game	2.74 (.13)ª	3.98 (.13) ^b	2.69 (.12)ª	4.02 (.13) ^b			
Geocaching	2.77 (.13) ª	3.76 (.13) ^b	3.23 (.12) ª	4.00 (.13) ^b			
Art Class	3.03 (.12) ª	3.87 (.12) ^b	2.95 (.12) ª	4.27 (.12) ^b			
Арр	2.82 (.12) ª	3.69 (.12) ^b	2.75 (.12) ª	3.81 (.12) ^b			
Reality Show	2.77 (.12) ^a	3.84 (.12) ^b	2.77 (.12) ^a	3.94 (.12) ^b			
Mean	2.83 (.12)	3.83 (.12)	2.88 (.12)	4.01 (.12)			

Competence & Autonomy Rating Means (SE) by Stem & Affinity Condition

Table A4

Note. Superscripts denote pairwise differences with Bonferroni corrections, horizontal only.

Other MMT ratings. To examine the effect of affinity on selection, we wanted all stories to be similar across other factors known to impact appeal in MMT. Differences between affinity conditions were nonsignificant for both excitement and absorption (F<1), but were significant for both measures of valence: Some conditions were perceived as more positive for the protagonist (F(3,1252)=6.09, p<.001) and happier overall (F(3,1252)=6.21, p<.001).

To examine this further, we once again conducted post-hoc pairwise comparisons with Bonferroni corrections for each story stem. There were no pairwise differences between the affinity conditions within the Video Game, Geocaching, or Art Class stories. One difference was observed in the Reality Show stories. Specifically, the Hi-Behavioral and Lo-Semantic Affinity story (where she meets people but wants money, *M*=3.98 *SE*=.11) was considered a less happy story than the Lo-Behavioral Affinity High-Semantic version (where she is competing alone but ultimately makes friends, *M*=4.39 *SE*=.11). Interestingly, this valence difference was only observed in the reality show stem, and indicated that high semantic affinity is more positive. Yet the results of both experiments will reveal that stories with high semantic affinity are less appealing than stories with low semantic affinity. This finding will be discussed further below, but it is important to note that it is in the opposite direction than the valence finding in the pilot test, suggesting that any valence differences across the story stems were unlikely to impact the observed relationship between semantic affinity and appeal.

Most significant differences in these measures were observed within the App stories (see Table 4), suggesting that manipulations of this story stem were less successful in controlling for these factors than the other story stems tested.

Table A5

· · · ·	Hi Behavioral –	Hi Behavioral –	Lo Behavioral –	Lo Behavioral –
	Hi Semantic	Lo Semantic	Hi Semantic	Lo Semantic
Is Exciting				
Game	2.79 (.14)	2.66 (.14)	2.35 (.14)	2.53 (.14)
Geocaching	2.58 (.14)	2.84 (.14)	2.51 (.13)	2.87 (.14)
Art Class	2.52 (.14)	2.69 (.14)	2.28 (.13)	2.57 (.14)
Арр	2.52 (.13) ª	2.24 (.13) ^{a,b}	2.52 (.13) ª	1.94 (.13) ^b
Reality Show	2.77 (.13)	2.90 (.13)	3.00 (.13)	3.08 (.13)
Mean	2.64 (.14)	2.67 (.14)	2.53 (.13)	2.60 (.14)
Is Absorbing				
Game	2.69 (.15)	2.55 (.15)	2.42 (.14)	2.53 (.15)
Geocaching	2.57 (.15)	2.73 (.15)	2.54 (.15)	2.84 (.15)
Art Class	2.61 (.15)	2.76 (.15)	2.39 (.15)	2.63 (.15)
Арр	2.60 (.15) ª	2.29 (.15) ^{a,b}	2.40 (.14) ^{a,b}	2.02 (.15) ^b
Reality Show	2.69 (.14)	2.77 (.14)	2.99 (.13)	3.16 (.14)
Mean	2.63 (.15)	2.62 (.15)	2.54 (.14)	2.64 (.15)
Pos. for Protag.				
Game	4.21 (.11)	4.21 (.11)	4.39 (.11)	4.21 (.11)
Geocaching	4.11 (.10)	4.26 (.10)	4.43 (.10)	4.42 (.10)
Art Class	4.29 (.10)	4.27 (.10)	4.45 (.10)	4.40 (.10)
Арр	4.00 (.11)	4.05 (.11)	4.34 (.10)	3.95 (.11)
Reality Show	4.13 (.11)	4.23 (.11)	4.46 (.10)	4.27 (.11)
Mean	4.15 (.10)	4.20 (.10)	4.41 (.10)	4.25 (.10)
Happy Story				
Game	4.15 (.11)	4.15 (.11)	4.26 (.11)	4.11 (.11)
Geocaching	4.31 (.09)	4.16 (.09)	4.32 (.09)	4.32 (.09)
Art Class	4.47 (.10)	4.24 (.10)	4.31 (.09)	4.40 (.10)
Арр	4.15 (.10) ^a	3.82 (.10) ^{a,b}	4.35 (.10) ^a	3.81 (.10) ^b
Reality Show	4.21 (.11) ^{a,b}	3.98 (.11) ª	4.39 (.11) ^b	4.08 (.11) ^{a,b}
Mean	4.25 (.10)	4.07 (.10)	4.33 (.10)	4.15 (.10)

MMT Response Rating Means (SE) by Story Stem & Affinity Condition

Note. Unmarked cells show no statistical differences. Superscripts denote pairwise differences with Bonferroni corrections, horizontal only. App Story was dropped from main study.

APPENDIX B: OSTRACISM ONLINE'S IMPACT ON MOOD

Table B1

	Mood Measures for each Induction Group						
Study 1 $F(2,205)=4.95, p=.01$ Bad $1.51 (.89)^a$ $1.63 (.90)^a$ $2.16 (1.11)^b$ $F(2,205)=8.85, p=.01$ Friendly $4.01 (1.04)^a$ $3.72 (.88)^{ab}$ $3.46 (1.11)^b$ $F(2,205)=5.67, p<.001$ Unfriendly $1.39 (.78)^a$ $1.57 (.85)^{ab}$ $3.46 (1.11)^b$ $F(2,205)=5.70, p<.001$ Angry $1.42 (.77)^a$ $1.57 (.85)^{ab}$ $1.91 (1.10)^b$ $F(2,205)=7.07, p<.001$ Pleasant $3.75 (.97)^a$ $3.60 (.88)^{ab}$ $3.28 (1.03)^b$ $F(2,205)=3.70, p=.01$ Happy $3.59 (.98)^a$ $3.49 (.94)^{ab}$ $3.20 (1.02)^b$ $F(2,205)=3.70, p=.01$ Sad $1.69 (.92)^a$ $1.87 (.99)^{ab}$ $3.20 (1.02)^b$ $F(2,205)=3.70, p=.03$ Mappy $3.59 (.98)^a$ $3.49 (.94)^{ab}$ $3.20 (1.02)^b$ $F(2,205)=3.77, p=.03$ Study 2 $F(2,205)=3.77, p=.03$ $F(2,205)=3.77, p=.03$ $F(2,205)=3.77, p=.03$ Mappy $3.59 (.98)^a$ $3.49 (.94)^{ab}$ $3.20 (1.02)^b$ $F(2,205)=3.77, p=.03$ Study 2 $F(4,628)=1.00, p=.03$ $F(4,628)=1.00, p=.03$ $F(4,628)=1.00, p=.03$ <			Included		Ostracized	Rejected	
$ \begin{array}{c c c c c c c c } \hline Good & 3.72 (.93)^a & 3.65 (.84)^a & 3.23 (1.15)^b & \begin{array}{c} F(2,205)=4.95, \\ p=.01 \\ F(2,205)=8.85, \\ p001 \\ F(2,205)=8.85, \\ p001 \\ F(2,205)=5.67, \\ p001 \\ \hline & \end{tabular} & 3.72 (.88)^{ab} & 3.46 (1.11)^b & \begin{array}{c} F(2,205)=5.67, \\ p001 \\ F(2,205)=5.70, \\ p001 \\ \hline & \end{tabular} & 1.39 (.78)^a & 1.57 (.85)^{ab} & 1.91 (1.10)^b & \begin{array}{c} F(2,205)=5.70, \\ p001 \\ \hline & \end{tabular} & 1.42 (.77)^a & 1.50 (.80)^a & 1.93 (0.98)^b & \begin{array}{c} F(2,205)=7.07, \\ p001 \\ \hline & \end{tabular} & 1.93 (0.98)^b & 3.28 (1.03)^b & \begin{array}{c} F(2,205)=7.07, \\ p001 \\ \hline & \end{tabular} & 3.75 (.97)^a & 3.60 (.88)^{ab} & 3.28 (1.03)^b & \begin{array}{c} F(2,205)=4.40, \\ p=.01 \\ p01 \\ \hline & \end{tabular} & 3.59 (.98)^a & 3.49 (.94)^{ab} & 3.20 (1.02)^b & \begin{array}{c} F(2,205)=3.77, \\ p=.03 \\ \hline & \end{tabular} & 1.69 (.92)^a & 1.87 (.99)^{ab} & 2.14 (1.05)^b & \begin{array}{c} F(2,205)=3.77, \\ p=.03 \\ \hline & \end{tabular} & 1.69 (.92)^a & 1.53 (.91)^a & 3.28 (1.08)^{b,c} & 3.08 (1.23)^c & \begin{array}{c} F(4,628)=12.41, \\ p001 \\ \hline & \end{tabular} & 1.34 (.80)^a & 1.53 (.91)^a & 1.58 (.97)^a & 2.01 (1.25)^b & \begin{array}{c} F(4,628)=10.77, \\ p001 \\ \hline & \end{tabular} & 1.34 (.80)^a & 1.53 (.91)^a & 1.58 (.97)^a & 2.01 (1.25)^b & \begin{array}{c} F(4,628)=10.77, \\ p001 \\ \hline & \end{tabular} & 1.34 (.80)^a & 1.53 (.91)^a & 1.58 (.97)^a & 2.05 (1.26)^b & \begin{array}{c} F(4,628)=10.77, \\ p001 \\ \hline & \end{tabular} & 1.34 (.80)^a & 1.53 (.91)^a & 1.58 (.97)^a & 2.05 (1.26)^b & \begin{array}{c} F(4,628)=10.77, \\ p001 \\ \hline & \end{tabular} & 1.34 (.61)^a & 1.53 (.91)^a & 1.58 (.97)^a & 2.05 (1.26)^b & \begin{array}{c} F(4,628)=10.77, \\ p001 \\ \hline & \end{tabular} & 1.34 (.61)^a & 1.53 (.91)^a & 1.58 (.97)^a & 2.05 (1.26)^b & \begin{array}{c} F(4,628)=10.77, \\ p001 \\ \hline & \end{tabular} & 1.34 (.76)^a & 1.37 (.69)^a & 1.47 (.85)^a & 2.05 (1.26)^b & \begin{array}{c} F(4,628)=13.57, \\ p001 \\ \hline & \end{tabular} & 1.34 (.76)^a & 1.37 (.69)^a & 1.47 (.43)^a & 1.71 (1.02)^b & \begin{array}{c} F(4,628)=12.67, \\ p001 \\ \hline & \end{tabular} & 1.34 (.76)^a & 1.37 (.69)^a & 1.34 (.74)^a & 1.71 (1.02)^b & \begin{array}{c} F(4,628)=11.67, \\ p001 \\ \hline & \end{tabular} & 1.35 (.61$	Study 1						
Good $3.72 (.93)^{\circ}$ $3.65 (.84)^{\circ}$ $3.23 (1.15)^{\circ}$ $p=.01$ Bad $1.51 (.89)^{\circ}$ $1.63 (.90)^{\circ}$ $2.16 (1.11)^{\circ}$ $F(2.205)=8.85$, $p<.001$ Unfriendly $4.01 (1.04)^{\circ}$ $3.72 (.88)^{\circ b}$ $3.46 (1.11)^{\circ}$ $F(2.205)=5.67$, $p<.001$ Unfriendly $1.39 (.78)^{\circ}$ $1.57 (.85)^{\circ b}$ $1.91 (1.10)^{\circ}$ $F(2.205)=5.73$, $p<.001$ Angry $1.42 (.77)^{\circ}$ $1.50 (.80)^{\circ}$ $1.93 (0.98)^{\circ}$ $F(2.205)=7.37$, $p<.001$ Pleasant $3.75 (.97)^{\circ}$ $3.60 (.88)^{\circ b}$ $3.28 (1.03)^{\circ}$ $F(2.205)=4.40$, $p=.01$ Happy $3.59 (.98)^{\circ}$ $3.49 (.94)^{\circ b}$ $3.20 (1.02)^{\circ}$ $F(2.205)=3.77$, $p=.03$ Sad $1.69 (.92)^{\circ}$ $1.87 (.99)^{\circ b}$ $2.14 (1.05)^{\circ}$ $F(2.205)=3.77$, $p=.03$ Study 2 0 0 0 0 0 0 0 Friendly $3.69 (1.00)^{\circ}$ $3.52 (1.01)^{\circ}$ $3.28 (1.08)^{\circ c}$ $3.08 (1.23)^{\circ}$ $F(4,628)=12.41$, $p<.001$ Friendly $3.89 (.97)^{\circ}$ $3.69 (1.00)^{\circ}$ $3.52 (1.01)^{\circ}$ $3.28 (1.08)^{\circ c}$ $3.08 (1.23)^{\circ}$ $F(4,628)=17.50$, $p<.001$ Unfriendly $1.34(081)^{\circ}$ $1.34(.80)^{\circ}$ $1.53(.91)^{\circ}$ $3.18(1.12)^{\circ}$ $2.06(1.24)^{\circ}$ $F(4,628)=17.50$, $p<.001$ Unfriendly $1.26(.62)^{\circ}$ $1.34(.76)^{\circ}$ $1.37(.69)^{\circ}$ $1.47(.85)^{\circ}$ $2.05(1.26)^{\circ}$ $F(4,628)=13.57$, $p<.001$ Unfriendly $1.26(.62)^{\circ}$ $1.34(.76)^{\circ}$ $1.37(.69)^{\circ}$ <td>Card</td> <td></td> <td>2 72 (02)3</td> <td></td> <td>2 (5 (0 4))</td> <td>2 22 /4 45)b</td> <td>F(2,205)=4.95,</td>	Card		2 72 (02)3		2 (5 (0 4))	2 22 /4 45)b	F(2,205)=4.95,
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Good		3.72 (.93)*		3.65 (.84)°	3.23 (1.15)	<i>p</i> =.01
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Bad		1 51 (89)ª		1 63 (90)ª	2 16 (1 11) ^b	F(2,205)=8.85,
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	buu		1.51 (.05)		1.00 (2.10 (1.11)	<i>p</i> <.001
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Friendly		4.01 (1.04)ª		3.72 (.88) ^{a.b}	3.46 (1.11) ^b	F(2,205)=5.67,
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$							p<.001
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Unfriendly		1.39 (.78)ª		1.57 (.85) ^{a,b}	1.91 (1.10) ^b	r(2,203)=3.73, n<.001
Angry $1.42 (.77)^a$ $1.50 (.80)^a$ $1.93 (0.98)^a$ $1.92 (0.98)^a$ $1.92 (0.01)^a$ Pleasant $3.75 (.97)^a$ $3.60 (.88)^{a,b}$ $3.28 (1.03)^b$ $F(2,205)=4.40, p=.01$ Happy $3.59 (.98)^a$ $3.49 (.94)^{a,b}$ $3.20 (1.02)^b$ $F(2,205)=2.92, p=.056$ Sad $1.69 (.92)^a$ $1.87 (.99)^{a,b}$ $2.14 (1.05)^b$ $F(2,205)=3.77, p=.036$ Over-InclIncludedNo ExposureOstracizedRejectedStudy 2 $3.89 (.97)^a$ $3.69 (1.00)^a$ $3.52 (1.01)^b$ $3.28 (1.08)^{b,c}$ $3.08 (1.23)^c$ $F(4,628)=12.41, p<0.001$ Bad $1.34(081)^a$ $1.34(.80)^a$ $1.53(.91)^a$ $1.58(.97)^a$ $2.01(1.25)^b$ $F(4,628)=10.77, p<0.001$ Friendly $3.85 (.99)^a$ $3.80(1.06)^a$ $3.56 (.97)^a$ $3.18(1.12)^a$ $2.96(1.24)^b$ $F(4,628)=13.50, p<0.001$ Unfriendly $1.26 (.62)^a$ $1.34 (.76)^a$ $1.37 (.69)^a$ $1.47 (.85)^a$ $2.05 (1.26)^b$ $F(4,628)=13.57, p<0.001$ Pleasant $3.85 (.94)^a$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^c$ $F(4,628)=11.60, p<0.001$ Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^d$ $F(4,628)=11.46, p<0.001$ F(4,628)^a $1.45 (.88)^a$ $1.55 (.96)^a$ $1.58 (.01)^a$ $2.02 (1.19)^b$ $F(4,628)=8.46, p<0.001$							F(2,205)=7.07,
Pleasant Happy $3.75 (.97)^a$ $3.60 (.88)^{a,b}$ $3.28 (1.03)^b$ $F(2,205)=4.40, p=.01$ $p=.01$ Happy $3.59 (.98)^a$ $3.49 (.94)^{a,b}$ $3.20 (1.02)^b$ $F(2,205)=2.92, p=.056$ $p=.056$ Sad $1.69 (.92)^a$ $1.87 (.99)^{a,b}$ $2.14 (1.05)^b$ $F(2,205)=3.77, p=.03$ Over-InclIncludedNo ExposureOstracizedRejectedStudy 2 $1.34 (081)^a$ $1.59 (.100)^a$ $3.52 (1.01)^b$ $3.28 (1.08)^{b,c}$ $3.08 (1.23)^c$ $F(4,628)=12.41, p<.001$ Bad $1.34(081)^a$ $1.34(.80)^a$ $1.53 (.91)^a$ $1.58 (.97)^a$ $2.01 (1.25)^b$ $F(4,628)=10.77, p<.001$ Friendly $3.85 (.99)^a$ $3.80 (1.06)^a$ $3.56 (.97)^a$ $3.18 (1.12)^a$ $2.96 (1.24)^b$ $F(4,628)=17.50, p<.001$ Unfriendly $1.26 (.62)^a$ $1.34 (.76)^a$ $1.37 (.69)^a$ $1.47 (.85)^a$ $2.05 (1.26)^b$ $F(4,628)=13.57, p<.001$ Pleasant $3.85 (.94)^a$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^c$ $F(4,628)=11.60, p<.001$ Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^d$ $F(4,628)=11.46, p<.001$ Sad $1.39 (.88)^a$ $1.45 (.88)^a$ $1.55 (.96)^a$ $1.58 (.01)^a$ $2.02 (1.19)^b$ $F(4,628)=11.46, p<.001$	Angry		1.42 (.77)ª		1.50 (.80)ª	1.93 (0.98)	p<.001
Headaint $3.75 (.57)$ $3.60 (.50)$ $5.26 (.1.03)$ $p=.01$ Happy $3.59 (.98)^a$ $3.49 (.94)^{a,b}$ $3.20 (1.02)^b$ $F(2,205)=2.92, p=.056$ Sad $1.69 (.92)^a$ $1.87 (.99)^{a,b}$ $2.14 (1.05)^b$ $F(2,205)=3.77, p=.03$ Over-InclIncludedNo ExposureOstracizedRejectedStudy 2Good $3.89 (.97)^a$ $3.69 (1.00)^a$ $3.52 (1.01)^b$ $3.28 (1.08)^{b,c}$ $3.08 (1.23)^c$ $F(4,628)=12.41, p<.001$ Bad $1.34(081)^a$ $1.34(.80)^a$ $1.53(.91)^a$ $1.58(.97)^a$ $2.01(1.25)^b$ $F(4,628)=10.77, p<.001$ Friendly $3.85 (.99)^a$ $3.80(1.06)^a$ $3.56 (.97)^a$ $3.18(1.12)^a$ $2.96(1.24)^b$ $F(4,628)=17.50, p<.001$ Unfriendly $1.26 (.62)^a$ $1.34 (.76)^a$ $1.37 (.69)^a$ $1.47 (.85)^a$ $2.05 (1.26)^b$ $F(4,628)=17.50, p<.001$ Angry $1.15 (.48)^a$ $1.23 (.61)^a$ $1.25 (.62)^a$ $1.34 (.74)^a$ $1.71 (1.02)^b$ $F(4,628)=12.67, p<.001$ Pleasant $3.85 (.94)^a$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^c$ $F(4,628)=11.60, p<.001$ Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^d$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(1.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46, p<.001$	Pleasant		3 75 (97)ª		3 60 (88) ^{a,b}	3 28 (1 03)b	F(2,205)=4.40,
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	ricusuite		3.75 (.57)		5.00 (.00)	5.20 (1.05)	<i>p</i> =.01
Sad1.69 (.92) ^a 1.87 (.99) ^{a,b} 2.14 (1.05) ^b $p=.036$ Sudy 2Over-InclIncludedNo ExposureOstracizedRejectedStudy 2Good $3.89 (.97)^a$ $3.69 (1.00)^a$ $3.52 (1.01)^b$ $3.28 (1.08)^{b,c}$ $3.08 (1.23)^c$ $F(4,628)=12.41, p<.001$ Bad $1.34(081)^a$ $1.34(.80)^a$ $1.53(.91)^a$ $1.58(.97)^a$ $2.01(1.25)^b$ $F(4,628)=10.77, p<.001$ Friendly $3.85(.99)^a$ $3.80(1.06)^a$ $3.56(.97)^a$ $3.18(1.12)^a$ $2.96(1.24)^b$ $F(4,628)=17.50, p<.001$ Unfriendly $1.26(.62)^a$ $1.34(.76)^a$ $1.37(.69)^a$ $1.47(.85)^a$ $2.05(1.26)^b$ $F(4,628)=18.57, p<.001$ Pleasant $3.85 (.94)^a$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^c$ $F(4,628)=11.60, p<.001$ Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^d$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(1.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46, p<.001$	Нарру		3.59 (.98)ª		3.49 (.94) ^{a,b}	3.20 (1.02) ^b	F(2,205)=2.92,
Sad $1.69 (.92)^a$ $1.87 (.99)^{a,b}$ $2.14 (1.05)^b$ $P(2,205)=3.77, p=.03$ Over-InclIncludedNo ExposureOstracizedRejectedStudy 2Good $3.89 (.97)^a$ $3.69 (1.00)^a$ $3.52 (1.01)^b$ $3.28 (1.08)^{b,c}$ $3.08 (1.23)^c$ $F(4,628)=12.41, p<.001$ Bad $1.34(081)^a$ $1.34(.80)^a$ $1.53(.91)^a$ $1.58(.97)^a$ $2.01(1.25)^b$ $F(4,628)=10.77, p<.001$ Friendly $3.85(.99)^a$ $3.80(1.06)^a$ $3.56(.97)^a$ $3.18(1.12)^a$ $2.96(1.24)^b$ $F(4,628)=17.50, p<.001$ Unfriendly $1.26(.62)^a$ $1.34(.76)^a$ $1.37(.69)^a$ $1.47(.85)^a$ $2.05(1.26)^b$ $F(4,628)=18.57, p<.001$ Angry $1.15 (.48)^a$ $1.23 (.61)^a$ $1.25 (.62)^a$ $1.34 (.74)^a$ $1.71 (1.02)^b$ $F(4,628)=12.67, p<.001$ Pleasant $3.85 (.94)^a$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^c$ $F(4,628)=11.46, p<.001$ Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{cd}$ $2.93 (1.26)^d$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46, p<.001$,		, ,		. ,	. ,	p=.056
Over-InclIncludedNo ExposureOstracizedRejectedStudy 2Good $3.89 (.97)^a$ $3.69 (1.00)^a$ $3.52 (1.01)^b$ $3.28 (1.08)^{b,c}$ $3.08 (1.23)^c$ $F(4,628)=12.41, p<.001$ Bad $1.34(081)^a$ $1.34(.80)^a$ $1.53(.91)^a$ $1.58(.97)^a$ $2.01(1.25)^b$ $F(4,628)=10.77, p<.001$ Friendly $3.85(.99)^a$ $3.80(1.06)^a$ $3.56(.97)^a$ $3.18(1.12)^a$ $2.96(1.24)^b$ $F(4,628)=17.50, p<.001$ Unfriendly $1.26(.62)^a$ $1.34(.76)^a$ $1.37(.69)^a$ $1.47(.85)^a$ $2.05(1.26)^b$ $F(4,628)=18.57, p<.001$ Angry $1.15 (.48)^a$ $1.23 (.61)^a$ $1.25 (.62)^a$ $1.34 (.74)^a$ $1.71 (1.02)^b$ $F(4,628)=12.67, p<.001$ Pleasant $3.85 (.94)^a$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^c$ $F(4,628)=11.60, p<.001$ Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^d$ $F(4,628)=8.46, p<.001$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46, p<.001$	Sad	1.69 (.92) ^a			1.87 (.99) ^{a,b}	2.14 (1.05) ^b	F(2,205)=3.77,
Over-InclIncludedNo ExposureOstracizedRejectedStudy 2Good $3.89 (.97)^a$ $3.69 (1.00)^a$ $3.52 (1.01)^b$ $3.28 (1.08)^{b,c}$ $3.08 (1.23)^c$ $F(4,628)=12.41, p<.001$ Bad $1.34(081)^a$ $1.34(.80)^a$ $1.53(.91)^a$ $1.58(.97)^a$ $2.01(1.25)^b$ $F(4,628)=10.77, p<.001$ Friendly $3.85(.99)^a$ $3.80(1.06)^a$ $3.56(.97)^a$ $3.18(1.12)^a$ $2.96(1.24)^b$ $F(4,628)=17.50, p<.001$ Unfriendly $1.26(.62)^a$ $1.34(.76)^a$ $1.37(.69)^a$ $1.47(.85)^a$ $2.05(1.26)^b$ $F(4,628)=18.57, p<.001$ Angry $1.15 (.48)^a$ $1.23 (.61)^a$ $1.25 (.62)^a$ $1.34 (.74)^a$ $1.71 (1.02)^b$ $F(4,628)=12.67, p<.001$ Pleasant $3.85 (.94)^a$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^c$ $F(4,628)=11.60, p<.001$ Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^b$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(1.01)^a$ $2.02(1.19)^b$ $F(4,628)=11.46, p<.001$							p=.03
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Good $3.89 (.97)^a$ $3.69 (1.00)^a$ $3.52 (1.01)^a$ $3.28 (1.08)^{abc}$ $3.08 (1.23)^a$ $p < .001$ Bad $1.34(081)^a$ $1.34(.80)^a$ $1.53(.91)^a$ $1.58(.97)^a$ $2.01(1.25)^b$ $F(4,628)=10.77, p < .001$ Friendly $3.85(.99)^a$ $3.80(1.06)^a$ $3.56(.97)^a$ $3.18(1.12)^a$ $2.96(1.24)^b$ $F(4,628)=17.50, p < .001$ Unfriendly $1.26(.62)^a$ $1.34(.76)^a$ $1.37(.69)^a$ $1.47(.85)^a$ $2.05(1.26)^b$ $F(4,628)=18.57, p < .001$ Angry $1.15 (.48)^a$ $1.23 (.61)^a$ $1.25 (.62)^a$ $1.34 (.74)^a$ $1.71 (1.02)^b$ $F(4,628)=12.67, p < .001$ Pleasant $3.85 (.94)^a$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^c$ $F(4,628)=11.60, p < .001$ Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^d$ $F(4,628)=11.46, p < .001$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(1.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46, p < .001$	Study 2	Over-Incl	Included	No Exposure	Ostracized	Rejected	
Bad $1.34(081)^a$ $1.34(.80)^a$ $1.53(.91)^a$ $1.58(.97)^a$ $2.01(1.25)^b$ $F(4,628)=10.77, p<.001$ Friendly $3.85(.99)^a$ $3.80(1.06)^a$ $3.56(.97)^a$ $3.18(1.12)^a$ $2.96(1.24)^b$ $F(4,628)=17.50, p<.001$ Unfriendly $1.26(.62)^a$ $1.34(.76)^a$ $1.37(.69)^a$ $1.47(.85)^a$ $2.05(1.26)^b$ $F(4,628)=18.57, p<.001$ Angry $1.15(.48)^a$ $1.23(.61)^a$ $1.25(.62)^a$ $1.34(.74)^a$ $1.71(1.02)^b$ $F(4,628)=12.67, p<.001$ Pleasant $3.85(.94)^a$ $3.66(1.04)^{a,b}$ $3.58(1.10)^{a,b}$ $3.35(1.12)^{b,c}$ $3.02(1.25)^c$ $F(4,628)=11.60, p<.001$ Happy $3.74(.97)^a$ $3.54(1.06)^{a,b}$ $3.37(1.14)^{b,c}$ $3.11(1.13)^{c,d}$ $2.93(1.26)^d$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(1.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46, p<.001$	Study 2	Over-Incl	Included	No Exposure	Ostracized	Rejected	F(4,628)=12.41,
Friendly $3.85(.99)^{a}$ $3.80(1.06)^{a}$ $3.56(.97)^{a}$ $3.18(1.12)^{a}$ $2.96(1.24)^{b}$ $F(4,628)=17.50, p<.001$ Unfriendly $1.26(.62)^{a}$ $1.34(.76)^{a}$ $1.37(.69)^{a}$ $1.47(.85)^{a}$ $2.05(1.26)^{b}$ $F(4,628)=18.57, p<.001$ Angry $1.15(.48)^{a}$ $1.23(.61)^{a}$ $1.25(.62)^{a}$ $1.34(.74)^{a}$ $1.71(1.02)^{b}$ $F(4,628)=12.67, p<.001$ Pleasant $3.85(.94)^{a}$ $3.66(1.04)^{a,b}$ $3.58(1.10)^{a,b}$ $3.35(1.12)^{b,c}$ $3.02(1.25)^{c}$ $F(4,628)=11.60, p<.001$ Happy $3.74(.97)^{a}$ $3.54(1.06)^{a,b}$ $3.37(1.14)^{b,c}$ $3.11(1.13)^{c,d}$ $2.93(1.26)^{d}$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^{a}$ $1.45(.88)^{a}$ $1.55(.96)^{a}$ $1.58(1.01)^{a}$ $2.02(1.19)^{b}$ $F(4,628)=8.46, p<.001$	Study 2 Good	Over-Incl 3.89 (.97) ^a	Included 3.69 (1.00)ª	No Exposure 3.52 (1.01) ^b	Ostracized 3.28 (1.08) ^{b,c}	Rejected 3.08 (1.23) ^c	F(4,628)=12.41, p<.001
Friendly $3.85(.99)^a$ $3.80(1.06)^a$ $3.56(.97)^a$ $3.18(1.12)^a$ $2.96(1.24)^b$ $F(4,628)=17.50, p<.001$ Unfriendly $1.26(.62)^a$ $1.34(.76)^a$ $1.37(.69)^a$ $1.47(.85)^a$ $2.05(1.26)^b$ $F(4,628)=18.57, p<.001$ Angry $1.15(.48)^a$ $1.23(.61)^a$ $1.25(.62)^a$ $1.34(.74)^a$ $1.71(1.02)^b$ $F(4,628)=12.67, p<.001$ Pleasant $3.85(.94)^a$ $3.66(1.04)^{a,b}$ $3.58(1.10)^{a,b}$ $3.35(1.12)^{b,c}$ $3.02(1.25)^c$ $F(4,628)=11.60, p<.001$ Happy $3.74(.97)^a$ $3.54(1.06)^{a,b}$ $3.37(1.14)^{b,c}$ $3.11(1.13)^{c,d}$ $2.93(1.26)^d$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(1.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46, p<.001$	Study 2 Good Bad	Over-Incl 3.89 (.97) ^a 1.34(081) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b	F(4,628)=12.41, p<.001 F(4,628)=10.77,
Unfriendly $1.26(.62)^{a}$ $1.34(.76)^{a}$ $1.37(.69)^{a}$ $1.47(.85)^{a}$ $2.05(1.26)^{b}$ $F(4,628)=18.57, p<.001$ Angry $1.15(.48)^{a}$ $1.23(.61)^{a}$ $1.25(.62)^{a}$ $1.34(.74)^{a}$ $1.71(1.02)^{b}$ $F(4,628)=12.67, p<.001$ Pleasant $3.85(.94)^{a}$ $3.66(1.04)^{a,b}$ $3.58(1.10)^{a,b}$ $3.35(1.12)^{b,c}$ $3.02(1.25)^{c}$ $F(4,628)=11.60, p<.001$ Happy $3.74(.97)^{a}$ $3.54(1.06)^{a,b}$ $3.37(1.14)^{b,c}$ $3.11(1.13)^{c,d}$ $2.93(1.26)^{d}$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^{a}$ $1.45(.88)^{a}$ $1.55(.96)^{a}$ $1.58(1.01)^{a}$ $2.02(1.19)^{b}$ $F(4,628)=8.46, p<.001$	Study 2 Good Bad	Over-Incl 3.89 (.97) ^a 1.34(081) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001
Unfriendly $1.26(.62)^{a}$ $1.34(.76)^{a}$ $1.37(.69)^{a}$ $1.47(.85)^{a}$ $2.05(1.26)^{b}$ $f(4,020) = 10.37, p < .001$ Angry $1.15 (.48)^{a}$ $1.23 (.61)^{a}$ $1.25 (.62)^{a}$ $1.34 (.74)^{a}$ $1.71 (1.02)^{b}$ $F(4,628)=12.67, p < .001$ Pleasant $3.85 (.94)^{a}$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^{c}$ $F(4,628)=11.60, p < .001$ Happy $3.74 (.97)^{a}$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^{d}$ $F(4,628)=11.46, p < .001$ Sad $1.39(.88)^{a}$ $1.45(.88)^{a}$ $1.55(.96)^{a}$ $1.58(1.01)^{a}$ $2.02(1.19)^{b}$ $F(4,628)=8.46, p < .001$	Study 2 Good Bad Friendly	Over-Incl 3.89 (.97) ^a 1.34(081) ^a 3.85(.99) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a 3.80(1.06) ^a	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a 3.56(.97) ^a	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a 3.18(1.12) ^a	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b 2.96(1.24) ^b	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001 F(4,628)=17.50, p<001
Angry $1.15 (.48)^{a}$ $1.23 (.61)^{a}$ $1.25 (.62)^{a}$ $1.34 (.74)^{a}$ $1.71 (1.02)^{b}$ $F(4,628)=12.67, p<.001$ Pleasant $3.85 (.94)^{a}$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^{c}$ $F(4,628)=11.60, p<.001$ Happy $3.74 (.97)^{a}$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^{d}$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^{a}$ $1.45(.88)^{a}$ $1.55(.96)^{a}$ $1.58(1.01)^{a}$ $2.02(1.19)^{b}$ $F(4,628)=8.46, p<.001$	Study 2 Good Bad Friendly	Over-Incl 3.89 (.97) ^a 1.34(081) ^a 3.85(.99) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a 3.80(1.06) ^a	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a 3.56(.97) ^a	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a 3.18(1.12) ^a	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b 2.96(1.24) ^b	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001 F(4,628)=17.50, p<.001 F(4,628)=18.57
Angry1.15 (.48)a1.23 (.61)a1.25 (.62)a1.34 (.74)a1.71 (1.02)b $p < .001$ Pleasant $3.85 (.94)a$ $3.66 (1.04)a,b$ $3.58 (1.10)a,b$ $3.35 (1.12)b,c$ $3.02 (1.25)c$ $F(4,628)=11.60, p < .001$ Happy $3.74 (.97)a$ $3.54 (1.06)a,b$ $3.37 (1.14)b,c$ $3.11 (1.13)c,d$ $2.93 (1.26)d$ $F(4,628)=11.46, p < .001$ Sad $1.39(.88)a$ $1.45(.88)a$ $1.55(.96)a$ $1.58(1.01)a$ $2.02(1.19)b$ $F(4,628)=8.46, p < .001$	Study 2 Good Bad Friendly Unfriendly	Over-Incl 3.89 (.97) ^a 1.34(081) ^a 3.85(.99) ^a 1.26(.62) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a 3.80(1.06) ^a 1.34(.76) ^a	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a 3.56(.97) ^a 1.37(.69) ^a	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a 3.18(1.12) ^a 1.47(.85) ^a	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b 2.96(1.24) ^b 2.05(1.26) ^b	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001 F(4,628)=17.50, p<.001 F(4,628)=18.57, p<.001
Pleasant $3.85 (.94)^a$ $3.66 (1.04)^{a,b}$ $3.58 (1.10)^{a,b}$ $3.35 (1.12)^{b,c}$ $3.02 (1.25)^c$ $F(4,628)=11.60, p<.001$ Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^d$ $F(4,628)=11.46, p<.001$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(1.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46, p<.001$	Study 2 Good Bad Friendly Unfriendly	Over-Incl 3.89 (.97) ^a 1.34(081) ^a 3.85(.99) ^a 1.26(.62) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a 3.80(1.06) ^a 1.34(.76) ^a	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a 3.56(.97) ^a 1.37(.69) ^a	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a 3.18(1.12) ^a 1.47(.85) ^a	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b 2.96(1.24) ^b 2.05(1.26) ^b	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001 F(4,628)=17.50, p<.001 F(4,628)=18.57, p<.001 F(4,628)=12.67,
Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^d$ $F(4,628)=11.46,$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(1.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46,$	Study 2 Good Bad Friendly Unfriendly Angry	Over-Incl 3.89 (.97) ^a 1.34(081) ^a 3.85(.99) ^a 1.26(.62) ^a 1.15 (.48) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a 3.80(1.06) ^a 1.34(.76) ^a 1.23 (.61) ^a	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a 3.56(.97) ^a 1.37(.69) ^a 1.25 (.62) ^a	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a 3.18(1.12) ^a 1.47(.85) ^a 1.34 (.74) ^a	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b 2.96(1.24) ^b 2.05(1.26) ^b 1.71 (1.02) ^b	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001 F(4,628)=17.50, p<.001 F(4,628)=18.57, p<.001 F(4,628)=12.67, p<.001
Happy $3.74 (.97)^a$ $3.54 (1.06)^{a,b}$ $3.37 (1.14)^{b,c}$ $3.11 (1.13)^{c,d}$ $2.93 (1.26)^d$ $F(4,628)=11.46,$ Sad $1.39(.88)^a$ $1.45(.88)^a$ $1.55(.96)^a$ $1.58(1.01)^a$ $2.02(1.19)^b$ $F(4,628)=8.46,$	Study 2 Good Bad Friendly Unfriendly Angry Pleasant	Over-Incl 3.89 (.97) ^a 1.34(081) ^a 3.85(.99) ^a 1.26(.62) ^a 1.15 (.48) ^a 3.85 (.94) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a 3.80(1.06) ^a 1.34(.76) ^a 1.23 (.61) ^a 3.66 (1.04) ^{a,b}	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a 3.56(.97) ^a 1.37(.69) ^a 1.25 (.62) ^a 3.58 (1.10) ^{a,b}	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a 3.18(1.12) ^a 1.47(.85) ^a 1.34 (.74) ^a 3.35 (1.12) ^{b,c}	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b 2.96(1.24) ^b 2.05(1.26) ^b 1.71 (1.02) ^b 3.02 (1.25) ^c	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001 F(4,628)=17.50, p<.001 F(4,628)=18.57, p<.001 F(4,628)=12.67, p<.001 F(4,628)=11.60,
Sad $1.39(.88)^{a}$ $1.45(.88)^{a}$ $1.55(.96)^{a}$ $1.58(1.01)^{a}$ $2.02(1.19)^{b}$ $F(4,628)=8.46,$	Study 2 Good Bad Friendly Unfriendly Angry Pleasant	Over-Incl 3.89 (.97) ^a 1.34(081) ^a 3.85(.99) ^a 1.26(.62) ^a 1.15 (.48) ^a 3.85 (.94) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a 3.80(1.06) ^a 1.34(.76) ^a 1.23 (.61) ^a 3.66 (1.04) ^{a,b}	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a 3.56(.97) ^a 1.37(.69) ^a 1.25 (.62) ^a 3.58 (1.10) ^{a,b}	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a 3.18(1.12) ^a 1.47(.85) ^a 1.34 (.74) ^a 3.35 (1.12) ^{b,c}	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b 2.96(1.24) ^b 2.05(1.26) ^b 1.71 (1.02) ^b 3.02 (1.25) ^c	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001 F(4,628)=17.50, p<.001 F(4,628)=18.57, p<.001 F(4,628)=12.67, p<.001 F(4,628)=11.60, p<.001
Sad $1.39(.88)^{\circ}$ $1.45(.88)^{\circ}$ $1.55(.96)^{\circ}$ $1.58(1.01)^{\circ}$ $2.02(1.19)^{\circ}$	Study 2 Good Bad Friendly Unfriendly Angry Pleasant Happy	Over-Incl 3.89 (.97) ^a 1.34(081) ^a 3.85(.99) ^a 1.26(.62) ^a 1.15 (.48) ^a 3.85 (.94) ^a 3.74 (.97) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a 3.80(1.06) ^a 1.34(.76) ^a 1.23 (.61) ^a 3.66 (1.04) ^{a,b} 3.54 (1.06) ^{a,b}	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a 3.56(.97) ^a 1.37(.69) ^a 1.25 (.62) ^a 3.58 (1.10) ^{a,b} 3.37 (1.14) ^{b,c}	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a 3.18(1.12) ^a 1.47(.85) ^a 1.34 (.74) ^a 3.35 (1.12) ^{b,c} 3.11 (1.13) ^{c,d}	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b 2.96(1.24) ^b 2.05(1.26) ^b 1.71 (1.02) ^b 3.02 (1.25) ^c 2.93 (1.26) ^d	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001 F(4,628)=17.50, p<.001 F(4,628)=18.57, p<.001 F(4,628)=12.67, p<.001 F(4,628)=11.60, p<.001 F(4,628)=11.46, p<.001
08.001	Study 2 Good Bad Friendly Unfriendly Angry Pleasant Happy	Over-Incl 3.89 (.97) ^a 1.34(081) ^a 3.85(.99) ^a 1.26(.62) ^a 1.15 (.48) ^a 3.85 (.94) ^a 3.74 (.97) ^a	Included 3.69 (1.00) ^a 1.34(.80) ^a 3.80(1.06) ^a 1.34(.76) ^a 1.23 (.61) ^a 3.66 (1.04) ^{a,b} 3.54 (1.06) ^{a,b}	No Exposure 3.52 (1.01) ^b 1.53(.91) ^a 3.56(.97) ^a 1.37(.69) ^a 1.25 (.62) ^a 3.58 (1.10) ^{a,b} 3.37 (1.14) ^{b,c}	Ostracized 3.28 (1.08) ^{b,c} 1.58(.97) ^a 3.18(1.12) ^a 1.47(.85) ^a 1.34 (.74) ^a 3.35 (1.12) ^{b,c} 3.11 (1.13) ^{c,d}	Rejected 3.08 (1.23) ^c 2.01(1.25) ^b 2.96(1.24) ^b 2.05(1.26) ^b 1.71 (1.02) ^b 3.02 (1.25) ^c 2.93 (1.26) ^d	F(4,628)=12.41, p<.001 F(4,628)=10.77, p<.001 F(4,628)=17.50, p<.001 F(4,628)=18.57, p<.001 F(4,628)=12.67, p<.001 F(4,628)=11.60, p<.001 F(4,628)=11.46, p<.001

Mood Measures for each Induction Group

APPENDIX C: PERCEPTIONS OF BASIC PSYCHOLOGICAL NEEDS BY INDUCTION CONDITION

The stimuli pilot showed that story manipulations were perceived to represent relatedness and wealth as intended. However the low semantic affinity stories (high in wealth and low in relatedness) were also being rated highly in competence and autonomy.

Given that the ostracism induction may make some needs particularly salient to people, we therefore test perceptions of these needs in all stories by induction condition. For example, would participants who have recently been rejected perceive more or less relatedness or autonomy than other groups?

In both studies, perceptions of needs in the stories did not differ by induction condition. Since participants rated stories as having a similar portrayals of these needs across conditions, any differences observed in story appeal will be due to the appeal of these needs in content rather than their perceived presence.

		Included		Ostracized	Rejected	
Study 1					•	
Relatedness		4.99 (1.94)		5.08 (1.73)	5.00 (1.85)	F(2,827)=0.23, p=.80
Autonomy		5.54 (1.32)		5.40 (1.23)	5.33 (1.34)	F(2,827)=1.90, p=.15
Competence		4.70 (1.44)		4.45 (1.60)	4.58 (1.53)	F(2,827)=1.88, p=.15
			No			
	Over-Incl	Included	Exposure	Ostracized	Rejected	
Study 2						
Relatedness	5.02 (2.01)	5.00 (2.00)	4.97 (1.93)	5.03 (1.87)	5.00 (1.96)	F(4,2527)=.07, p=.99
Autonomy	4.72 (1.52)	4.64 (1.58)	4.78 (1.55)	4.73 (1.49)	4.80 (1.58)	F(4,2527)=1.50, p=.20
Competence	5.11 (1.55)	4.95 (1.55)	4.99 (1.55)	4.89 (1.57)	5.06 (1.58)	<i>F</i> (4,2527)=.80, <i>p</i> =.53
Wealth	4.52	4.59 (2.12)	4.50 (2.07)	4.47(2.06)	4.46 (2.14)	F(4,2527)=.28, p=.89

Table C1

Perceptions of basic needs in the narratives for each induction group (M & SD)

Note. 1-5 Likert scale. Relatedness is an average of two items (one about desiring connection with others and one about building relationships), all other motives are single items. Wealth item was added in Study 2. Degrees of freedom reflect the fact that each participant rated multiple stories.

APPENDIX D: DELIBERATION TIME RESULTS

The initial proposal for this project included a research question about the deliberation time associated with the two choices participants were asked to make: which film they would like to see, and with whom they would like to share this choice. The experience of social need threat may have impacted the speed with which decisions were made and therefore selected.

To test this idea, browsers passively captured time-to-click for each of these choices in both Study 1 and Study 2. This is measured as the number of seconds from when the choice is presented (either stories or audiences) until the page is submitted.

This metric will include reading time of the prompts and options, but page content and prompt length were consistent across audiences, and any individual variance in reading speed will be randomized across conditions and just contribute additional error variance.

Study 1 shows no differences between groups. However, the additional conditions in Study 2 demonstrated some interesting differences.

When choosing stories, people who have been recently over-included were selecting their stories more quickly than the no exposure control group., By contrast, when choosing sharing audiences, rejected people are significantly faster at choosing their preferred audience than either over-included people or the no induction group. This suggests that people who have received the positive mood boost of being well-liked are faster at choosing narrative content, but people under threat are faster in selecting with whom they would like to connect.

		Included		Ostracized	Rejected	
Study 1						
Story Choice		101.11		98.44	91.01	F(2,205)=.71,
		(56.30)		(56.30)	(40.19)	<i>p=</i> .49
Sharing Audience		17.74		17.22	17.41	F(2,205)=.10,
		(7.63)		(7.42)	(7.62)	<i>p</i> =.90
	Over-Incl	Included	No Exposure	Ostracized	Rejected	
Study 2						
Story Choice	104.33ª	119.26 ^{a,b}	138.63 ^b	107.00 ^{a,b}	108.57 ^{a,b}	F(4,2527)=3.02,
	(73.52)	(101.25)	(73.62)	(88.78)	(74.07)	<i>p</i> =.02
Sharing Audience	22.34ª	18.73 ^{a,b}	24.25 ^a	19.77 ^{a,b}	13.77 ^b	F(4,2527)=2.92,
	(30.17)	(14.16)	(38.27)	(21.91)	(7.00)	<i>p=</i> .02

Table D1

	Time to selection b	v induction	condition in	seconds	(Mean 8	(SD
--	---------------------	-------------	--------------	---------	---------	-----

APPENDIX E: SURVEY INSTRUMENT

Notes:

- Participants were randomized to Ostracism Online induction condition after the initial instruction block.
- Story content was randomized without replacement so that the field codes corresponded to (a) a randomly assigned protagonist and (b) each of the four affinity combinations in a random order, distributed across all four story stems.
- Mild deception was used (with IRB approval) to mask this study as two projects, one about the social media activity (the ostracism induction), and one about movie ratings. Participants were debriefed upon completion.
- In Study 2, the order of the story items and social-sharing items were counterbalanced.
 This slightly altered the wording of the social-sharing instructions. Both versions are included below.

Start of Block: Instructions_—Pulls out to Ostracism Online Induction activity

Today you will take part in two brief studies. Each one will take 10 minutes.

In the first study, you will join a group of other people in an online task.

The interface connecting you to the other users is hosted on a separate webpage, but **you will need to come back to this survey afterward.**

Click here to launch the first task [click this link only ONCE]

Start of Block: Deception

Induction In a sentence or two, describe your experience with this site.

Page Break

Thank you. You have now completed the first study. As a reminder, today you will take part in two brief studies. Click the arrow to indicate you are ready to launch Study 2.

Page Break

Thank you for agreeing to participate in this study.

The study is testing potential movie plots. You will read the short synopsis of several movie plots and answer questions about them. All plots you'll see are from a similar genre. After rating the stories, you'll answer a few questions about yourself.

Because you will be asked several questions about each potential plot, they will be displayed multiple times. Pay careful attention to which story you are being asked about in each section. Press the forward arrow when you're ready to continue. End of Block: Deception

Start of Block: ChooseStory

On the next page you will see a set of short movie synopses.

Read each one, and then choose the one you would most like to watch right now.

Page Break

Choice FIELD CODES CORRESPOND TO THE 5 CHARACTERS AND 5 STORY STEMS in APPENDIX A, randomized without replacement. Story 1 \${e://Field/c1}

\${e://Field/HH1}\${e://Field/HL1}\${e://Field/LH1}\$

Story 2 \${e://Field/c2}

\${e://Field/HH2}\${e://Field/HL2}\${e://Field/LH2}\$

Story 3 \${e://Field/c3}

\${e://Field/HH3}\${e://Field/HL3}\${e://Field/LH3}\$

Story 4 \${e://Field/c4}

\${e://Field/HH4}\${e://Field/HL4}\${e://Field/LH4}\$

Right now, which movie would you like to watch the most?

- Story 1
- O Story 2
- Story 3
- O Story 4

ChoiceTime Timing First Click Last Click Page Submit Click Count

Page Break

Why

You indicated you wanted to watch the following movie the most: \${Choice/ChoiceGroup/SelectedChoices}.

Why did you pick this one?

Responses should be 100 characters long (roughly a couple of sentences)

End of Block: ChooseStory

Start of Block: AttnCheck



Attn You read four different plot synopses. Which of these things happened? Choose the 4 options that best describe the stories you read.

	Someone	played a	a new	game
--	---------	----------	-------	------

- Someone went Geocaching
- Someone took an art class
- Someone went on a reality tv show
- Someone went mountain climbing
- Someone went to Japan
- Someone played in a band
- Someone had a baby
- Someone learned to swim
- Someone adopted a pet
- Someone joined a dating app
- Someone went to college

End of Block: AttnCheck

Start of Block: Preferences

Now we're going to ask you a little about your interest in each movie synopsis you read.

You'll see each of the synopses again to help you answer these questions.

Page Break

Pref1 Story 1

\${e://Field/c1}

\${e://Field/HH1}\${e://Field/HL1}\${e://Field/LL1}

How much would you like to watch this movie right now?



Pref2 Story 2

\${e://Field/c2}

\${e://Field/HH2}\${e://Field/HL2}\${e://Field/LH2}\$

How much would you like to watch this movie right now?



Pref3 Story 3

\${e://Field/c3}

\${e://Field/HH3}\${e://Field/HL3}\${e://Field/LH3}\$

How much would you like to watch this movie right now?



Pref4 Story 4

\${e://Field/c4}

\${e://Field/HH4}\${e://Field/HL4}\${e://Field/LH4}\$

How much would you like to watch this movie right now?

		Not at all		,	Very Muc	h
	0	20	40	60	80	100
Story 4) —		

End of Block: Preferences

Start of Block: Sharing2



ShareChoice2

Now you have picked a movie, you have the opportunity to share this choice with other people (for example, posting about your selection online).

Who would you most like to share your movie choice with right now?

- O Friends, family or a partner
- The people from the social networking site you visited for Study 1
- No one (I'd like to keep my choices private)
- Anyone (I'd make my choices public)

$X \rightarrow$

[COUNTERBALANCED: THIS IS SHARING FIRST GROUP VERSION OF THE SAME ITEM ABOVE}

In a moment, you will be asked to read the synopses of several movie plots. After, you will pick the movie you'd be most interested in watching.

Imagine that you can share your movie choice with other people (for example, posting about the movie you want to watch online).

Who would you most like to share your movie choice with right now?

- Friends, family or a partner
- The people from the social networking site you visited for Study 1
- No one (I'd like to keep my choices private)
- Anyone (I'd make my choices public)

Sharing2Time Timing First Click Last Click Page Submit Click Count

Page Break



close

How much do you agree with the following statements.

I am interested in sharing my movie selection with close others (family, friends, partner)

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

X-

oot I am interested in sharing my movie selection with the people from the social networking site I was just on

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

```
X \rightarrow
```

public I am interested in sharing my movie selection with everyone on a public forum

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- O Agree
- Strongly agree

X^{\perp}

private I am interested in keeping my movie selection private

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

End of Block: Sharing2

Start of Block: RateFeatures

Great! We're now going to ask you a few more questions about each of the movie synopses. You'll see the descriptions again as a reminder.

Indicate how much you agree or disagree with each statement

Page Break

Story 1 \${*e*://Field/c1} \${*e*://Field/HH1}\${*e*://Field/LL1}\${*e*://Field/LL1}

How much do you agree with each statement about this story?

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
This story shows a character who wants to make connections.	0	0	0	0	0	0	0
This story shows a person who wants to gain skills and achieve success.	0	0	0	0	0	0	0
This story shows a person who wants to be independent and free.	0	0	0	0	0	0	0
This story shows a person who wants to gain wealth and resources.	0	0	0	0	0	0	0
The story is a positive experience for the character.	0	0	0	0	0	0	0
The story is a happy one.	0	0	0	0	0	0	0

Rate2 Story 2

$e://Field/c2} \\ e://Field/HH2} \\ e://Field/HL2} \\ e://Field/LH2} \\ e://Field/LL2} \\ e://Field/LL2} \\ e://Field/LH2} \\ e://FiH2} \\ e://Field/LH2} \\ e://Field/LH2} \\ e://Field/LH2} \\ e://Field$

How much do you agree with each statement about this story?

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
This story shows a character who wants to make connections.	0	0	0	0	0	0	0
This story shows a person who wants to gain skills and achieve success.	0	0	0	0	0	0	0
This story shows a person who wants to be independent and free.	0	0	0	0	0	0	0
This story shows a person who wants to gain wealth and resources	0	0	0	0	0	0	0
The story is a positive experience for the character.	0	0	0	0	0	0	0
The story is a happy one.	0	0	0	0	0	0	0

Rate3 Story 3

$\label{eq:linear} $$e://Field/HH3} $$e://Field/HL3} $$e://Field/LH3} $$e://Field/LL3} $$$

How much do you agree with each statement about this story?

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
This story shows a character who wants to make connections.	0	0	0	0	0	0	0
This story shows a person who wants to gain skills and achieve success.	0	0	0	0	0	0	0
This story shows a person who wants to be independent and free.	0	0	0	0	0	0	0
This story shows a person who wants to gain wealth and resources	0	0	0	0	0	0	0
The story is a positive experience for the character.	0	0	0	0	0	0	0
The story is a happy one.	0	0	0	0	0	0	0

Rate4 **Story 4** \${e://Field/c4} \${e://Field/HH4}\${e://Field/LH4}\${e://Field/LL4} How much do you agree with each statement about this story?

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
This story shows a character who wants to make connections.	0	0	0	0	0	0	0
This story shows a person who wants to gain skills and achieve success.	0	0	0	0	0	0	0
This story shows a person who wants to be independent and free.	0	0	0	0	0	0	0
This story shows a person who wants to gain wealth and resources	0	0	0	0	0	0	0
The story is a positive experience for the character.	0	0	0	0	0	0	0
The story is a happy one.	0	0	0	0	0	0	0

End of Block: RateFeatures

Start of Block: Induction Check

You're mostly done with today's tasks.

We'd like to ask a few more questions about the first study you took part in.

Think back to your experience on the social networking site and press the arrow to continue.

Page Break			

Likes

The feedback I received on my profile description in terms of Likes and Dislikes was ...

- Extremely negative
- Moderately negative
- Slightly negative
- Neither positive nor negative
- Slightly positive
- Moderately positive
- Extremely positive

Ignored I felt ignored.

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Rejected I felt rejected.

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Mood For each of the feelings below, indicate how much they apply to you.

I feel...

	Not at all				Extremely
Good	0	0	0	0	0
Bad	0	0	0	0	0
Friendly	0	0	0	0	0
Unfriendly	0	0	0	0	0
Angry	0	0	0	0	0
Pleasant	0	0	0	0	0
Нарру	0	0	0	0	0
Sad	0	0	0	0	0

Page Break

Tell us about your experience on the social networking site. How much do each of the following statements apply to you?

	Not at all				Extremely
l felt disconnected	0	0	0	0	0
I felt rejected	0	0	\bigcirc	0	0
I felt like an outsider	0	0	0	0	\circ
I felt I belonged to the group	0	0	0	0	0
I felt the other people interacted with me a lot	0	0	0	0	0

End of Block: Induction Check

Start of Block: Demographics

Q31 Thanks for your responses! You're almost done, we're just going to ask a few questions about you.
Page Break

SDT In general, how true are each of the following for you?

	Completely untrue				Completely true
I feel that the people I care about also care about me	0	0	0	0	0
I feel connected with people who care for me, and for whom I care	0	0	0	0	0
I feel close and connected with other people who are important to me	0	0	0	0	0
l experience a warm feeling with the people I spend time with	0	0	0	0	0
I feel excluded from the group I want to belong to	0	0	0	0	0
I feel that people who are important to me are cold and distant towards me	0	0	0	0	0
I have the impression that people I spend time with dislike me	0	0	0	0	0
I feel the relationships I have are just superficial	0	0	0	0	0

Page Break

Age What is your age? (e.g., 18)

Gender What is your gender identity?

- Man
- Woman
- O Genderqueer/Nonbinary/other
- Prefer not to say

Race Please identify the racial & ethnic categories with which you most identify (choose all that apply).

- White
- Black or African American
- Native American, Indigenous or Alaska Native
- Asian
- Latino/a/x or Hispanic
- Native Hawaiian or Pacific Islander
- Prefer not to say
- Other _____

SNS How often do you use social networking sites?

- Never
- Rarely
- Occasionally
- At least one most days
- At least one every day
- All the time

Income What is your average household income?

- O under \$20,000
- \$20,001-50,000
- \$50,001-75,000
- \$75,001-100,000
- \$100,001-150,000
- O over \$150,000

Page Break

Deception What do you think Study 1 was about?

Deception2 What do you think Study 2 was about?

Page Break

Writein Is there anything else you feel we should know about your experience taking the survey?

Page Break

Debrief Thank you for your responses.

Part of this research helps us understand how people react to social information online. Please note that the other user profiles and reactions you received in the first study were autogenerated and not a reflection of real responses to you or your profile. Please keep this information private for at least three weeks to avoid biasing people you know who may also be participating.

End of Block: Demographics