When dreaming is believing: Extending the findings to favorite celebrities

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Summary. Building on the findings of Morewedge and Norton (2009) we hypothesized and found that our 157 college participants selected the Freudian interpretation of dreams over three other interpretations as the one most likely to be true. We also hypothesized that participants randomly assigned to read a brief script of a positive-, compared to a negative-imaginary dream about their favorite celebrity would score higher on meaningfulness of the dream. We found marginal support for this hypothesis. As predicted, participants who selected the Freudian interpretation of dreams as "most true" did score higher on a scale designed to measure meaningfulness of the imaginary dream about their favorite celebrity than those participants who selected any of the other theories of dream interpretation. Contrary to our prediction, participants randomly assigned to read a brief script of a positive-, compared to a negative-imaginary dream about their favorite celebrity did not score higher on the *Celebrity Attitude Scale (CAS)*. Participants who selected the Freudian interpretation of dreams as "most true" scored higher on the *CAS* than those participants who selected any of the other theories of dream interpretation. Discussion focused on the extension of Morewedge and Norton's (2009) findings on motivated interpretation of dreams beyond the realm of social relationships to parasocial relationships, specifically to dreaming about celebrities.

Keywords: Dream Analysis, Freudian Interpretation, Celebrity Dreaming

1. Introduction

Every morning across the globe, many people wake up with an uneasy feeling. Among some potentially drab dream topics, these individuals may have been dreaming about some of the commonly-occurring unpleasant dreams such as someone, or something, chasing them, death of someone in their lives or their own imagined tragic deaths, the imagined betrayal of a close friend, or the imagined sexual infidelity of an intimate partner (Levin & Nielsen, 2007; Morewedge & Norton, 2009). Morewedge and Norton (2009) showed that the interpretation of these dreams could have a profound effect on the lives of these uneasy dreamers. They conducted six related studies. In the first of them they showed that from a brief description of four theories about the meaning of dreams, the majority of individuals from the United States, South Korea, and India chose one of them as most likely to be true, namely the belief that dreams contain hidden truthful information. This is similar to the ideas of the importance of dream interpretation presented by Freud (1900/1955), and reaching as far back as Plato (Grube, 1974; Malone, 2009). In the second and third studies, they demonstrated

that dreams are widely believed to provide meaningful information about the world around us, more so than the same thoughts that occurred during waking hours. In subsequent studies they demonstrated that the meaningfulness that people attached to dreams was moderated by their consistency with preexisting beliefs. For example, if a dream about a trusted friend had the friend behaving in a helpful way, then participants attributed considerable meaningfulness to that dream. Presumably, this enhanced perception of meaning was attributable to the fact that the dream content was consistent with preexisting expectations about how the friend would behave in real life and facilitated the maintenance of a positive disposition towards the friend. Such a dream would likely be considered less meaningful if the trusted friend behaved in an unhelpful way. People might downplay the meaning of such a dream because the friend's behavior in the dream violated their expectations of the way the friend would actually behave and because interpreting the dream as a valid commentary on the character of the friend would require them to change their disposition towards the friend. Interestingly, Morewedge and Norton (2009) showed that dream content could actually influence perceived behavior. Specifically, their participants reported greater liking for a real friend "after considering an imaginary dream in which a friend protected rather than betrayed them" (2009, p. 249). Thus, the authors concluded that motivated interpretation of dreams can translate to, and impact, our daily lives.

This paper was well-received, with watered-down accounts of it being chronicled in the popular press (Cherry, 2019). The reason for the warm reception likely stemmed partly from the popularity of Freudian ideology in contem-

porary culture (Stanovich, 2019) and especially Freud's speculation about the importance of dream interpretation. Furthermore, the findings were consistent with other studies that had previously shown negative daily events, such as stress, often were associated with bad dreams, specifically nightmares (Levin & Nielsen, 2007; Zadra & Donderi, 2000), and increased frequency of dreaming (Duke & Davidson, 2002). Several studies with individuals suffering from mood disorders both before and after 2009 indicated that mood disturbances are reflected in dream content (see DeCicco et al., 2013 for a review). Furthermore, at least one recent study found an association between excessive need frustration and both negative dream themes and negative interpretation of those dreams (Weinstein, Campbell, & Vansteenkiste, 2018).

The Morewedge and Norton (2009) study contained insights about motivated dream interpretation worthy of further study. In the current study we extended the findings of Morewedge and Norton (2009) beyond just social relationships (friends, significant others) to parasocial relationships (celebrities).

Over the course of several years, McCutcheon and colleagues (Ashe & McCutcheon, 2001; Griffith, Aruguete, Edman, Green, & McCutcheon, 2013; Maltby, Houran, Lange, Ashe, & McCutcheon, 2002; Maltby & McCutcheon, 2001; McCutcheon, Lange, & Houran, 2002; McCutcheon, Maltby, Houran, & Ashe, 2004) measured admiration for celebrities, beginning with the underlying notion that admiration could be best studied by conceptualizing it in terms of degrees of admiration for a favorite celebrity. They created scale items to measure the extent to which individuals admired their favorite celebrities. To date more than 55 published articles have used the *Celebrity Attitude Scale* (*CAS*) in one form or another and studies validate its convergent and external validities (for example, see Griffith et al., 2013). However, most of these studies found personality variables that correlated with *CAS* scores (see Brooks, 2018 for a review), few of them involved true experiments (see Wong, Goodboy, Murtagh, Hackney, & McCutcheon, 2010, for an exception), and we know of none in which there was an attempt to influence *CAS* scores.

The present study is similar to the fifth study of Morewedge and Norton (2009). Their participants each named a friend and then researchers randomly assigned them to think about a pleasant, neutral, or unpleasant dream that featured the friend they named. Specifically, they imagined that their friend kissed the participant's present or most recent significant other in an intimate way (cheating - unpleasant dream), or that the friend defended the participant from harm (pleasant dream). A control group imagined a dream about their friend. Participants then rated the extent to which they thought the dream was meaningful on a 7-point scale. They predicted that motivated reasoning processes would be at work. In detail, they predicted and found that participants attributed more meaningfulness to the pleasant dream than the unpleasant one, presumably because the pleasant dream matched the preexisting views that participants had about the loyalty of good friends. Finally, they asked participants to rate their affection for their friend. They found that participants reported greater affection for the pleasant dream friends than for the cheating-unpleasant dream friends. The latter result was quite profound as it implied that real social relationships can be altered simply by imagining a dream in which a friend exhibits either loyalty or betrayal.

In the current study, participants completed a series of questionnaires, during which they reported on a few key topics. First, they rated their agreement with four dream theories. Then, they named their favorite celebrity and stated their perceived level of connectedness to that celebrity. Then, we randomly assigned them to read about their celebrity in either a positive (celebrity helping) or negative (celebrity not helping) dream scenario prior to rating how meaningful they believed it to be. Last, all participants completed the *CAS*.

Hypotheses

1. Participants would select the Freudian interpretation of dreams over the other interpretations as the one most likely to be true.
2. Participants randomly assigned to read a brief script of a positive imaginary dream about their favorite celebrity would score higher on meaningfulness of the dream than participants randomly assigned to read a brief script of a negative imaginary dream about their favorite celebrity.
3. Participants who selected the Freudian interpretation of dreams as "most true" would score higher on a scale designed to measure meaningfulness of the imaginary dream about their favorite celebrity than those participants who selected any of the other theories of dream interpretation.
4. Participants randomly assigned to read a brief script of a positive imaginary dream about their favorite celebrity would score higher on the *CAS* than participants randomly assigned to read a brief script of a negative imaginary dream about their favorite celebrity.
5. Participants who selected the Freudian interpretation of dreams as "most true" would score higher on the *CAS* than those participants who selected any of the other theories of dream interpretation.

2. Method

2.1. Participants

After we obtained permission from the IRBs of our respective universities, we recruited 178 participants from universities located in four states: California, Georgia, South Carolina, and South Dakota. We excluded 21 participants for failure to provide complete responses related to dream interpretation (n = 15) and the *Celebrity Attitude Scale* (n = 6). This resulted in a final sample size of 157 (M_{age} = 22.56 years, SD_{age} = 5.97). By university, the final sample sizes and self-identified sexes for each campus were as follows: California (*n* = 35; 27 females, 8 males), Georgia (*n* = 36; 23 females, 13 males), South Carolina (*n* = 46; 41 females, 4 males, 1 genderqueer), and South Dakota (*n* = 40; 30 females, 10 males). Further, they self-identified as White (56%), Hispanic/Latino/Spanish origin (22%), African American/Black (17%), Asian American/Asian (3%), American Indian (1%), and Black and White (1%). Participants completed this study as part of a research participation module or extra credit in a psychology course (ranged from introductory to advanced levels of psychology courses), both accounting for a minimal amount of points in each course. An a priori power analysis using G*Power (Erdfelder, Faul, & Buckner, 1996) indicated that

a total sample size of 128 (assuming equal group sample sizes) would be needed to detect a moderate effect size of $d = 0.5$ (Cohen, 1988) with 80% power using an independent t-test with alpha at .05, two tails.

2.2. Measures

The Dream Theories measure consisted of brief (23 - 28 words) descriptions of four major theories of dreaming taken verbatim from the appendix of the Morewedge and Norton (2009) study. None of the theories were labeled, but they were brief representations of Freudian theory (FDI), problem-solving theory (NFDI 1), learning theory (NFDI 2), and by-product theory (NFDI 3). For example, Freudian theory was represented by the following statement: "Emotions buried in the unconscious surface in disguised form during dreaming, and the remembered fragments of dreams can help uncover the buried feelings." Following the brief description of each theory, participants indicated the extent to which they agreed or disagreed by circling a number on a Likert scale that ranged from 1 (*Do not agree at all*) to 7 (*Agree completely*).

Before reading the randomly-assigned dream scenario, each participant named their favorite celebrity. Then, we used a 7-point Likert scale question to determine participants' self-ratings of their feelings of connectedness toward their favorite celebrity. The Likert scale ranged from 1(*Very Weak*) to 7(*Very Strong*). Participants in this study, on average, rated themselves as having strong feelings of connectedness with their favorite celebrities ($M = 5.44$, $SD = 1.23$). To assess the meaningfulness participants attributed to the randomly assigned dream scenario, they rated it on a Likert scale that ranged from 1(*definitely purely coincidental*) to 7(*definitely meaningful*). Participants in this study, on average, rated the randomly-assigned dream scenario as more on the coincidental side of the scale ($M = 3.27$, $SD = 1.93$, see Table 1 for a detailed breakdown of mean ratings for meaningfulness).

The *Celebrity Attitude Scale (CAS)* consists of 23 items, and has been shown to have good psychometric properties over the course of several studies (Ashe & McCutcheon, 2001; Griffith et al., 2013; Maltby et al., 2002; Maltby & McCutcheon, 2001; McCutcheon et al., 2002; Wong, Goodboy, Murtagh, Hackney & McCutcheon, 2010; Zsila, McCutcheon, & Demetrovics, 2018). The response format for the *CAS* is a 5-point scale, ranging from 1(strongly disagree) to 5(strongly agree). Across several studies total scale Cronbach's alpha values ranged from .84 to .94 (McCutcheon et al., 2004). Cronbach's alpha for the *CAS* in the current study was .90.

2.3. Procedure

All participants first filled out the Dream Theories questionnaire in designated rooms on their home campuses. Then they circled the theory that they believed to be "most true." We labeled all participants who chose the Freudian theory as "most true" the Freudian Dream Interpretation (FDI) group. Those who selected any of the other three theories as "most true" comprised the Non-Freudian Dream Interpretation (NFDI) group.

Next, all participants wrote the name of their favorite celebrity, which we limited to famous persons living or recently deceased. Each participant then rated their level of connectedness to their stated favorite celebrity. This celebrity

was the focus for the next step in which they read the randomly-assigned positive or negative imaginary dream scenario. The dream scenarios read as, "Imagine that last night you dreamed about your favorite celebrity. In this dream you were being threatened by a gang of thieves who were intent on taking your possessions. Further imagine that your favorite celebrity suddenly appeared and blew a loud whistle that caused the gang of thieves to run away (positive dream scenario). Your favorite celebrity then escorted you to the safety of a local police station." In the Negative dream condition participants read, "…soft whistle that caused more gang members to appear from hiding. Your favorite celebrity then assisted the gang as they robbed you of your possessions." The two dream scenarios contained an equal number of words. All participants then rated the level of meaningfulness they attached to that dream. In the final part of the study, all participants reported their age, gender, and ethnicity before filling out the *CAS*, using their favorite celebrity as their target person.

2.4. Analysis

Because we had categorical data for the first hypothesis, we used a chi-square analysis to detect any differences between the frequencies of "most true" choices among the four theories of dreaming. To inform statistical test selection for the remaining hypotheses, we conducted data diagnostics to determine whether our data met assumptions for parametric analyses. The diagnostic procedure for assessment of normality proceeded by visual inspection of histograms paired with Kolmogorov-Smirnov tests. For homogeneity of variances, we consulted Levene's test. We selected parametric analyses only when data met appropriate assumptions.

3. Results

Hypothesis 1. Our first hypothesis stated that participants would select the Freudian interpretation of dreams over the other interpretations as the one most likely to be true. Data supported this hypothesis (see Figure 1). Participants selected the Freudian interpretation (95% CI [65, 89]) more frequently than the other three interpretation options (NFDI 1: 95% CI [5, 17]; NFDI 2: 95% CI [18, 36]; NFDI 3: 95% CI [30, 51]), $\chi^2 (3, N = 155) = 61.955, p < .0001$, $W = .63$.

In addition, we examined the extent to which each individual agreed with each of the four dream theories. Given the non-normal nature of each distribution, we used a Friedman test to examine any differences in individuals' level of agreement with the theories. We found a difference in level of agreement across the Freudian theory ($M = 5.30$, $SD = 1.17$, Mean Rank = 3.10), problem-solving theory ($M = 4.06$, $SD = 1.48$, Mean Rank = 2.08), learning theory ($M = 3.83$, $SD = 1.67$, Mean Rank = 1.97), and by-product theory ($M = 5.05$, $SD = 1.26$, Mean Rank = 2.85, $\chi^2 (3, N = 157) = 104.334, p < .0001$ (one-tailed), $W = .22$). To determine the difference in levels of agreement amongst these theories, we conducted follow-up Wilcoxon signed-ranks tests with a Bonferroni adjustment ($\alpha_{adjusted} = .008$; one-tailed p-values reported). Participants reported significantly higher agreement with the Freudian perspective relative to the problem-solving theory ($p < .0001$) and the learning theory ($p < .0001$), with marginally higher agreement than the by-product theory ($p = .03$). There was no

significant difference between agreement ratings for the problem-solving and learning theories (p = .06). Agreement with the by-product theory was significantly higher than that of problem-solving theory (p < .0001) and learning theory (p < .0001).

Hypothesis 2. We further hypothesized that participants randomly assigned to read a brief script of a positive-, but not negative-imaginary dream about their favorite celebrity would score higher on meaningfulness of the dream. Data did not meet the normality assumption for a parametric analysis. A Mann-Whitney U-test revealed that participants randomly assigned a positive dream scenario (M = 3.57, SD = 0.24, Mean Rank = 84.62) rated the dream scenario as similarly meaningful to those randomly assigned to a negative scenario (M = 2.98, SD = 1.68, Mean Rank = 73.59, U = 2647.00, p = .062 (one-tailed), r = .12). Table 1 shows a breakdown of mean ratings of meaningfulness for positive and negative dream scenarios by interpretation group (FDI, NFDI) and sex.

Hypothesis 3. Our third hypothesis was that participants who selected the Freudian interpretation of dreams as "most true" would score higher on a scale designed to measure meaningfulness of the imaginary dream about their favorite celebrity than those participants who selected any of the other, non-Freudian theories of dream interpretation. These data also did not meet the normality assumption to warrant a parametric analysis, therefore, we used a Mann-Whitney U-test. This test revealed that those who selected the Freudian dream interpretation (M = 3.55, SD = 1.85, Mean Rank = 86.67) rated the dream scenario as more meaningful than those who selected a non-Freudian interpretation (M = 3.00, SD = 1.98, Mean Rank = 71.62, U = 2489.50, p = .018 (one-tailed), r = .17).

Hypotheses 4 and 5. Our fourth hypothesis was that participants randomly assigned to read a brief script of a positive-, but not negative-imaginary dream about their favorite celebrity would score higher on the *CAS* (total scores). The fifth hypothesis was that participants who selected the Freudian interpretation of dreams as "most true" would score higher on the *CAS* than those participants who se-

Table 1. Mean ratings for meaningfulness of dream scenarios

Type	Female	Male
Freudian dream interpretation (FDI)		
Positive Dream	4.00 ± 1.93	4.00 ± 2.00
Negative Dream	3.26 ± 1.74	2.50 ± 1.73
Non-Freudian dream interpretations (NFDI)		
Positive Dream	3.26 ± 2.34	3.11 ± 1.97
Negative Dream	2.92 ± 1.44	2.50 ± 1.93

Note. Means ± Standard deviations

selected any of the other theories of dream interpretation. The *CAS* data for these hypotheses met assumptions for parametric analyses. Thus, we used a 2 (Scenario: Negative v. Positive) x 2 (Interpretation: Freudian v. Non-Freudian) factorial ANOVA. *Figure 2* shows the cell means associated with the analysis. There was no main effect of scenario as *CAS* scores for those assigned the negative dream scenario (M = 56.80, SD = 14.34) were not significantly different from those who read a positive dream scenario (*M* = 54.66, *SD* = 14.00, F (1, 153) = 0.595, p = .221 (one-tailed), η_p^2 = .004). There was a main effect of interpretation, with those who selected the Freudian dream interpretation as most true (*M* = 58.01, *SD* = 13.13) having *CAS* scores significantly higher than those who selected a non-Freudian dream interpretation as most true (*M* = 53.58, *SD* = 14.86, F (1, 153) = 3.542, p = .031 (one-tailed), η_p^2 = .023). There was no significant interaction between scenario and interpretation, F (1, 153) = 0.096, p = .757, η_p^2 = .001.

4. Discussion

In the current study, we extended the work of Morewedge and Norton (2009) on motivated interpretation of dreams beyond the realm of social relationships to parasocial relationships, specifically to dreaming about celebrities. We examined five specific hypotheses and found support for three out of the five.

First, we expected participants in our sample to be more likely to report high agreement with the dream theory consistent with the Freudian perspective, which posits that dreams contain hidden, but meaningful, information relative to other dream theories that do not assign much meaning to dreams. Consistent with the findings of Morewedge and Norton (2009), participants in our sample had the highest agreement ratings for the Freudian dream interpretation that dreams contain some hidden meaning or truth and this was the perspective that they selected with the greatest frequency as being "most true" (see *Figure 1*).

Second, we predicted that participants who read a positive dream scenario involving their favorite celebrity would rate the dream as being more meaningful relative to participants who read a negative dream scenario involving their favorite celebrity. This hypothesis emerged from prior work in which researchers investigated motivated interpretations of thoughts and dreams and found that individuals tend to attribute more meaning to thoughts and dreams that are consistent with their pre-existing beliefs and expectations
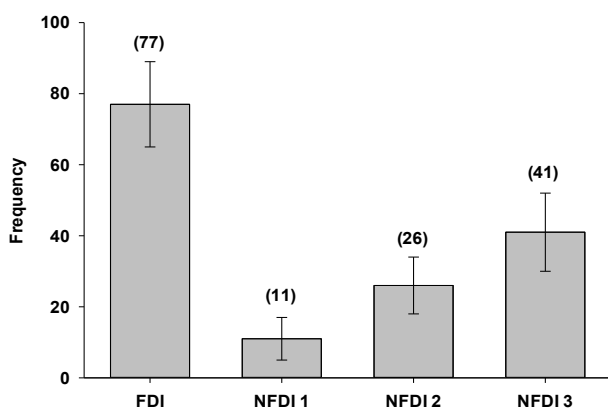

Figure 1. Frequencies with 95% CI of "most true" selections for the Freudian dream interpretation (FDI) and the three non-Freudian dream interpretations (NFDI). Note. Two participants did not provide a selection for this prompt.

(Morewedge & Norton, 2009). Although the difference was in the predicted direction, it did not reach statistical significance.

A potential explanation for the failure to find this predicted difference focuses on the possibility of conflicting expectations about celebrity behavior. Previous research by Schmidt, Stumbrys, and Erlacher (Study 1, 2014) highlighted the importance of dreamers' expectations. In their analysis of the ability of lucid dreamers to interact with dream characters (dreamers were to ask the encountered dream characters to guess a number held behind their back and upon waking report the accuracy of the dream characters' guess), they found that in the two instances when the encountered dream characters were celebrities, they failed to cooperate with the dreamers' request to participate in the number guessing task. Schmidt et al. (2014) interpreted the failure of lucid dreamers to elicit cooperation of celebrity dream characters as stemming from the dreamers' expectations about celebrity behavior – namely that celebrities would view themselves as too important and too busy to be bothered with such requests. Extrapolating this finding to an interpretation of the present study, it is possible that participants held conflicting expectations about celebrities. On the one hand, they held favorable attitudes towards their favorite celebrity and would therefore be motivated to expect the celebrity to act in positive ways. On the other hand, they might generally expect all celebrities to be somewhat aloof and non-responsive to strangers (because of stereotypes that they are generally busy and self-absorbed people). Consequently the positive dream scenario utilized in our study may have been ambiguous because it contained some elements that were consistent and others that were inconsistent with expectations.

Third, given the persistent popularity of Freudian theory in contemporary society (Stanovich, 2019), in which dreams are thought to carry significant meaning, we expected participants who selected the Freudian dream theory as "most true" to rate the dream scenario as more meaningful than those who selected one of the non-Freudian perspectives as "most true." Indeed, participants in our sample who sided with the Freudian perspective reported a greater degree of meaningfulness for the dream scenario than those who did not side with the Freudian perspective, which supports the consistency in attribution of meaningfulness to dreams and tenets of the theoretical perspective these individuals support.

One unique aspect of the current study was an attempt to investigate whether or not the positive or negative dream scenario that participants read, and individuals' beliefs about dream interpretation and meaningfulness, could impact *Celebrity Attitude Scale* (*CAS*) scores. As noted, only one study used the *CAS* in an experimental situation (Wong et al., 2010) and to our knowledge no study tried to influence the scores. In our fourth hypothesis, we expected those individuals who read a positive dream scenario with their favorite celebrity as the target to score higher on the *CAS* than those who read a negative dream scenario. In other words, those who dreamed about their favorite celebrity in a positive light, which likely aligned with their expectations of the celebrity's behavior, should express a more favorable attitude toward their favorite celebrity than those whose dream scenario was at odds with their expectations. Our data did not reveal this to be the case. We found no significant difference in *CAS* scores between individuals who read a positive dream scenario and individuals who read a negative dream scenario.

In speculating as to why we did not find a difference in the above results, it is possible that when people think and dream about their celebrities they could be related to roles in which those celebrities play that gives them celebrity status rather than who they are in day-to-day life. In other words, it is possible that individuals read the positive or negative dream scenario and thought of their celebrity in a role in which they did behave in such a way, thus finding a way to align the expectations with the scenario. In our data, a slight majority (65%) of the individuals named as favorite celebrities have acted at some point in their careers, which may support the proposition that many participants may have been able to imagine their favorite celebrity playing a role in such a way. We know that individuals have such cognitive flexibility in such situations from prior research, such as that of Miles and Crisp (2014) in which they demonstrated reductions in prejudice toward groups simply by having participants imagine positive scenarios with members of that particular group. Further, one can note such mental adjustments in many studies in which individuals apply interpretations flexibly so as to suit their personal situation and needs (Ditto, Munro, Apanovitch, Scepansky, & Lockhart, 2003; Kruger & Dunning, 1999). Thus, it is possible that focusing on celebrities makes this a distinctly different situation than focusing in on friends, in which friends should have consistent behaviors to develop strong expectations.

However, data were consistent with our fifth hypothesis in that those who selected the Freudian interpretation of dreams to be "most true" scored significantly higher on the *CAS* than those who selected one of the three non-Freudian perspectives as "most true." With higher *CAS* scores, and thus a greater penchant to demonstrate an attachment to celebrities, the selection of the Freudian perspective begs the question, why might these individuals have selected the Freudian perspective as "most true?" In the current study, we cannot answer this as participants self-selected into the dream interpretation groups. Given that there was no random assignment to a dream interpretation, we can only
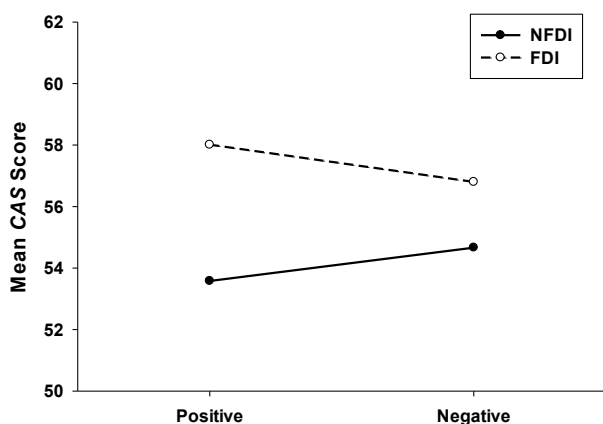
Figure 2. Celebrity Attitude Scale (CAS) cell means associated with the 2 (Scenario: Positive v. Negative) x 2(Interpretation: Freudian (FDI) v. Non-Freudian (NFDI)) factorial ANOVA.

speculate on the directionality of their decision-making. Based on the work of Baumeister (2005), Stanovich (2019), and Morewedge and Norton (2009), Freud's popularity across cultures, and especially within entertainment, gives him some celebrity status of his own. In the current study, we did not determine whether or not individuals who read the scenario knew it was linked to Freud, which, given the pervasiveness of his ideas across cultures, is not entirely impossible, and thus selected it based on that or the actual tenets of the theory presented. Further, we did not control for, nor explore, other variables that may be associated with celebrity admiration that could drive such a decision to select the Freudian interpretation of dreams over others. Specifically, individuals who selected the Freudian interpretation may tend to be more intuitive than rational, demonstrate a preoccupation with fantasy, or even have a need to believe in a just world.

5. Limitations

An important limitation of the current study was that the dream scenarios may have confounded valence with expectation. To the extent that people hold positive attitudes towards celebrities, they should expect them to behave in positive ways and consequently rate as more meaningful dreams in which celebrity characters in the dream behaved towards them favorably. The element assumed to enhance perceived meaning of dreams is not merely whether people were treated favorably or unfavorably by a dream character. Rather, the important factor is the extent to which dream characters behave in ways that are consistent with the expectations and attitudes that people are motivated to protect. For example, one might expect that people would rate dreams in which they were treated unfavorably by dream characters whom they dislike in real life as more meaningful than dreams in which they were treated favorably by such characters. A fruitful avenue for future research would be to develop dream scenarios that manipulated both the valence of the behavior (positive/negative) and the expectation (consistent with expectation / inconsistent with expectation) in a factorial design. Future research might also include measures of participants' expectations about the likelihood that the behavior depicted in the dream scenarios would be engaged in by the dream character in real life.

Another key limitation in the current study deals with overall ratings of meaningfulness of the dreams. This was a key measure and although we did find differences in participants' attributions of meaning to the dream scenarios as a function of whether or not they supported the Freudian dream perspective, the overall meaningfulness values were low on our scale. Specifically, no meaningfulness ratings were greater, on average, than four, which was our scale midpoint. Thus, overall, average meaningfulness was more on the coincidental side. This does somewhat align with the results of the fifth study from Morewedge and Norton (2009) in that the highest average meaningfulness scores were just over the scale midpoint of four. Ultimately, it is possible that reading an "imagined" dream scenario in a laboratory situation hinders the attribution of great meaning relative to participants actually having such dreams. In the current study, we do not have the ability to address such a statement. Further, it is also possible that the imagined dream scenarios may be somewhat bland and sterile due to the controlled nature of the study and therefore may not be as interesting, and consequently not stand out as mean-

ingful. It is possible that we would be able to see modulations in meaningfulness, specifically greater attributions of meaningfulness, with more sophisticated and varied dream scenarios in future iterations of this research. An additional avenue warranting future research is to more directly assess the premise that dreams are rated as more meaningful to the extent that the characters in the dream adhere to real life expectations and attitudes about the character. This would require initial baseline assessments of the attitudes towards and expectations about the character (e.g., friend, celebrity, adversary) to be depicted in the dream scenarios.

6. Concluding remarks

In this study we set out to extend the work of Morewedge and Norton (2009) from social relationships to parasocial relationships (celebrities). We replicated the finding that most individuals tend to agree with the Freudian interpretation of dreams in that they believe dreams contain hidden meaning. Also, we demonstrated that some aspects of motivated interpretations of dreaming about celebrities have overlap, or show similar patterns, with such interpretations about other social relationships (e.g., friends). Also, we extended our examination to explore how imagined celebrity dreams and meaningfulness of such dreams related to individuals' admiration of their favorite celebrities via the use of the *Celebrity Attitude Scale (CAS)*. In doing so, we discovered a relationship between dream theory agreement and admiration of favorite celebrities. Specifically, those who sided with the Freudian perspective scored significantly higher on the CAS, and thus seem to show greater affinities for their favorite celebrities. In this initial extension to include parasocial relationships, specifically celebrities, we laid a foundation to further explore the intricacies of motivated interpretations of celebrity dreaming.

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