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Examining the Motivations of Walt Disney Heroes and Villains and Their Association with Audience Appeal and Future Film Production

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ABSTRACT

Guided by the model of intuitive-motivation and exemplars, we content analyzed the population of $N = 734$ Walt Disney Studio film synopses to determine whether Disney's heroes and villains were motivated by *altruistic* or *egoistic* values, and if these values were associated with films' audience ratings, box-office performance, or the future production of similar value-laden films. Results revealed that heroes were most likely to be motivated by altruism, villains were most likely to be motivated by egoism, and films' emphasis on altruism was associated with more positive audience ratings and greater box-office earnings. No clear relationship between motivations and future film production emerged. We discuss how the present results can inform future work investigating the relationship between audiences and Disney content.

For as long as Walt Disney films have existed, their associated characters have been a steady presence in American culture (Wasko, 2001). Perhaps for just as long, publics have been concerned about the effects that exposure to Disney characters may have on audiences' value systems (Artz, 2004). Yet although exposure to Disney content may influence audiences' values (e.g., Padilla-Walker et al., 2013), a profit-driven film industry such as Disney's suggests that audience value preferences are also likely to reciprocally shape

the production of future Disney content. In pursuit of a more complete understanding of the relationship between Disney content and audience values, investigations are warranted into both the specific values emphasized by Disney characters and the extent to which the values Disney films depict are associated with aggregate audience appeal. Recent theoretical advancements in media psychology provide a framework for these investigations.

The model of intuitive-motivation and exemplars (MIME; Tamborini, 2013) suggests a reciprocal relationship between audiences' values and the values emphasized in media content. Specifically, exposure to media content that emphasizes specific values can increase the importance audiences place on those values, and audiences are expected to then select content consistent with their salient values. In the long-term, media creators are thought to produce new content featuring the values most favored by audiences, which increases the exposure audiences have to value-relevant content.

Building on previous work (Coyne et al., 2016; Padilla-Walker et al., 2013; Tamborini et al., 2013) and guided by the MIME, we investigate the values emphasized by heroes and villains in all Walt Disney Studio films and examine the extent to which films' emphasis on specific values may be associated with aggregate audience appraisal and selection indicators across time. Employing a data-driven approach on time-sensitive indicators of Disney appeal (i.e., box-office earnings), we also attempt an initial test of the MIME's long-term component by exploring the extent to which audiences' selection of value-laden content may predict Disney's future production of value-relevant content, and whether Disney's production of value-laden content may predict future audience exposure to value-consistent content. We begin by reviewing the prevalence of Walt Disney film content in audiences' lives, discuss the short- and long-term components of the MIME, and describe the present study.

Walt Disney Film Content Popularity

The popularity of Disney content has transcended generations, as Disney's earliest characters such as Snow White from 1937's *Snow White and the Seven Dwarves* still enjoy popularity with audiences of all ages (Artz, 2004; Wasko, 2001). Working to sustain this popularity, the Walt Disney industry has capitalized on the characters depicted in their films to reach into audiences' lives well beyond the films themselves. This reach can be seen in multi-billion-dollar markets of merchandise centered around Disney's princesses, heroes, and villains, and in their emphasis on character meet-and-greets, princess makeovers, and opportunities to dine with beloved characters at 12 worldwide theme-parks (Artz, 2004).

Due to Disney characters' enduring popularity, it is perhaps not surprising that publics question the effects of continual exposure on audiences'

social value systems (Wasko, 2001). Though not investigating the values depicted in Disney content directly, existing content analytic work has demonstrated high frequencies of prosocial (i.e., socially beneficial) and aggressive behaviors across animated Disney films (Coyne & Whitehead, 2008; Feng & Park, 2015; Padilla-Walker et al., 2013). In the short-term, researchers have demonstrated that children who watch Disney characters perform helping behaviors are more likely to enact helping behaviors themselves (De Leeuw & van der Laan, 2018; but see Coyne et al., 2016). This finding makes sense in light of entertainment education research suggesting that audiences learn most effectively from media when educational concepts are tied explicitly to the plot and made salient by the main characters (Fisch, 2005). In an effort to understand what types of values audiences may learn from Disney, we attempt to investigate the central values depicted by Walt Disney's population of main characters: heroes and villains.

Extant concerns over Disney content's effects raise an important question: Where do the values depicted in popular Disney content come from? On one hand, those concerned with children's moral development (i.e., parents, teachers) may wonder to what extent Disney attempts to "set the stage" with its content to shift audiences' values (either intentionally or unintentionally; e.g., Coyne et al., 2016; Coyne & Whitehead, 2008; Padilla-Walker et al., 2013). This type of influence assumes Disney films emphasize values that *creators* deem desirable in hopes of advocating for the importance of those values to audiences. It also assumes audiences do not already deem these depicted values as important. However, given the multi-billion-dollar industry Disney has built, we might alternatively expect that creators seek to develop content emulating values that *audiences* already deem important to increase profitability. This might suggest that Disney is *responding* to audiences' value preferences. We attempt to explore answers to the question of where Disney content's values come from by (A) examining the relationship between values emphasized in content and aggregate audience appraisal patterns, and (B) exploring whether the production of value-laden Disney content may impact audience exposure to value-consistent content, or vice versa. The MIME provides a framework for investigating these relationships.

The MIME

The MIME (Tamborini, 2013) outlines a reciprocal relationship between audiences' values and the values emphasized in the media they consume. In an open-media system (such as the US), this recursive audience-media process is thought to be one factor contributing to the aggregate maintenance of audiences' values over time; but any shift in audiences' values should be reflected in the aggregate patterns of both selection and production. Thus, examining the emphasis that popular media content, such as

Disney films, places on certain values across time, and by time, is thought to offer important aggregate and time-dependent insights into the values most important to audiences of that content.

Intuitive Motivations

The MIME conceptualizes audience values in terms of *intuitive-motivations*, or sensitivities toward behaviors providing social or personal benefit. As these intuitive-motivations are thought to be biological instincts that have developed into fully functioning motivational systems (Tamborini et al., 2020), we refer to intuitive-motivations simply as *motivations*. The MIME distinguishes between two types of motivations: *altruistic* (adopted from moral foundations theory; Haidt & Joseph, 2007) and *egoistic* (adopted from self-determination theory and research on universal human values; Deci & Ryan, 1985; Schwartz, 1994).

The *altruistic* motivations are defined as drives for behaviors that benefit *others* at a cost to one's self whereas the *egoistic* motivations are conceptualized as drives for behaviors that provide benefit to one's *self* (Tamborini et al., 2020). Although the MIME distinguishes subcategories of each motivation type, the present study focuses on examining differences in content between the higher-order categories of *altruistic* and *egoistic* motivations across the population of Walt Disney film content in an attempt to explore, on the aggregate, whether Disney heroes and villains are other- or self-focused. Both altruistic and egoistic motivations are thought to be innate and universal in all humans, however the importance individuals place on each is thought to increase depending on environmental factors, including exposure to media content (Haidt & Bjorklund, 2008).

Short-Term Component

The MIME's short-term component begins by suggesting that exposure to motivational exemplars (i.e., examples) in media can increase the *salience* of those motivations, or the importance that audiences place on those motivations relative to others (Stage 1; e.g., Hahn et al., 2022; Tamborini et al., 2016b, 2016a). Observing behaviors in media content that are motivated by the upholding of salient altruistic or egoistic motivations is thought to increase positive affect in audiences, leading viewers to like motivationally-consistent content (Stages 2 and 3). Audiences are subsequently expected to selectively choose media content consistent with content they positively appraised earlier (Stage 4). Prior work suggests the centrality of the MIME's motivations and motivational conflict between and within characters of popular narratives for audience appraisal processes (Eden et al., 2017; Hopp et al., 2020; Lewis et al., 2014).

In similar work guided by affective disposition theory (ADT; Zillmann, 2013), which states audiences will positively appraise content containing moral characters who are rewarded and immoral characters who are punished, researchers have demonstrated that film characters' exemplification of intuitive-motivational principles can predict audience appraisals and aggregate selection patterns (e.g., audience ratings and box-office earnings; Lewis et al., 2019; Weber et al., 2008; but see Grizzard et al., 2011). Yet despite the growing evidence supporting the MIME's short-term processes, little attention has been paid to investigating Stages 5 and 6, both of which have been characterized as difficult to test (Tamborini, 2013).

Long-Term Component

Drawing from Slater's (2007) reinforcing spirals framework, the MIME suggests that content's emphasis on specific motivations can lead to shared patterns of motivation salience in specific subgroups of audiences, termed *morality subcultures* (Eden & Tamborini, 2017; Tamborini et al., 2013). The MIME's long-term component suggests shared preferences for specific motivationally-laden content will influence the mass production of similar content (Stage 5), which will increase audiences' exposure to such content (Stage 6; Tamborini, 2013). The population of Disney films in the present study provides a unique opportunity to conduct an initial test of these time-dependent macro processes.

Specifically, Stage 5 suggests patterns in audiences' selection of liked, motivation-specific content will drive the production of future value-consistent content. This process assumes media creators identify patterns in audiences' appraisals and selection of content and explicitly reproduce content reinforcing these patterns. Although we know of no evidence directly testing the process described by Stage 5 in an entertainment context, several studies have demonstrated differences in content produced for different morality subcultures, including audiences of different ages (Hahn, 2022; Hahn et al., 2019; Tamborini et al., 2017), languages and cultures (Mastro et al., 2013; Prabhu et al., 2020), and political bent (Bowman et al., 2014; Klebig et al., 2021). Taken together, these studies illustrate that content popular among specific subcultures emphasizes unique patterns of intuitive-motivations.

Even without time-dependent work in this area, it is not hard to imagine that profit-driven content producers (e.g., Walt Disney Studios) would seek to create content adhering to and thus reinforcing audience subculture preferences. Early MIME work discussed this type of motivational reinforcement as a maintenance process, by which exposure to media content serves to sustain audiences' preexisting value systems (Tamborini, 2013). In line with this logic, we might expect that investigating film content over time

from one production studio, such as Walt Disney, where many factors influencing content creation are held constant, would offer a robust test of Stage 5.

The present study attempts to directly investigate the extent to which, in the aggregate, the heroes and villains of Disney films are motivated by *altruism* or *egoism*. Although we have no specific expectations of how character motivations may differ according to genre or content-rating, it is reasonable to expect that characters' emphasis on different values may shift depending on the films' genre or recommended audience age (as indicated by the Motion Picture Association of America [MPAA] rating). Thus, we ask:

RQ1: Are (A) heroes and villains driven by different motivations in Disney films, and does this differ by (B) genre or (C) MPAA rating?

Previous research suggests the mere presence of a motivation does not necessarily communicate to audiences that the motivation is desirable (Hahn, 2022). Instead, content features, such as associating a motivation with a hero or villain may moderate audiences' understandings of the motivation's desirability. In line with that logic, we might expect audiences to select and positively appraise content depicting their preferred values in a desirable light and their disliked values in an undesirable light. For instance, if audiences prefer altruistic values and dislike egoistic values, we would expect them to select and positively appraise content that depicts altruistically-motivated heroes and egoistically-motivated villains. We examine this possibility in the present study by assessing the extent to which heroes' and villains' motivations are associated with films' performance metrics and audience ratings:

RQ2: Across time, are heroes' and villains' motivations associated with greater (a) production budgets, (b) box-office earnings, or (c) audience ratings?

Aggregate patterns identified by either RQ1 or RQ2 would provide evidence consistent with the MIME's conception of morality subcultures. In addition, the more than 80-year span of Disney films offers a unique opportunity to examine the time-dependent, recursive nature of the MIME's predictions.

The final MIME process, described by Stage 6, suggests that increased production of content emphasizing specific motivations is expected to feed back into audiences' environments and increase audiences' exposure to motivation-relevant content. We know of no time-dependent research directly testing logic from this stage, although few studies provide evidence that repeated exposure to intuitive-motivations can maintain the

salience of those intuitive-motivations in audiences (Eden et al., 2014; Tamborini et al., 2010). To the extent that it is possible to provide evidence of such a relationship in a content analysis, in the present study we might expect (A) audience preferences for content that emphasizes the desirability of altruistic or egoistic motivations at one time would predict the production of future motivation-consistent content (Stage 5), and (B) the production of content emphasizing the desirability of specific motivations would predict future audience exposure to films emphasizing those motivations (Stage 6). We might expect this relationship to be strongest in Disney's family-rated films (i.e., those rated Approved prior to 1970 or G and PG after 1970), as these films may be most likely to represent content that is popular among a stable morality subculture. Thus, we attempt an initial test of the MIME's long-term stages and recursive nature by examining the population of Walt Disney family-rated films for both the time-dependent relationships predicted in Stages 5 and 6:

RQ3: (A) Do average box-office earnings of family-rated films emphasizing the desirability of altruism or egoism at one time predict the number of motivation-consistent films at future times, and/or (B) does the number of family-rated films emphasizing the desirability of altruism or egoism at one time predict the average box-office earnings of motivation-specific films at future times?

Method

Population

We content analyzed the synopses of all Walt Disney Studio films. We opted to code film synopses gathered from Wikipedia, rather than entire films themselves, for two reasons. First, despite some persisting public concern regarding its reliability and validity, Wikipedia's entries are demonstrably accurate sources of information (Giles, 2005; Jemielniak, 2019). Second, film synopses are widely used as proxies for content in previous content-analytic research investigating a range of media; including television dramas (Signorielli & Bacue, 1999), soap operas (Thompson et al., 2000), and films (Allen et al., 1997) – especially when the study's focus is on broader plot points, like the present study's focus on heroes' and villains' main motivations (also see Grizzard et al., 2011). Thus, Wikipedia film entries were deemed fit as proxies for investigating film content.

To obtain a complete list of Disney films, we consulted Wikipedia's complete list of all $N = 794$ Walt Disney Studio films here: https://en.wikipedia.org/

wiki/Lists_of_Walt_Disney_Studios_films. Films were included in the present study if they featured a single narrative and characters with dialogue. This criterion resulted in the exclusion of $n = 60$ nature documentaries, musicals without dialogue (such as *Fantasia*), concert films, and anthologies. This left $N = 734$ Disney films included for inspection in the present study. The entire list of films can be viewed on OSF here: https://osf.io/w8kda/

We then collected each film's (1) synopsis and date of release from Wikipedia, (2) Motion Picture Association of America (MPAA) rating, genre, Internet Movie Database (IMDb) votes and rating, and Rotten Tomatoes score from IMDb.com's public dataset (https://www.imdb.com/interfaces/) or OMDb.com's public API (https://www.omdbapi.com/), and (3) production budget and United States box-office gross earnings from BoxOfficeMojo.com. Descriptive information for all metrics can be found in Table 1.

Overall, 22 unique genres were reported by IMDb.com. Each film had up to seven genres associated with it. Inspection revealed several genres that were either similar or contained proportionally few films. To trim the list of genres down to more meaningfully distinct categories, we combined films in the "music" genre ($n = 79$) with "musicals" ($n = 56$), combined "mysteries" ($n = 45$) with "crime" films ($n = 69$), combined "horror" films (n = 15) with "thrillers" ($n = 86$), and deleted the news ($n = 1$) and documentary ($n = 4$) genres. This process resulted in 17 distinct genres: action, adventure, animation, biography, comedy, crime, drama, family, fantasy, history, music, romance, science fiction (sci-fi), sports, thriller, war, and western. Genre frequencies and descriptions can be viewed on OSF: https://osf.io/w8kda/

In terms of MPAA ratings, films released after 1970 fell into one of five categories: G (general audience; $n = 155$), PG (parental guidance of very young children suggested for some material; $n = 229$), PG-13 (parental guidance urged for audiences under 13 years; $n = 170$), R (restricted content that contains adult material; $n = 115$), or not-rated ($n = 22$). Films released

Table 1. Average film performance metrics.

Outcome	All films ($N =734$)	Family-rated films (Approved, G-, and PG-rated; $n = 427$)	Adult-rated films (PG-13, R, and Not-rated; $n = 307$)
Average production budget	$90.47 ($77.33)	$91.49 ($71.34)	$89.22 ($84.57)
Average domestic box-office gross	$133.62 ($236.31)	$166.19 ($290.21)	$94.54 ($138.42)
Average IMDb scores	6.39 (0.90)	6.39 (0.91)	6.38 (0.89)
Average IMDb votes	90.92 (171.20)	74.61 (145.20)	116.08 (202.68)
Average Rotten Tomatoes score	54.36% (27.67%)	59.08% (27.60%)	48.3% (26.61)

Standard deviations are in parentheses. Production budgets and domestic box-office ratings are adjusted for inflation and reported in millions of dollars. IMDb votes are reported in thousands.

before 1970 (n = 43) were listed as "Approved," which was the rating for family-oriented movies before the MPAA ratings system was created in 1970. Because films rated Approved, G, and PG are defined as movies appropriate for family viewing (see motionpictures.org and filmratings.com/ RatingsGuide), we operationalize family-rated films as those rated Approved, G, or PG, and adult-rated films as those rated PG-13 or R.

Audience ratings were operationalized as IMDb votes and ratings, as well as Rotten Tomatoes audience scores. IMDb votes offer insight into a film's *popularity*, as they represent the number of people who have seen and rated a particular film's quality on IMDb.com (Lewis et al., 2019; Oliver et al., 2014). IMDb ratings represent how much audiences *like* a film, and are defined as the average star rating out of 10 given to a film by raters on IMDb.com. Last, Rotten Tomatoes audience scores represent an additional metric of *liking*, defined as the percent of users who rated a film at least 3.5 out of 5 stars on RottenTomatoes.com.

Finally, after collecting all available information on films' production budgets and US box-office gross earnings, we adjusted each for inflation using the Consumer Price Index as indicated by the United States Bureau of Labor Statistics here: https://www.bls.gov/cpi/. Because the production budgets and box-office gross earnings were non-normally distributed, we log-transformed each. We used the inflation-adjusted log-transformed budgets and box-office grosses in all analyses.

Character Identification

After the dataset was compiled, two coders identified the main hero and main villain present in each film's synopsis, if any. To identify heroes and villains, coders were instructed to list the main protagonist (i.e., character(s) who chiefly drove the plot) and antagonist (i.e., character(s) who attempted to thwart the protagonist), respectively. To gauge intercoder agreement on character identification, coders identified the heroes and villains of n = 121 (16.49%) randomly selected films from the population. Coders agreed on 93.39% of hero identifications, and 74.38% of villain identifications. Disagreements were refereed by a separate, blind third expert coder. Following this, coders independently identified characters in half the remaining n = 613 films. This process resulted in the identification of a hero in all but one film (n = 733), and a villain in n = 497 films.

Coding Procedure

Researchers then trained two new coders on the MIME coding scheme. Coders were instructed to read each film's synopsis and extract the prominent motivation driving the identified hero and villain. For instance, in the

movie *Frozen*, the heroine Anna would be coded as motivated by *altruism* because she is primarily driven to save her sister Elsa's life. The villain, Hans, would be coded as motivated by *egoism*, as he was primarily driven to benefit himself by becoming king of Arendelle no matter the cost.

To assess intercoder reliability for the motivation coding, coders identified the motivations of heroes and villains in $n = 129$ films (17.57% of the population). Based on guidelines reported by Neuendorf for exploratory research (Neuendorf, 2018), we set the current study's intercoder agreement criteria at Kappa = .60 and 80% agreement. Coders' agreement on the identification of altruistic motivations (Brennan & Prediger's Kappa = .67; 83% agreement) and egoistic motivations (Brennan & Prediger's Kappa = .67; 83% agreement) exceeded these criteria. The remaining 605 films were divided in half and each was independently coded by one of the two coders. All disagreements were refereed by a blind third expert coder.

Finally, we combined the motivations of heroes and villains to create a new variable, called *character motivation balance*, that describes the balance of altruism and egoism between heroes and villains in each film. Specifically, if a film featured an altruistic hero and an egoistic villain (or either alone), we interpreted that as emphasizing the desirability of altruism (and undesirability of egoism) and coded the character motivation balance as a 1. If a film featured a hero and villain who were both altruistic, we interpreted that as depicting the mixed desirability of altruism and coded it as a 2. For films featuring both an egoistic hero and an egoistic villain, we interpreted that as depicting the mixed desirability of egoism and coded it as a 3. Finally, if a film featured an egoistic hero and an altruistic villain (or either alone), we interpreted that as emphasizing the desirability of egoism (and undesirability of altruism) and coded it as a 4. Altogether, the character motivation balance variable had four levels ranging from 1 (altruism desirable/egoism undesirable) to 4 (egoism desirable/altruism undesirable).

Granger-Causality Procedure and Data Selection

To test RQ3, we examined films in which the character motivation balance was coded as 1 (altruism desirable/egoism undesirable) or 4 (egoism desirable/altruism undesirable), as these films were thought to most clearly depict the desirability of altruism versus egoism to audiences, and thus would offer the most robust test of the MIME's long-term processes. We refer to films coded as 1 as "altruistic films" and those coded as 4 as "egoistic films."

To answer RQ3, we implemented a series of granger-causality tests, which assess the extent to which one variable, y, can be better predicted using the histories of both x and y than it can by assessing just the history of y. If y is better predicted using the histories of x and y than y alone, x is said to

granger-cause y. Using a data-driven approach, we attempted to test this with four models where we examined whether: (1) altruistic-film box-office earnings (x_1) predicted altruistic film frequencies (y_1), (2) egoistic-film box-office earnings (x_2) predicted egoistic-film frequencies (y_2), (3) altruistic-film frequencies (x_3) predicted altruistic box-office earnings (y_3), and (4) egoistic-film frequencies (x_4) predicted egoistic box-office earnings (y_4).

We proceeded with our tests of RQ3 by focusing specifically on films produced between 1975 and 2018 that were family-rated (i.e., those rated G or PG). Beyond the theoretical consideration of selecting films that represent content popular among a morality subculture, the decision to limit our analyses in RQ3 to family-rated films was driven by three considerations. First, a substantial number of years in our time-series existed where no adult-rated films (i.e., PG-13, R, or Not Rated) were produced, contributing to a significant number of missing data points for adult-rated films. Second, there was less variation in genre for family-rated films compared to adult-rated films, and thus examining the MIME's long-term predictions in family-rated films allowed us to hold genre constant to a greater degree than we could have if we included adult-rated films. Finally, our decision was necessitated by the (A) relatively few and sporadic number of family-rated films produced before 1975, as fewer Disney films were produced in these early years compared to post-1975 production rates, and (B) introduction of Disney+ films beginning in 2019, which do not have box-office earnings and would have inflated the number of films produced. Details associated with our data preparation for the granger models, model lag selection, and steps for determining causality can be found on OSF: https://osf.io/w8kda/

Results

Average film production budgets, box-office earnings, and audience ratings are available in Table 1.

RQ1: The Motivations of Disney Heroes and Villains

To investigate the motivations most often associated with heroes ($n = 733$) and villains ($n = 497$), we conducted a one-way chi-square test on the character motivation balance variable, $\chi^2(3, N = 708) = 248.87$, $p < .001$, $\varphi = .59$. Results suggested films most commonly featured heroes motivated by altruism and/or villains by egoism ($n = 331$; standardized residual = 11.57), whereas films featuring both an altruistic hero and villain were rare ($n = 35$; standardized residual = −10.67). The frequency of films with an egoistic hero and villain ($n = 178$), or an egoistic hero and altruistic villain ($n = 164$) were proportionally equal.

Next, to determine if the balance of heroes' and villains' motivations differed by genre, we conducted a 4 (character motivation balance: altruistic hero/egoistic villain, both altruistic, both egoistic, egoistic hero/altruistic villain) x 17 (genre) chi square test, $\chi^2(48, N = 2239) = 110.81$, $p < .001$, *Cramer's V* = .13. Inspection of residuals revealed that heroes were motivated by altruism and villains were motivated by egoism proportionally most often in action (adjusted standardized residual = 3.0), science fiction (adj. std. res. = 2.0), thriller (adj. std. res. = 2.0), and western genres (adj. std. res. = 1.9). Alternatively, heroes were motived by egoism and villains were motivated by altruism in comedies (adj. std. res. = 2.4), dramas (adj. std. res. = 3.8), romance (adj. std. res. = 2.1), and sports genres (adj. std. res. = 2.2). Romance films also featured a greater proportion of heroes and villains who were both motivated by egoism (adj. std. res. = 3.8). We found no differences between heroes' or villains' motivations by MPAA ratings (*Cramer's V* < .05), or when we collapsed MPAA ratings post-hoc into broader categories of movies that were family-rated (Approved, G, and PG ratings) compared to adult-rated (PG-13 and R; *Cramer's V* < .05).

RQ2: Character Motivations' Relationship with Film Performance and Audience Ratings

To examine whether films' character motivation balance was associated with greater film performance metrics and audience ratings, we conducted a series of ANOVA with motivation balance as the independent variable and budget, box office earnings, IMDb scores, IMDb votes, or Rotten Tomatoes scores as separate dependent variables. Details of these analyses are reported in Table 2. Results demonstrated that, regardless of villains' motivations, films with an altruistic hero earned more in the US box office, higher IMDb scores, more IMDb votes, and greater Rotten Tomatoes scores than films with an egoistic hero. In contrast,

Table 2. Differences in performance metrics by films' emphasized motivation.

Outcome	Altruistic hero, egoistic villain	Altruistic hero and villain	Egoistic hero and villain	Egoistic hero, altruistic villain
Production budget	7.86 (.36)[A]	7.92 (.35)[A]	7.79 (.41)[A]	7.63 (.38)[B]
US box-office earnings	7.89 (.60)[A]	8.02 (.47)[A]	7.68 (.75)[B]	7.46 (.84)[C]
IMDb scores	6.48 (.91)[A]	6.64 (1.00)[A]	6.23 (.92)[B]	6.34 (.84)
IMDb votes	4.40 (.91)[A]	4.48 (1.08)[A]	4.28 (.84)	4.11 (.87)[B]
Rotten Tomatoes scores	57.24% (27.66)[A]	57.47% (28.40)	49.70% (28.26)[B]	53.41% (26.16)

Different superscripts by row indicate significant differences at $p < .05$. **Production budgets** (adjusted for inflation and log-transformed): $F(3, 411) = 8.15$, $p < .001$, $\eta^2 = .06$ (95% CI = .02, .10). **US box-office earnings** (adjusted for inflation and log-transformed): $F(3, 598) = 13.19$, $p < .001$, $\eta^2 = .06$ (95% CI = .03, .10). **IMDb scores**: $F(3, 701) = 3.98$, $p = .008$, $\eta^2 = .02$ (95% CI = .001, .04). **IMDb votes** (log-transformed): $F(3, 701) = 4.32$, $p = .005$, $\eta^2 = .02$ (95% CI = .002, .04). **Rotten Tomatoes scores**: $F(3, 589) = 2.67$, $p = .05$, $\eta^2 = .01$ (95% CI = .00, .03).

films with an egoistic hero and altruistic villain were associated with lower production budgets and box-office earnings than all other film types.

RQ3: The Relationship between Audience Preferences and Content Production

RQ3 asked whether the number of films emphasizing the desirability of altruism or egoism at one time-point predicted the average box-office earnings of future films emphasizing those motivations, or vice versa. To test this, we built four granger-causality models: two for films emphasizing the desirability of altruistic motivations and two for films emphasizing the desirability of egoistic motivations. Based on the cross-correlation analyses that we describe in a supplementary file (https://osf.io/w8kda/), the max lag in our models was set at 13 years.

For the altruistic models, we examined whether (1) altruistic-emphasizing films produced at one time granger-caused box office earnings for altruistic films at later times and (2) box-office earnings in altruistic films granger-caused the number of altruistic films produced at later times. Both tests failed to reach statistical significance despite several sensitivity analyses on the number of maximum lags (all $F < 2$ and $p > .2$).

We repeated these tests with the egoistic-emphasizing film data. The tests with the 13-year lags failed to reach statistical significance ($F < 2$ and $p > .2$). We then performed several sensitivity analyses by decreasing the number of lags. With the maximum lag set at 8 years, we found that the number of egoistic films granger-caused box-office earnings of egoistic films ($F = 2.74$; $p = .04$; partial $\eta^2 = .55$). The reverse model did not reach statistical significance ($F < 1$, $p = .63$). To rule out the possibility that the observed effect was spurious, we constructed a final granger-model to examine whether the box-office earnings for egoistic films (y_4) could be predicted by *altruistic*-film frequencies (x_3). With the maximum lag set at 8 years, we found that the number of *altruistic* films granger-caused box-office earnings of *egoistic* films ($F = 2.53$; $p = .05$; partial $\eta^2 = .52$), suggesting the effect we observed may be spurious. Thus, the current findings do not provide clear evidence in support of the MIME's long-term component.

Discussion

Overall, the present study revealed that Walt Disney heroes are predominantly driven by altruistic motivations and villains are driven by egoistic motivations. Our results also suggest that audiences generally appraise films emphasizing the desirability of altruism more positively than films that depict the desirability of egoism. Our findings revealed no clear evidence in support of the MIME's long-term processes. In the next section, we discuss

the implications of our findings, review potential issues affecting our tests of the MIME's long-term component, and offer suggestions for future researchers attempting to examine these long-term processes.

Motivations Emphasized in Walt Disney Films

The present study builds on existing work that has found a prevalence of prosocial behavior in Disney films (Coyne & Whitehead, 2008; Padilla-Walker et al., 2013) by (1) examining the *population* of Walt Disney films, (2) extracting the motivations of main characters (heroes and villains), and (3) investigating not only the presence of *other-focused* motivations, but also the presence and predominance of *self-serving* motivations. Logic from ADT (Zillmann, 2013) suggests that audiences like narrative characters who do good things and dislike characters who do bad things. As the main protagonists, we would expect that the heroes may serve as a proxy for liked characters, and the villains, the main antagonists, may serve as a proxy for disliked characters. To the extent that this is the case, our findings shed light on what intuitive motivations audiences might associate as "good" and "bad," at least for characters in broad-appeal Disney films.

It is perhaps no surprise that heroes would be motivated most often by altruism; however, the fact that villains are often driven to provide themselves personal benefit is less expected. After all, egoistic motivations are not inherently perceived as "bad" by audiences, as they can suggest a character's focus on personal growth, well-being, and competence (see Eden et al., 2015). Indeed, we found the central motivations driving heroes shifts to egoism in a few film genres such as comedies, romances, and sports films. Although beyond the scope of the present study, we might speculate that villains are driven toward self-service *at a cost* to others' well-being. This builds on previous research demonstrating that villains are associated with moral violations substantially more often than heroes (Eden et al., 2015). Future researchers could extend work by Eden et al. (2015) to investigate which of the MIME's specific intuitive-motivations Walt Disney heroes and villains tend to violate, and how these violations may shape character appraisals.

Emphasized Motivations' Association with Film Performance and Ratings

Previous scholars attempting to determine the reception and the ultimate success of films have described the process as *the land of hunch and wild guess* (Litman & Ahn, 1998). That is, it is difficult to determine why some films are more successful than others. Yet extant research has begun to show evidence that intuitive-motivation content features, to some degree, can predict audiences' appraisals (Lewis et al., 2019; Weber et al., 2008; but

see Grizzard et al., 2011). The present study adds to this body of literature by demonstrating that Disney films emphasizing altruistic motivations, compared to egoistic motivations, were more positively appraised in terms of IMDb votes and ratings as well as Rotten Tomatoes scores. These findings are despite the fact that our population contained films from a span of over 80 years, suggesting that audiences' preferences for heroes who are morally motivated are largely stable. Of course, IMDb votes and ratings, as well as Rotten Tomato scores, are not time-dependent metrics, and thus are likely more indicative of modern viewers' appraisals of older films, rather than proxies for bygone viewers' appraisals of those films when they were released.

Although we found evidence suggesting that films with altruistic heroes performed better at the box office, our findings echo those of Grizzard et al. (2011) in suggesting characteristics of film quality, such as production budget, may underlie these differences. Still, the finding that films with altruistic heroes were among those associated with greater production budgets is noteworthy. This finding may suggest that creators anticipate altruistic-emphasizing films will be more successful than egoistic-emphasizing films or are simply adhering to narrative conventions that happen to be in line with ADT (i.e., protagonists do good things; see Grizzard et al., 2011; Lewis et al., 2019; Raney, 2003). Although attempting to predict box office success based on a categorical measure of films' motivation emphasis was beyond the scope of the present study, the fact that we found associations between films' motivation emphasis and indicators of films' reception points to the need for future research in this area. In particular, future scholars might attempt to predict audience reception and the box office success of broad-appeal Disney films using logic from ADT (see Grizzard et al., 2011; Weber et al., 2008) or examine the extent to which films' emphasis on specific motivations provokes enjoyment versus appreciation in audiences (Lewis et al., 2019).

The MIME's Long-term Processes

We think the absence of evidence for the MIME's long-term component in the present study could be due to a few reasons. First, it is possible that we observed no relationship between the number of films produced and box-office earnings of value-consistent films because no relationship exists. Yet several factors lead us to think this is not the case. First, multiple studies have demonstrated separate evidence for the presence of morality subcultures (e.g., Bowman et al., 2014; Hahn et al., 2017; Mastro et al., 2013; Prabhu et al., 2020; Tamborini et al., 2013, 2017), which suggests that distinct patterns of motivations' emphasis exist in content popular among different audiences. Importantly, the absence of evidence in the present study does not necessarily suggest evidence of absence. Second, both the MIME's long-term predictions

and the notion that Disney film content should be shaped by either creator preferences *or* audience preferences are face valid, as it would be surprising for a profit-driven film industry to completely ignore audience value-preferences when greenlighting films.

These observations lead us to believe that a combination of two different factors may be contributing to the present study's absence of evidence: (1) our data suggest that content in family-rated, broad-appeal Disney films is largely stable over time, and (2) our coding may not have been nuanced enough to detect subtle content differences that could shift in accordance with audiences' preferences over time. Scholars (including Tamborini, 2013) have indicated the difficulty of testing the MIME's long-term processes, but recommendations for direct tests of these processes are scarce. With the hope that future researchers will build on our initial test and attempt more robust tests of the MIME's long-term processes, we elaborate on the factors we believe contributed to this absence of evidence and offer explicit recommendations for future work testing the MIME's long-term processes in a supplementary file: https://osf.io/w8kda/

Limitations & Directions for Future Research

Several limitations exist. First, although it surpassed our criterion for acceptable reliability (Neuendorf, 2018), intercoder agreement on the altruistic and egoistic motivations could be improved. Second, our work stopped short of examining additional variables beyond motivations that may have contributed to films' reception, such as whether the film was animated, the presence of certain actors, or films' marketing budgets. Future work should take these factors into consideration, perhaps jointly with a films' budget to improve understandings in this area. Next, we note that Rotten Tomatoes audience scores and IMDb votes and scores likely represent a particular demographic of movie fans with strong opinions about films' quality. Future experimental work should seek to investigate the relationship between character motivations and film reception in a sample more representative of a typical film audience. Finally, we tested RQ3 with only a subset of films from one production company. Although we chose this subset for specific theoretical reasons and in order to mitigate other methodological concerns, this decision may have limited our ability to perform a robust test of the MIME's long-term processes.

Conclusion

This study investigated (A) the values portrayed most often by Walt Disney Studio films, (B) how emphasis on particular values may relate to films' reception, and (C) whether audience preferences for specific types of content may influence the future production of value-consistent films, or vice versa. Our findings

revealed that Disney heroes are most often driven by altruism, villains are most often driven by egoism, and films emphasizing the desirability of altruism tend earn higher audience ratings and perform better at the box office. This work builds on extant research in this area by examining the extent to which altruistic, other-focused motivations and egoistic, self-focused motivations underlie the behaviors of narrative characters in the population of Walt Disney films. We hope that by providing a more comprehensive understanding of the types of value-depictions present in the main characters of Disney films that our findings can be useful for scholars and practitioners alike.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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References

Allen, J., Livingstone, S., & Reiner, R. (1997). The changing generic location of crime in film: A content analysis of film synopses, 1945–1991. *Journal of*

Communication, *47*(4), 89–101. https://doi.org/10.1111/j.1460-2466.1997.tb02727.x

Artz, L. (2004). The righteousness of self-centered royals: The world according to Disney animation. *Critical Arts*, *18*(1), 116–146. https://doi.org/10.1080/02560240485310071

Bowman, N., Lewis, R. J., & Tamborini, R. (2014). The morality of May 2, 2011: A content analysis of US headlines regarding the death of Osama bin Laden. *Mass Communication and Society*, *17*(5), 639–664. https://doi.org/10.1080/15205436.2013.822518

Coyne, S. M., Linder, J. R., Rasmussen, E. E., Nelson, D. A., & Birkbeck, V. (2016). Pretty as a princess: Longitudinal effects of engagement with Disney princesses on gender stereotypes, body esteem, and prosocial behavior in children. *Child Development*, *87*(6), 1909–1925. https://doi.org/10.1111/cdev.12569

Coyne, S. M., & Whitehead, E. (2008). Indirect aggression in animated Disney films. *Journal of Communication*, *58*(2), 382–395. https://doi.org/10.1111/j.1460-2466.2008.00390.x

Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, *19*(2), 109–134. https://doi.org/10.1016/0092-6566(85)90023-6

De Leeuw, R. N., & van der Laan, C. A. (2018). Helping behavior in Disney animated movies and children's helping behavior in the Netherlands. *Journal of Children and Media*, *12*(2), 159–174. https://doi.org/10.1080/17482798.2017.1409245

Eden, A., Daalmans, S., & Johnson, B. K. (2017). Morality predicts enjoyment but not appreciation of morally ambiguous characters. *Media Psychology*, *20*(3), 349–373. https://doi.org/10.1080/15213269.2016.1182030

Eden, A., Oliver, M. B., Tamborini, R., Limperos, A., & Woolley, J. (2015). Perceptions of moral violations and personality traits among heroes and villains. *Mass Communication and Society*, *18*(2), 186–208. https://doi.org/10.1080/15205436.2014.923462

Eden, A., & Tamborini, R. (2017). Moral intuitions: Morality subcultures in disposition formation. *Journal of Media Psychology: Theories, Methods, and Applications*, *29*(4), 198–207. https://doi.org/10.1027/1864-1105/a000173

Eden, A., Tamborini, R., Grizzard, M., Lewis, R., Weber, R., & Prabhu, S. (2014). Repeated exposure to narrative entertainment and the salience of moral intuitions. *Journal of Communication*, *64*(3), 501–520. https://doi.org/10.1111/jcom.12098

Feng, Y., & Park, J. (2015). Bad seed or good seed? A content analysis of the main antagonists in Walt Disney and Studio Ghibli-animated films. *Journal of Children and Media*, *9*(3), 368–385. https://doi.org/10.1080/17482798.2015.1058279

Fisch, S. (2005). Children's learning from television. *TeleviZIon*, *18*, 10–14.

Giles, J. (2005). Internet encyclopedias go head to head. *Nature*, *438*(7070), 900–901. https://doi.org/10.1038/438900a

Grizzard, M., Lewis, R. J., Lee, S. A., & Eden, A. (2011). Predicting popularity of mass market films using the tenets of disposition theory. *International Journal of Arts and Technology*, *4*(1), 48–60. https://doi.org/10.1504/IJART.2011.037769

Hahn, L. (2022). Moral clarity decreases as viewer age increases: A content analysis of the moral values and reinforcement clarity depicted in popular U.S. children's television. *Journal of Children and Media*, *16*(2), 168–187. https://doi.org/10.1080/17482798.2021.1943475

Hahn, L., Tamborini, R., Klebig, B., Novotny, E., Grall, C., Hofer, M., & Lee, H. (2019). The representation of altruistic and egoistic motivations in popular music over 60 years. *Communication Studies*, *70*(1), 59–78. https://doi.org/10.1080/10510974.2018.1447493

Hahn, L., Tamborini, R., Prabhu, S., Grall, C., Novotny, E., & Klebig, B. (2022). Narrative media's emphasis on distinct moral intuitions alters early adolescents' judgments. *Journal of Media Psychology*, *34*(3), 177–187. https://doi.org/10.1027/1864-1105/a000307

Hahn, L., Tamborini, R., Prabhu, S., Klebig, B., Grall, C., & Pei, D. (2017). The importance of altruistic versus egoistic motivations: A content analysis of conflicted motivations in children's television programming. *Communication Reports*, *30*(2), 67–79. https://doi.org/10.1080/08934215.2016.1251602

Haidt, J., & Bjorklund, F. (2008). Social intuitionists answer six questions about moral psychology. In W. Sinnott-Armstrong (Ed.), *Moral psychology, Vol. 2. The cognitive science of morality: Intuition and diversity* (pp. 181–217). MIT Press.

Haidt, J., & Joseph, C. (2007). The moral mind: How 5 sets of innate intuitions guide the development of many culture-specific virtues, and perhaps even modules. In P. Carruthers, S. Laurence, & S. Stich, (Eds.), *The innate mind* (Vol. 3, pp. 367–391). Oxford University Press.

Hopp, F. R., Fisher, J. T., & Weber, R. (2020). A Graph-Learning Approach for Detecting Moral Conflict in Movie Scripts. *Media and Communication*, *8*(3S2), 164–180. https://doi.org/10.17645/mac.v8i3.3155

Jemielniak, D. (2019). Wikipedia: Why is the common knowledge resource still neglected by academics? *GigaScience*, *8*(12), giz139. https://doi.org/10.1093/gigascience/giz139

Klebig, B., Hahn, L., Tamborini, R., Aley, M., Goble, H., & Baldwin, J. (2021). The influence of prevailing regional political narratives on intuitions featured in religious messages. *Communication Reports*, *34*(1), 37–49. https://doi.org/10.1080/08934215.2020.1869281

Lewis, R. J., Grizzard, M. N., Choi, J. A., & Wang, P. L. (2019). Are enjoyment and appreciation both yardsticks of popularity? *Journal of Media Psychology: Theories, Methods, and Applications*, *31*(2), 55–64. https://doi.org/10.1027/1864-1105/a000219

Lewis, R. J., Tamborini, R., & Weber, R. (2014). Testing a dual-process model of media enjoyment and appreciation. *Journal of Communication*, *64*(3), 397–416. https://doi.org/10.1111/jcom.12101

Litman, B. R., & Ahn, H. (1998). Predicting financial success of motion pictures: The early '90s experience. In B. R. Litman (Ed.), *Motion picture mega-industry* (pp. 172–197). Allyn & Bacon.

Mastro, D., Enriquez, M., Bowman, N. D., Prabhu, S., & Tamborini, R. (2013). Morality subcultures and media production: How Hollywood minds the morals of its audience. In R. Tamborini (Ed.), *Media and the moral mind* (pp. 75–92). Routledge.

Neuendorf, K. A. (2018). *The content analysis guidebook* (2nd ed.). Sage.

Oliver, M. B., Ash, E., Woolley, J. K., Shade, D. D., & Kim, K. (2014). Entertainment we watch and entertainment we appreciate: Patterns of motion picture consumption and acclaim over three decades. *Mass Communication and Society*, *17*, 853–873. https://doi.org/10.1080/15205436.2013.872277

Padilla-Walker, L. M., Coyne, S. M., Fraser, A. M., & Stockdale, L. A. (2013). Is Disney the nicest place on earth? A content analysis of prosocial behavior in animated Disney films. *Journal of Communication*, *63*(2), 393–412. https://doi.org/10.1111/jcom.12022

Prabhu, S., Hahn, L., Tamborini, R., & Grizzard, M. (2020). Do morals featured in media content correspond with moral intuitions in media users?: A test of the MIME in two cultures. *Journal of Broadcasting & Electronic Media*, *64*(2), 255–276. https://doi.org/10.1080/08838151.2020.1757364

Raney, A. A. (2003). Disposition-based theories of enjoyment. In J. Bryant, D. R. Roskos-Ewoldsen, & J. Cantor (Eds.), *Communication and emotion: Essays in Honor of Dolf Zillmann* (pp. 61–84). Routledge.

Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human-values? *Journal of Social Issues*, *50*(4), 19–45. https://doi.org/10.1111/j.1540-4560.1994.tb01196.x

Signorielli, N., & Bacue, A. (1999). Recognition and respect: A content analysis of prime-time television characters across three decades. *Sex Roles*, *40*(7), 527–544. https://doi.org/10.1023/A:1018883912900

Slater, M. D. (2007). Reinforcing spirals: The mutual influence of media selectivity and media effects and their impact on individual behavior and social identity. *Communication Theory*, *17*(3), 281–303. https://doi.org/10.1111/j.1468-2885.2007.00296.x

Tamborini, R. (2013). A model of intuitive morality and exemplars. In R. Tamborini (Ed.), *Media and the moral mind* (pp. 43–74). Routledge.

Tamborini, R., Eden, A., Bowman, N. D., Grizzard, M., Weber, R., & Lewis, R. J. (2013). Predicting media appeal from instinctive moral values. *Mass Communication and Society*, *16*(3), 325–346. https://doi.org/10.1080/15205436.2012.703285

Tamborini, R., Hahn, L., Klebig, B., Walling, B. M., Kryston, K., & Aley, M. R. (2020). The representation of altruism and egoism in children's books. *Communication Studies*, *72*(2), 163–177. https://doi.org/10.1080/10510974.2020.1833356

Tamborini, R., Hahn, L., Prabhu, S., Klebig, B., & Grall, C. (2017). The representation of altruistic and egoistic motivations in children's TV programming. *Communication Research Reports*, *34*(1), 58–67. https://doi.org/10.1080/08824096.2016.1227312

Tamborini, R., Lewis, R. J., Prabhu, S., Grizzard, M., Hahn, L., & Wang, L. (2016b). Media's influence on the accessibility of altruistic and egoistic motivations. *Communication Research Reports*, *33*(3), 177–187. https://doi.org/10.1080/08824096.2016.1186627

Tamborini, R., Prabhu, S., Lewis, R. J., Grizzard, M., & Eden, A. (2016a). The influence of media exposure on the accessibility of moral intuitions and associated affect. *Journal of Media Psychology*, *30*(1), 79–90. https://doi.org/10.1027/1864-1105/a000183

Tamborini, R., Weber, R., Eden, A., Bowman, N. D., & Grizzard, M. (2010). Repeated exposure to daytime soap opera and shifts in moral judgment toward social convention. *Journal of Broadcasting & Electronic Media*, *54*(4), 621–640. https://doi.org/10.1080/08838151.2010.519806

Thompson, T. L., Robinson, J. D., Cusella, L. P., & Shellabarger, S. (2000). Women's health problems in soap operas: A content analysis. *Women's Health Issues*, *10*(4), 202–209. https://doi.org/10.1016/s1049-3867(00)00046-3

Wasko, J. (2001). *Understanding Disney: The manufacture of fantasy*. Blackwell.

Weber, R., Tamborini, R., Lee, H. E., & Stipp, H. (2008). Soap opera exposure and enjoyment: A longitudinal test of disposition theory. *Media Psychology*, *11*(4), 462–487. https://doi.org/10.1080/15213260802509993

Zillmann, D. (2013). Moral monitoring and emotionality in responding to fiction, sports, and the news. In R. Tamborini (Ed.), *Media and the moral mind* (pp. 132–151). Routledge.