

## Research Articles

## A Classification Scheme for Literary Characters

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## Abstract

There is no established classification scheme for literary characters in narrative theory short of generic categories like protagonist vs. antagonist or round vs. flat. This is so despite the ubiquity of stock characters that recur across media, cultures, and historical time periods. We present here a proposal of a systematic psychological scheme for classifying characters from the literary and dramatic fields based on a modification of the Thomas-Kilmann (TK) Conflict Mode Instrument used in applied studies of personality. The TK scheme classifies personality along the two orthogonal dimensions of assertiveness and cooperativeness. To examine the validity of a modified version of this scheme, we had 142 participants provide personality ratings for 40 characters using two of the Big Five personality traits as well as assertiveness and cooperativeness from the TK scheme. The results showed that assertiveness and cooperativeness were orthogonal dimensions, thereby supporting the validity of using a modified version of TK's two-dimensional scheme for classifying characters.

**Keywords:** literary characters, archetypes, classification, personality, Thomas-Kilmann, assertiveness, cooperativeness

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In what was perhaps the first treatise of literary theory, Aristotle (335 BCE/1996) in his *Poetics* argued for a prioritization of plot over character in the study of drama, an idea that has come to dominate much literary theory during the last two millennia, including in the contemporary psychological study of “story grammars” (Mandler, 1984; Rumelhart, 1975; Stein & Trabasso, 1981). Indeed, 20th century analysts of folklore developed detailed classification schemes for plot types, whereas no comparable classification of character types was proposed. For example, stories have been classified with respect to plot motifs and tale types (Motif-Index, Tale Type Index, and Aarne-Thompson-Uther Index; Dundes, 1962, 1997; Fischer, 1963; Uther, 2004), paradigmatic patterns (Lévi-Strauss, 1955), and action functions (Fischer, 1963; Propp, 1968, 1984).

It might be expected that, since plot and character are highly related (Elsner, 2012; Mateas & Stern, 2002; Si & Marsella, 2010), there would be a distinct structure to character organization within these classification methods. While some of the plot typologies include character groupings (e.g., animal stories; Fischer, 1963; Propp, 1968), these groupings are limited to superficial features of the characters (i.e., animal stories are about ducks or pigs) and say nothing about the quality of the characters (their personality, agency, etc.), nor do they offer any form of predictability (i.e., what types of characters are associated with what types of plots). As such,

there is no established method within literary theory to classify the characters around which narratives develop. Any previous attempts to classify characters are defined strictly within the bounds of the aforementioned structural analyses that feature them, restricting our understanding of characters in these analyses solely to the narrative motif or function they serve (Fischer, 1963; Propp, 1968). Indeed, short of generic categories such as round vs. flat, one-, two-, three-, or multi-dimensional, or protagonist vs. antagonist (Arp & Johnson, 2009), there has been no systematic classification of characters in literature and drama.

Perhaps the closest that previous work has come to character classification is Carl Jung's notion of an "archetype" (Chang et al., 2013, 2014; Faber & Mayer, 2009; Jung, 1921/1971, 1968), as manifested in character-archetypes in folk tales, myths, dreams, religion, fantasies, literature, and other art forms. Work inspired by Jung – spanning from mythology (Campbell, 1949) to mass media studies (Faber & Mayer, 2009) – has honed in on 12 basic character-archetypes. Golden (2011) has provided a dimensional structure to these archetypes, as organized along a wheel with four "cardinal orientations" that reflect the motivation and social values of the character. The categories and constituent archetypes are as follows: ego fulfillment (creator, hero, magician) in opposition to socialness (lover, caregiver, everyman); and freedom (explorer, outlaw, jester) in opposition to order (sage, ruler, innocent). Inspired by Jung's ideas, Faber and Mayer (2009) conducted a factor analysis of people's archetype associations to items from popular music, movies, television, literature, and classic art of the day. In doing so, they were able to identify five clusters of character-archetypes, what they labelled as knower, carer, striver, conflictor, and everyperson. Interestingly, they found that these categories were essentially independent of personality dimensions, as assessed using the Big 5 classification system.

Our work in this area, as with Golden (2011), was motivated by a desire to develop a dimensional scheme that could potentially organize all possible characters along a small number of canonical dimensions. However, we did not find the two dimensions comprising the four cardinal orientations to be a compelling and useful scheme for our work. Likewise, while we wanted to develop a scheme that could be empirically validated by participant ratings of characters, we did not want to use a data-driven approach, such as the factor analysis that Faber and Mayer (2009) had employed, but instead attempt to develop a theory-driven approach based on character concepts coming from personality theory in psychology.

The current study examines a dimensional approach to classifying characters based on a modification of the Thomas-Kilmann (TK) Conflict Mode Instrument used in applied studies of personality (Barki & Hartwick, 2001; Duane, 1989; Kilmann & Thomas, 1975, 1977; Rahim, 1985; Thomas, 1992). The TK scheme classifies Jungian personality correlates of people's conflict-handling modes along the two orthogonal dimensions of cooperativeness and assertiveness (Jung, 1921/1971; Kilmann & Thomas, 1975, 1977). Previous analyses of conflict modes support the validity of a two-dimensional scheme comprised of an evaluative factor (cooperativeness) combined with a dynamic factor (assertiveness), without the need for any additional factors (Kilmann & Thomas, 1977; Ruble & Thomas, 1976). The TK scheme shows parallels to the circumplex model of affect in emotion theory (Russell, 1980; Woods & Anderson, 2016) in that the latter too is comprised of an evaluative factor (valence) and a dynamic factor (arousal). These parallels are important since characters should, in theory, have a meaningful association with emotion (Woods & Anderson, 2016). Hence, an approach to characters that can relate personality dimensions to emotion dimensions should prove advantageous in the analysis and classification of characters. In addition, the use of conflict-handling dimensions in classifying characters opens the possibility of illuminating the relationship between character and plot, since the central conflict of a story is a prominent feature of its plot (Abbott, 2008). Thus, in selecting the TK model as the basis

of our proposed classification scheme, we are attempting to provide an underlying framework for the classification and organization of characters, as well as a basis for hypothesis testing.

In order to make the TK scheme more robust and more accommodating for classifying characters, we are proposing a key modification to the structure of the scheme. The published scheme is something of a 3 x 2 model, with 3 parametric levels of assertiveness crossed with 2 levels of cooperativeness. We propose adding a third, neutral level to the middle of the cooperativeness axis so as to make this fully a 3 x 3 scheme (this is presented in [Figure 1](#) in the Results section). The principal aim of the current study is to analyze the validity of our modification of the TK scheme as a systematic method for classifying characters in a dimensional fashion with regards to their assertiveness and cooperativeness. In order to do this, we had participants rate a diverse group of 40 characters taken from a broad range of Western literary sources along the lines of four personality dimensions. These included assertiveness and cooperativeness from the TK scheme, as well as two of the Big 5 dimensions of extraversion and conscientiousness (Costa & McCrae, 1992; Digman, 1990; Meyers, 2010). The validity of the TK scheme for classifying characters would be supported by two observations, first that assertiveness and cooperativeness were orthogonal (i.e., uncorrelated and independent) dimensions, and second, that the 40 characters populated the 9 cells of the 3 x 3 scheme in a balanced manner. A second objective of the study was to explore the relative uniformity or diversity of people's conceptions of the characters by looking at the variability of the ratings across characters.

## Method

### Participants

The sample consisted of 142 participants (114 female, 28 male, age range 18–34), who completed an online rating survey. The task took roughly 30 minutes to complete. Participants were recruited from an undergraduate participant pool and were given course credit for their participation. Prior to the start of the study, participants provided informed consent. The study was approved by the McMaster University research ethics review board.

### Procedure

A rating form was created for the purpose of this study using Google Forms. It was hosted and distributed from the authors' webpage (cntl.science). Participants were provided with a link to the host site and the rating form once they agreed to participate. Due to the absence of a scholarly repository of characters, we pseudo-randomly selected character names from a variety of Western sources. They included books and web sites with large listings of literary characters ("[Archetypal Character](#)," 2013; [Freedman, 2014](#); [Golden, 2011](#); "[List of stock characters](#)," 2012; [Propp, 1968](#); [Schmidt, 2001, 2012](#)) and dramatic characters ([Landy, 1996](#)). Our goal was to select a range of diverse but recognizable character names from the fields of both literature and drama, resulting in a final list of 40 characters. Character names were incorporated into the study if they 1) were recognized by the authors, 2) were repeated over the several sources, and 3) provided adequate examples of use in well-known literary/theatrical works. The character names were formatted on the rating form exactly as they were presented in the sources. Exceptions to this practice related to the formatting of gendered characters (e.g., heroine vs. hero, queen vs. king), as well as the removal of qualifiers from names (e.g., star-crossed lover became lover), or the simplification of names to increase recognizability (e.g., servant to the rich became butler, intellectual became professor). The full list of characters is shown in [Table 1](#).

Table 1

*Alphabetical Listing of the Literary and Dramatic Characters Examined in This Study*

Action Hero	Critic	Hero	Monster	Scientist
Artist	Crone	Heroine	Old Hag	Self
Average Joe	Cynic	Jock	Politician	Sidekick
Babysitter	Damsel in Distress	King	Priest	Snob
Bimbo	Femme Fatale	Librarian	Professor	Spoiled Child
Bully	Geek	Loner	Queen	Supervillain
Butler	Grandparent	Lover	Recluse	Superhero
Coward	Grump	Miser	Rogue	Teacher

Participants were presented with the names of the 40 characters in a random order. In order to encourage the participants to actively think about the characters when responding, we asked participants to imagine the character being performed on stage by an actor (i.e., as if in a theatrical production). The gender of the character was not specified, although it was implied in the names of a small number of the characters (e.g., queen, heroine, king, hero). Using the rating form, participants rated the 40 characters on 4 personality-trait scales (see below). Ratings were given on a Likert scale from 1 to 9, where 1 represented the character having a low degree of the given personality trait (i.e., unassertive, uncooperative, introverted, and not conscientious) and 9 represented the character having a high degree of the given personality trait (i.e., highly assertive, highly cooperative, highly extraverted, and highly conscientious). One rating was given per personality trait per character.

## Measures

Participants were asked to provide ratings on the 40 characters using 4 personality-trait scales in a fixed order. The scales were presented to participants as follows. 1) Assertiveness (i.e., self-assured without being aggressive): scores range from unassertive to highly assertive. 2) Cooperativeness (i.e., a character being agreeable in their relations): scores range from uncooperative to highly cooperative. 3) Extraversion (i.e., level of outgoingness): scores range from introverted or not extraverted to highly extraverted. 4) Conscientiousness (i.e., being efficient and organized): scores range from not conscientious (i.e., easy-going or disorderly) to highly conscientious.

## Analyses

The raw data were transferred from Google Forms to a Microsoft Excel spreadsheet. They were screened for missing values and outliers, of which none were found. Ratings were collapsed across participants, and repeated measures analysis of variance tests (RM-ANOVAs) were run to determine if there was an effect of gender on any of the four rating scales. Next, character ratings were collapsed across participants, and the mean and standard deviation were determined for each character. Pearson product-moment correlation analysis and Hoeffding's *D* tests were run on the mean character ratings for each trait to explore the correlations and independence, respectively, of each pair of trait-variables. All statistical data analyses were run in R 3.4.0 (R Core Team, 2013).

From the original 4 traits, the 2 least correlated and most independent traits – as established by the Pearson product-moment correlation and Hoeffding's *D* analyses – were selected to create a two-dimensional scheme.

In order to create a 3 x 3 structure, we employed a binning process such that Likert ratings of 1-3 were considered as *low*, 4-6 as *medium*, and 7-9 as *high*. Next, each of the 40 characters was assigned by the authors to one of the 9 cells of the scheme based on its mean ratings (rounded to the nearest integer) for the two chosen dimensions.

## Results

The means and standard deviations of the ratings for each character for the 4 personality traits are summarized in Table 2. As described in the Introduction, the major objective of the current study was to test out the notion that assertiveness and cooperativeness are two orthogonal personality dimensions that can be used to classify characters. To investigate this, we examined pairwise correlations among the 4 personality scales used in the study, as well as ran Hoeffding's *D* test to explore independence among the variables.

Table 2

Mean Personality Ratings for All Characters With Standard Deviations

Character	Assertiveness		Cooperativeness		Extraversion		Conscientiousness	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Action Hero	8.01	1.42	7.11	1.94	7.68	1.66	6.65	2.07
Artist	5.46	2.16	5.25	1.83	4.23	2.27	4.09	2.35
Average Joe	5.07	1.08	5.50	1.12	5.14	0.87	4.87	1.26
Babysitter	6.79	1.51	7.19	1.49	6.32	1.49	6.69	1.73
Bimbo	4.34	2.50	5.27	2.40	6.92	2.09	2.92	2.08
Bully	6.78	3.03	1.94	1.60	6.18	2.23	3.11	1.91
Butler	4.73	2.43	7.89	1.66	4.51	2.07	7.57	1.98
Coward	2.30	1.89	4.17	2.72	2.72	1.97	3.27	2.14
Critic	7.40	2.12	3.89	2.12	5.58	2.33	6.64	2.26
Crone	5.56	2.04	3.87	2.10	4.30	2.01	4.82	2.04
Cynic	6.32	2.23	2.98	1.77	4.64	2.28	5.22	2.23
Damsel In Distress	3.59	2.12	5.87	2.42	4.80	1.91	3.73	1.91
Femme Fatale	7.32	1.83	5.34	2.17	6.93	1.84	6.18	2.07
Geek	3.87	2.52	5.66	2.38	2.49	1.77	6.96	2.49
Grandparent	6.13	1.75	7.15	1.73	5.97	1.86	5.96	2.39
Grump	5.13	2.46	2.37	1.70	3.33	1.97	3.87	2.05
Hero	7.91	1.55	7.83	1.48	7.88	1.32	7.13	1.99
Heroine	7.68	1.68	7.10	1.98	7.46	1.70	7.20	1.82
Jock	6.91	2.26	5.11	2.19	7.99	1.43	3.80	2.23
King	8.18	1.64	5.09	2.48	7.53	1.58	6.64	2.08
Librarian	6.23	2.30	6.58	2.15	3.87	2.10	7.80	2.00
Loner	2.59	2.05	3.66	2.06	1.53	1.18	4.39	2.25
Lover	6.44	1.72	7.22	1.59	6.39	1.76	5.72	1.98
Miser	6.03	1.95	3.73	2.05	4.51	2.04	5.98	2.15
Monster	6.58	2.71	2.03	1.66	4.88	2.76	3.19	2.21
Old Hag	5.27	2.60	2.85	1.72	3.39	2.05	3.66	2.25
Politician	8.20	1.49	5.04	2.53	7.97	1.60	7.23	1.81
Priest	6.55	2.09	6.90	2.16	6.26	1.92	7.08	1.87
Professor	7.72	1.45	6.44	1.91	6.45	2.11	7.36	1.98

Character	Assertiveness		Cooperativeness		Extraversion		Conscientiousness	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Queen	8.20	1.49	6.04	2.42	7.36	1.55	7.85	1.34
Recluse	3.42	2.12	3.47	2.13	2.40	2.06	4.32	2.40
Rogue	6.51	2.20	3.61	2.20	5.37	2.30	5.12	2.34
Scientist	7.04	1.77	6.20	1.95	4.22	2.15	7.35	2.24
Self	6.02	1.85	7.07	1.54	5.05	2.05	6.45	1.94
Sidekick	4.89	2.18	7.85	1.67	5.56	1.83	5.59	2.17
Snob	6.66	2.48	2.42	1.68	5.99	2.29	5.01	2.44
Spoiled Child	6.70	2.70	1.72	1.23	6.73	1.99	3.42	2.18
Supervillain	7.27	2.66	2.15	1.80	6.13	2.55	5.98	2.79
Superhero	8.07	1.55	7.99	1.53	7.90	1.69	7.25	2.06
Teacher	7.58	1.45	7.06	1.64	7.09	1.36	7.49	1.74

## Correlations Between Personality Dimensions

Pearson product-moment correlations for each pairwise combination of the 4 personality-trait variables are shown in Table 3. There were strong and significant correlations between the ratings for assertiveness and extraversion, as well as between the ratings for cooperativeness and conscientiousness, with the latter also being highly correlated with extraversion. Of interest to our research question for the present study, there was a weak and non-significant correlation between ratings for assertiveness and cooperativeness ( $r(38) = 0.19$ ,  $p = .24$ ). This result indicates that these two personality features are uncorrelated and thus, potentially, orthogonal. The lack of correlation between the personality dimensions of assertiveness and cooperativeness is, in addition, the predicted negligible correlation based on the TK scheme. These variables were therefore deemed uncorrelated in a linear context, but not necessarily independent. Their independence was assessed using Hoeffding's  $D$  test.

Table 3

*Pearson Product-Moment Correlation Coefficients Between the 4 Personality-Trait Ratings of the 40 Characters*

Measure	1	2	3	4
1. Assertiveness	–			
2. Cooperativeness	0.19	–		
3. Extraversion	0.81***	0.35*	–	
4. Conscientiousness	0.55***	0.66***	0.34*	–

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Hoeffding's $D$ Test for Dependence

A Hoeffding's  $D$  test for dependence was used to further examine the relationship between the uncorrelated personality-trait scales of assertiveness and cooperativeness. The null hypothesis for Hoeffding's  $D$  test is that variables are independent of one another. A significant difference in  $D$  results in the alternative hypothesis that the variables are dependent. Values of  $D$  range from -0.5 to 1, such that the smaller the value of  $D$ , the more independent the variables are. The  $D$  statistic is robust against a wide variety of alternatives to independence (Lafaye De Micheaux & Bilodeau, 2008).

The ratings for assertiveness and cooperativeness failed to reject the null hypothesis and were thus deemed independent of one another ( $D = 0$ ,  $p = .40$ ). Overall, the results supported the predicted independence of assertiveness and cooperativeness from the TK scheme, suggesting the possible utility of these two dimensions in a scheme for classifying literary characters.

In order to visualize the placement of the 40 characters in our modified version of the TK scheme, we binned the character ratings to conform to a 3 x 3 scheme (see Methods for details). The results are shown in Figure 1. In general, there was a good spread of characters throughout the top two rows of the scheme, but relatively few characters in the bottom row of low assertiveness. The lower right cell (i.e., high cooperativeness + low assertiveness) was empty. Importantly, the figure shows reasonable associations among conceptually similar characters, for example bully with monster, hero with priest, and coward with loner. Participants rated Average Joe as medium in both dimensions (a good quality-control), while they rated themselves as medium in assertiveness but high in cooperativeness.

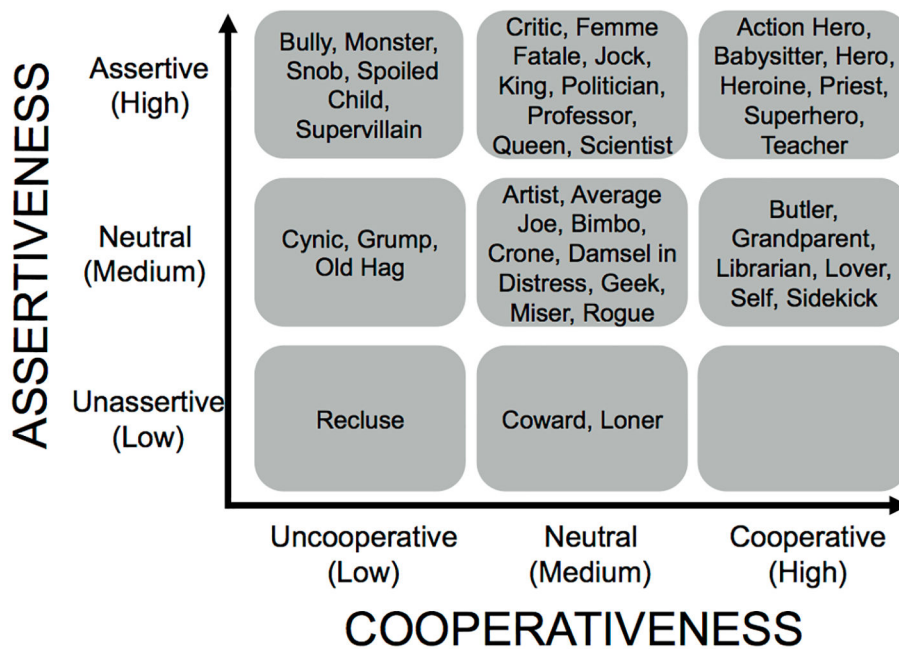


Figure 1. Placement of the 40 characters in the modified TK Scheme. Characters are categorized by their binned means on three levels (low, medium, and high) of the two orthogonal personality dimensions (assertiveness and cooperativeness) in our 3 x 3 modification of the TK scheme.

### Variability of Character Concepts

A second important issue that we wanted to address was the variability of how the characters were conceived by participants. We used the standard deviation of the ratings as a measure of this variability. The means and standard deviations of the ratings were calculated for each of the 40 characters along the two orthogonal personality-trait dimensions of assertiveness and cooperativeness. The characters were then plotted with respect to the means of each personality dimension and then color coded with regard to the magnitude of the standard deviations for assertiveness or cooperativeness in separate analyses (see Figure 2 and Figure 3, respectively). This becomes a measure of how uniform or diverse people's conceptions are of particular literary characters.

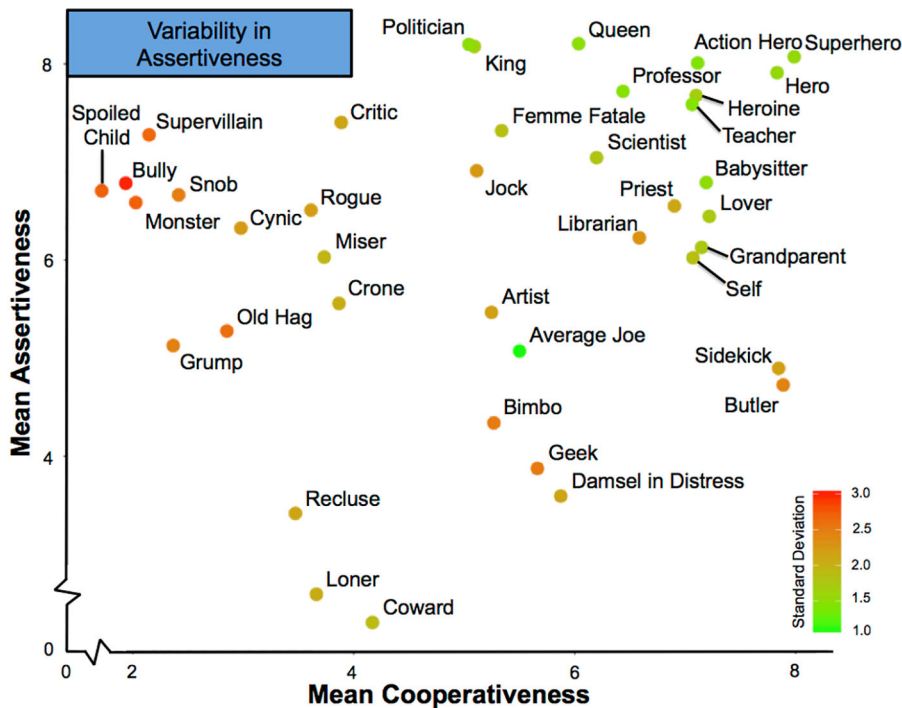


Figure 2. Variability of character ratings for assertiveness. Characters are plotted with regard to their mean assertiveness and cooperativeness. The color-coding denotes the standard deviation for the assertiveness ratings.

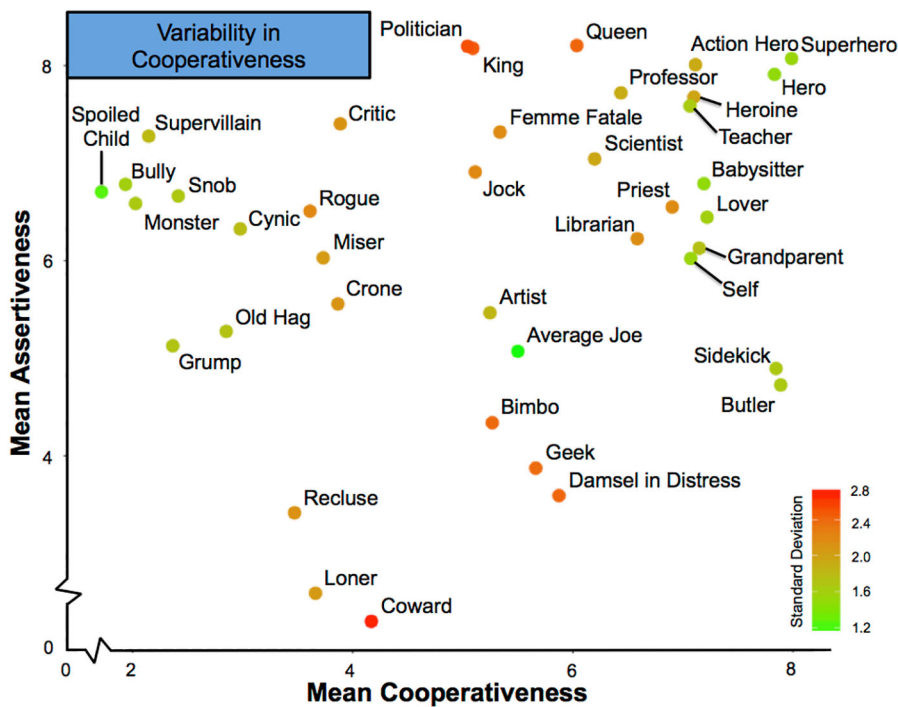


Figure 3. Variability of character ratings for cooperativeness. Characters are plotted with regard to their mean assertiveness and cooperativeness, exactly as in Figure 2. The color-coding denotes the standard deviation for the cooperativeness ratings.



The pattern for assertiveness revealed a possible interaction with cooperativeness ratings: standard deviations for assertiveness increased as cooperativeness ratings decreased, and vice versa (Figure 2). This finding indicates that participants had more-uniform conceptions of a character's assertiveness the higher the character was rated on the cooperativeness dimension, but less uniform the lower it was rated. This is demonstrated by the increase of green color towards the right side of Figure 2. Hence, a character like teacher showed low variability in assertiveness ratings, whereas a character like spoiled child showed high variability.

The standard deviations for cooperativeness showed a different type of pattern. They were lowest at the extremes of the scale and highest in the middle, as shown by the highest concentration of red in the center of Figure 3. This finding suggests that participants had a more uniform conception of a character's cooperativeness the more extreme this cooperativeness was (either low or high), but a more variable and less certain conception when the cooperativeness was neutral. Hence, a character like superhero showed low variability, whereas a more neutral character like king showed high variability.

Both analyses show that participants had variable conceptions of the characters, but that this variability was apportioned differentially with respect to assertiveness and cooperativeness. Variability for assertiveness was highest for low-cooperative characters, while variability for cooperativeness was highest for cooperatively-neutral characters.

## Ratings as a Function of Participant Gender

As the sample of participants turned out to be predominately female (80%), we were interested in examining if gender had a significant effect on the personality scales employed. One-way repeated measures ANOVAs were conducted on each of the four rating scales using Bonferroni-adjusted alpha levels of 0.0125 per test (0.05/4) to correct for multiple comparisons. There were no significant effects of gender on any of the four rating scales.

## Discussion

### Toward a Classification of Character Types

The results of the present study validated the predicted orthogonality of the two dimensions present in the TK scheme, as well as showed that the corpus of 40 characters demonstrated a reasonable spread across the cells of our modified 3 x 3 scheme. This supports our contention that the modified TK scheme offers a novel means of classifying characters with regards to the personality dimensions of assertiveness and cooperativeness. Given that the plots of stories are often described with respect to the central conflict between a protagonist and an antagonist (Abbott, 2008; Arp & Johnson, 2009), a classification scheme of characters rooted in conflict mode dimensions (Kilmann & Thomas, 1975, 1977) provides an appropriate association with literary features that unite character and plot. In fact, the central conflict can be conceptualized in terms of the contrastive personality features of the protagonist and antagonist, most especially with respect to cooperativeness, thereby making them complementary characters. Future studies could focus on the interaction between specific characters and the outcomes of these interactions, as perceived by a reader or audience member.

We predicted that assertiveness and cooperativeness would be the most orthogonal personality dimensions out of the four tested. Our rating study confirmed this prediction. As a result, we have chosen to include assertiveness and cooperativeness as the two dimensions in our predictive scheme. This pairing is supported by previous research on personality as well as emotion. The two-dimensional pairing between assertiveness and cooperativeness has been validated by decades' worth of research on the TK scheme (Barki & Hartwick, 2001; Duane, 1989; Kilmann & Thomas, 1975, 1977; Rahim, 1985; Thomas, 1992). Furthermore, assertiveness has a desirable connection with the emotional dimension of intensity/arousal in the circumplex model of affect (Russell, 1980; Woods & Anderson, 2016), thereby making it a robust candidate for future experimental and conceptual analyses of characters that attempt to unite personality and emotion. Future studies could expand upon this notion, not only by examining the parallels between personality and emotion with regard to characters, but also by examining other dimensional parameters for classification.

An important finding of the results shown in Figure 1 is that the 40 characters were distributed relatively smoothly across the scheme. However, we observed that there was an uneven distribution of characters along the assertiveness axis (i.e., more characters at the positive extreme), whereas this was not the case for the cooperativeness axis (i.e., a more even distribution). We would like to offer a provisional interpretation of these trends. The skewed distribution of characters in the direction of medium to high assertiveness suggests that the characters of stories, whether they are cooperative or uncooperative, are required to have assertiveness in order to propel the story's sequence of events. This is related to their sense of motivation, agency, efficacy, and engagement, something that unassertive characters generally lack. On the other hand, the even distribution of characters on the cooperativeness dimension suggests that literature depends on a *balance* between good and bad characters. In fact, as mentioned above, it is the pairing of characters along opposing lines of cooperativeness that often establishes the central conflict of a plot. This serves to convey the moral message of a story and to make literature an important vehicle for the modeling of prosocial behaviors in all human cultures (Gottschall, 2012).

### “Ethotypes” as Character Variants

Historical and cross-cultural analyses of literature show that stock characters do not have invariant properties across stories, but instead vary in their personality features across traditions and time periods. The character of a king can be benevolent or despotic. Likewise, the character of the snob can be charming (e.g., a dandy) or persnickety (e.g., a critic). It stands to reason that some characters can have only a restricted range of properties in order to be those characters (e.g., a bully or hero), while others can show a diversity of features across stories (e.g., a king or snob). We examined the variability of character ratings across characters in our dataset in order to determine which ones showed the most-variable and least-variable features with respect to both assertiveness and cooperativeness. The results showed that character conceptions, as measured by personality dimensions, did indeed vary across characters, and that the patterns differed between assertiveness and cooperativeness (Figures 2 and 3).

We would like to propose a formalization of the concept of a character-variant. The ancient Greek word for character is “ethos”, applying both to one's own moral character and to the characters that are found in theatrical dramas (Storm, 2016). Borrowing terminological practice from genetics (Jobling, Hurler, & Tyler-Smith, 2004), we would like to propose two new terms applying, respectively, to the variants and to the overall category of a character, what we will call *ethotype* and *ethogroup*. For example, the character of king is

comprised of a series of king ethotypes that vary along a number of personality and behavioral dimensions. The benevolent king is one ethotype, the despotic king is another, and the collection of all king ethotypes makes up the ethogroup of king, where the average character (or character-archetype) might be thought of as the mean variant of the ethogroup. The present study showed that a basic measure like the standard deviation can effectively capture the variability of character conceptions in a rating study like ours.

## Limitations

Potential limitations of this study are found within its scope of a) characters and b) ratings scales. Although a large cohort examined a large corpus of characters, the findings reported here are preliminary, as there are many characters to be examined across the both the literary and dramatic fields as well as across cultures. Future studies should aim to replicate the findings reported here as well as expand the corpus of characters to include a more culturally diverse sample.

Next, only two out of the five Big 5 personality scales were selected and tested directly. Evidence suggested that openness – a Big 5 dimension that was not examined here – is highly correlated with assertiveness and could thus be omitted (Kirst, 2011), while agreeableness is similar to TK's cooperativeness. Future studies should endeavour to include a larger number of dimensions to further replicate and validate the taxonomic scheme.

## Conclusions

We have developed the first systematic scheme for classifying literary characters, basing it on personality dimensions. The results of the rating study showed that the two dimensions of the scheme were uncorrelated and independent. Furthermore, the 40 characters that were analyzed in the study showed a reasonable spread across the cells of the scheme, although with an underrepresentation in the low-assertive cells, in keeping with the idea that narratively-interesting characters require a certain minimum degree of assertiveness in order to propel a story. Finally, the analysis of character ratings showed that people's character conceptions varied, suggesting that there can be a multitude of variants for a given character, something that we refer to using the neologism "ethotype".

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## Competing Interests

The authors have declared that no competing interests exist.

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