



Avengers, Disassemble! Analyzing Personality Types and Success in Marvel Characters

Yifat Winkler

College of Liberal Arts and Sciences, University of Florida

Dr. Marina A. Klimenko, Department of Psychology

Abstract

Popular culture both reflects and shapes audience beliefs. Content analysis of blockbusting movies can teach us about public attitudes. This study examined underlying themes pertaining to personality types, as they are reflected in movies produced by the largest franchise in history, Marvel Cinematic Universe. Twenty-seven Marvel characters were assessed for their personality traits and received a rating for each of the big five personality aspects. To test which personality type was endorsed by the Marvel narratives, each character's success was measured by examining the outcomes for that character. Successful outcomes were defined by levels of goal achievement in two categories, somatic goals and reproductive goals. The hypothesis was that being a commercial art-product of Western culture, Marvel storylines will follow neoliberal ideas, and award success to characters that align with the entrepreneurial personality type. That is, characters that exhibit high levels of openness, stability, extraversion, and conscientiousness, but not high levels of agreeableness. Results showed that the strongest predictor for success was openness to experience. It was followed by a second predictor, emotional stability. No correlation was found between extraversion or conscientiousness and success. Agreeableness was found to be moderately correlated to somatic success. The hypothesis was partially supported, indicating there might be some influence of neoliberal values on the Marvel character depiction.

Keywords: Content Analysis, Marvel Cinematic Universe, Personality, Success.

Introduction

Analysis of the themes that underly blockbusting films offers us a peek into the collective psyche that popularized them. The content of popular entertainment is not merely a reflection of public beliefs; it is also a potential source of influence on the public. Depiction of characters and plotlines could normalize certain personality traits or condemn them. When searching for a broad mirror by which to examine the reflection of the Western culture, the Marvel Cinematic Universe (MCU) is a leading candidate. Since its debut in 2008, MCU has taken central stage in entertainment, becoming the highest grossing movie franchise in history (Carollo, 2024, Nash

Information Services, 2023), with 55 titles viewed by hundreds of millions. As a high-grossing franchise, Marvel is catering to the public palate, while possibly affecting it in the process.

The MCU has been subject of interpretation and critique regarding its political, social, and even environmental stands (Carnes & Goren, 2023). However, there has not been content analysis where concepts are quantified and tested to reveal the saga's themes. This study searched for themes pertaining to the psychological messages embedded in MCU stories. The focus was to examine, objectively, which personality types are endorsed in the MCU by testing correlations between specific personality traits and the success rates of the characters studied.

The hypothesis of this study believed the traits that would predict success for a character will be aligned with what has been named by Obschonka et. al. (2013) the "entrepreneurial personality type." This personality type has high levels of openness, emotional stability, extraversion, and conscientiousness, but lower levels of agreeableness. The type was identified in extensive research (N>600,000) of personality types in Western culture (Obschonka, 2013). Obschonka et. al. (2013) documented a rise in its prevalence since the 1970s. Furthermore, the entrepreneurial type has been described in theoretical literature as the personality type preferred and encouraged by neoliberal systems (Chung, 2017; Adams et al., 2019).

In a nutshell, neoliberalism is an economic agenda which sees dysregulation of markets as a means for overall economic growth. In pursuit of optimal market expansion, the neoliberal agenda aims to liberate commerce from growth-constraining principles such as wealth distribution and profit limitation (Smith, 2023). In accordance with opposition to governmental regulation, the neoliberal approach shifts the responsibility to one's wellbeing from the collective to the individual (Chomsky, 1999). Psychological attitudes rooted in neoliberalism encourage self-reliance, self-regulation, and self-improvement as keys to wellbeing (Adams et. al., 2019). Hence, personality types that show independence and self-reliance would be preferred by neoliberal systems.

Marvel Comics was launched during the Cold War, in the summer of 1961: the same summer that saw the building of the Berlin Wall. The franchise then continued to develop as a publisher of comic books, with many of the plot lines staged against that backdrop. In the decades since then, and particularly after the collapse of the Soviet Union, neoliberalism took hold as the dominant worldview in politics and economics in the West (Campbell, 2001). This study

hypothesizes that popular Marvel movies will reflect neoliberal themes by demonstrating that more success is achieved by characters possessing high levels of openness, stability, extraversion, and conscientiousness.

Methods

Research Design and Procedures

The underlying themes in the MCU were studied through content analysis. Focusing this examination on messages that are both widespread and relevant to today's viewers, the sample of movies to be studied was defined by crossing the list of films that were high-grossing (over 1 billion dollars) with the list of movies released in the last 10 years. These criteria yielded a list of eight movies, which were watched fully while coding (Appendix A).

Selecting characters to observe was based on the centrality of the character to the plot and having sufficient information to conduct assessments. The official poster of each movie was used to determine the centrality of the character to the plot. The second requirement for selection was based on a design used by Johnson, Carroll, Gottschall, & Kruger (2011) in their study of Victorian era novels. In that study, a list of twelve fundamental human goals was comprised, based on evolutionary approaches to psychology. The goals were divided into two types, somatic and reproductive. Somatic goals pertain to the body (soma), or the self, for example survival, or increase of power. Reproductive goals pertain to relations between individuals, such as attracting and attaining a partner, or promoting survival of kin. Characters who had at least five goals were included in the study. Characters that were portrayed as background figures to the level that viewers cannot discern their goals, were not studied. The rationale behind this number was that any background character could be assumed to be interested in some configuration of four basic goals pertaining to survival, romance, power, and material gain. Twenty-seven characters met the criteria (Appendix B).

Variables and Measures: Assessing Personality Traits and Success Rates

The predictors in this study were the five personality aspects, which were assessed using the Ten Item Personality Inventory scale (TIPI) (Gosling, Rentfrow, and Swann, 2003). The response variable was the levels of success the narrative awards each character with. Success was assessed by measuring how the characters achieved either the somatic or reproductive goals

identified by Johnson et al. (2011). The narratives analyzed in this study required adaptations to accommodate the difference between the MCU storylines and Victorian era novels. Three goals that pertained to human heroes but not to fictional superheroes were eliminated. In addition, the adult goal of “short-term mating” was replaced with its PG-13 equivalent of “appearing attractive/attracting short-term romantic partner.” Lastly, to balance the scales and have five goals of each type, a reproductive goal was added, “repairing a damaged relationship.” Defining this goal was based on the atonement step of the hero’s journey (Campbell, 1949) and on the researcher’s observation that having a damaged relationship from the past appeared to be a recurring theme in the superhero narrative.

The rating of success in this study was comprised of ten questions. Five questions checked the character’s success in reaching somatic goals: survival, appearing attractive, gaining or keeping wealth, gaining or keeping power, and acquiring wisdom or knowledge. Five additional questions focused on reproductive success: Finding or keeping a spouse, nurturing or fostering offspring or kin, aiding non-kin, forming friendships or alliances, and repairing a damaged relationship. For each goal an evaluation was made rating to what level it was accomplished, out of 5 possibilities: 1- not at all; 2 – somewhat; 3 – mostly; 4 – completely; NA – this was not a goal for this character.

To test the reliability and reproducibility of the questionnaire, three of the characters were rated by a second rater who assessed their personality traits and success levels. The intraclass correlation coefficient (ICC) based on an average measure ($k = 2$), consistency agreement, and a two-way random-effects model was calculated to determine the agreement between two coders on personality and success of the chosen characters. The ICC for personality was .153, which is low (e.g., Koo & Li, 2016). The ICC for rating of success was .246, which is also considered low.

Coding Scheme and Data Analysis

The questions pertaining to personality traits were calculated to yield ratings of five personality dimensions, according to the TIPI scale instructions. The success levels were calculated by averaging the level of goal-achievement for each character in each of the categories (somatic and reproductive). The average was reached by including only the goals that were indeed desirable goals from the perspective of the character. That means a goal that was not

achieved because the character did not pursue it was coded NA, and was not part of the calculation of success level. For instance, many of the characters in the MCU are not interested in wealth, and so there were only four goals in the somatic category that pertain to them, and these four results were used to calculate their level of somatic success.

The calculation of data yielded five predictors, the personality traits, which were each rated on a scale of 1-7. There were two criterion variables, the two types of success, which were each rated on a scale of 1-4. The study used the Pearson test to check the correlation of each of the five personality traits with each of the types of success.

Results

Twenty-seven Marvel characters were observed and coded for success. Ten of the characters were female, and 17 were male. Seventeen of the characters were superheroes, five were human protagonists, and five were villains. The means for personality traits of extraversion, agreeableness, and openness were 3.94, 4.01, and 4.53 respectively. These mean values indicate a normal distribution. The means for emotional stability and conscientiousness leaned to the high side, 5.44 and 6.02 respectively. The variance for conscientiousness was lower than for other traits, indicating this group of characters are clustered closer around this high mean.

Table 1 presents the correlations between the five personality dimensions with each of the two types of success. The strongest predictor for success of both types was openness to experience; a finding which supports the hypothesis. The Pearson correlation coefficient for openness and somatic success was $r=.630, p < .001$. The Pearson correlation coefficient for openness and reproductive success was $r=.578, p = .002$.

A second predictor was emotional stability, which was correlated to both types of success. The Pearson correlation coefficient pointed to moderate correlation: $r=.393, p = .043$ for stability and somatic success and $r=.399, p = .039$ for stability and reproductive success. These findings support the hypothesis regarding emotional stability.

The hypothesis that success will be correlated with high levels of extraversion and conscientiousness was not supported. The Pearson coefficient indicated very weak (albeit positive) correlations between each of these personality traits and the rates of goal achievement.

Counter to the hypothesis, which excluded agreeableness from the traits correlated to success, a partial positive correlation was found, pertaining only to somatic success. The Pearson correlation coefficient of agreeableness and somatic success was $r=.482$, $p= 0.11$. The personality trait of agreeableness was not significantly correlated to Reproductive success.

Table 1. Correlation between personality aspects and success in goal-achievement (N=27)

Success	Extraversion	Agreeableness	Conscientiousness	Stability	Openness
Somatic Goals	.601	.011*	.141	.043*	<0.001***
Reproductive Goals	.378	.058	.276	.039*	0.002**

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

It should be noted that the results for the reliability test showed low agreement between the main rater (the author) and the secondary one.

Discussion

The hypothesis of this study was that the MCU storylines and character depiction will connect higher levels of success with high levels of openness to experience, emotional stability, extraversion, and conscientiousness. The results show that openness stands out as the strongest predictor of success in the MCU. Captain America exceptionally demonstrates both this trait and the success it entails. He scores 7 in the rating of openness: he volunteered for an experiment, adapted to a new body, accepted various roles from entertainer to warrior, and successfully adjusted to living in different eras. His success is rated a perfect 4 in both aspects. He fully achieves somatic goals of survival, increasing power, and gaining wisdom, and reaches reproductive roles of forming the alliance of the Avengers, rescuing his dear friend Bucky, and reuniting with his beloved Peggy.

Emotional stability was found to be another predictor of both types of success, to a moderate degree. To draw a negative example, antagonists, like Kill Monger in *Black Panther* and Mysterio in *Spider-Man Far from Home*, display outbursts of frustration, rage, and pain, and scored 3.5 and 1.5 respectively on emotional stability. They are both condemned to death by the storyline and suffer other negative outcomes. The success levels of the two villains 2.10 for Mysterio and 1.5 for Kill Monger. The lack of emotional stability is connected to negative

outcomes even for a protagonist. A stark example is the character of Spider-Man. As a teenage superhero, Spider-Man exhibits strong emotional reactions. He displays a range of responses from euphoria and excitement to anxiety and overwhelming fear, which reflects in an emotional stability score of 2.5. At the conclusion of the films, Spider-Man survives and proceeds to live the life of a superhero, but he has lost his caregiver (Aunt May), his patron (Iron Man), and his three closest relationships (MJ, Ned, and Happy). His path to higher education is obstructed, and his living situation has downgraded. His level of goal achievement is rated below 3.

The hypothesis was not supported for extraversion and conscientiousness. No significant correlation was found between either of these personality aspects and success. This could mean that the MCU's worldview is not completely aligned with neoliberal agenda, and at least in Phase 3 of the franchise's movies the entrepreneurial type is not fully endorsed. However, this lack of correlation might stem from the method by which the study examined which characters are endorsed. This study design checked success only in terms of goal achievement. There might be other cinematic expressions by which a character type could be endorsed, such as depicting the character as attractive, highlighting the character with more lines and shots, or enhancing the character's appeal with punchlines and relatable moments. It is possible that a character would not be awarded positive outcomes, but still be perceived as a model for desired traits and behaviors.

Another procedural element that might have obscured a possible correlation was the method for assessing conscientiousness. When assessing characters for this trait, coders did not judge the character's morality, only checked if they verbalize their moral motivation and align their actions with their morals. Coding in this manner led to the finding that conscientiousness was high across the board. The sampled characters had a mean of 6.02 on a 1-7 scale. This central tendency carries some meaning since it indicates that in the MCU, attention is directed to understanding characters' moral stance (and not just their motivation) and furthermore, that this ethical stand is often declared in the script.

A third predictor of success, which was not included in the hypothesis, is agreeableness. This personality trait was moderately correlated to somatic success. This connection is surprising, since logic suggests that agreeable characters will have reproductive success, i.e., reach goals in the field of relationships. Counter to that intuition, the results show that characters like Sam

Wilson from *The Avengers*, and Mantis from the *Guardians of the Galaxy*, who are ranked as highly agreeable, enjoy achieving mainly somatic goals. Both have survived and increased their power and their wisdom, but on the reproductive list of goals much has not been achieved. They do not find love, do not foster offspring, do not repair damaged relationships, and only partially aid non-kin.

The hypothesis that Marvel movies are aligned with neoliberal agenda, and therefore award success to heroes that follow the entrepreneurial personality type, has only been partially supported when checking level of goal achievement. The goal-achieving hero, as depicted in the MCU, is indeed very open to experience and emotionally stable, and in that the characters do display the self-reliance endorsed by neoliberalism. The message is further reinforced by the negative examples. Characters who show rigidity and emotional instability serve as a cautionary tale as viewers witness their negative outcomes. However, unlike the "entrepreneurial type" identified by Obschonka et al. (2013), the successful Marvel characters are also agreeable, and not necessarily more extraverted or conscientious than the unsuccessful characters.

Limitations

The main limitation of this study was the low level of reliability of the main measures. The ICC tests revealed poor agreement between the two coders. It is possible that the second coder was insufficiently trained to use the coding scheme. Alternatively, the coding scheme might be inherently flawed or not detailed enough which might have led to different ratings between the coders.

A second limitation lies in the sampling context. This study's focus was on central themes, and thus only 27 characters in 8 highly popular movies were observed. It has been pointed out by critics that in the off-center Marvel movies, more room was given to representation of minorities (Brown, 2016). Perhaps in these films, there is also more representation of non-mainstream, collectivistic values like interdependence, solidarity, and constructive awareness of mental health issues (as opposed to championing emotional stability).

Continued Research

The central finding of this study is that the trait of openness is strongly endorsed by this American superhero franchise. Since popular culture can potentially carry an instructive

message, it would benefit fields like education and psychology to examine further what messages are supported. For example, is openness to experience treated differently when following authority and when questioning authority? Does emotional stability connect to different results in male characters and in female characters?

In addition, to receive a comprehensive picture of the message carried by Marvel, there is room for a more extensive content analysis that will explore a broader sample of stories. Additional questions that could be addressed in a larger context could be whether the personality types that are portrayed as successful change across gender and race, and whether Marvel's messages – like society – underwent changes with time.

Acknowledgements

This paper was written with the guidance, support, and immensely helpful insight of Dr. Marina Klimenko.

References

- Adams, G., Estrada-Villalta, S., Sullivan, D., & Markus, H.R., (2019). The Psychology of Neoliberalism and the Neoliberalism of Psychology. *Journal of Social Issues*, Vol. 75, No. 1, 2019, pp. 189—216. Retrieved from <https://shorturl.at/jNPZ4>
- Brown, J. (2021). *Panthers, Hulks, and Ironhearts: Marvel, diversity, and the 21st century superhero*. Rutgers University Press
- Campbell, J. L. & Pedersen, O. K. eds. (2001). *The Rise of Neoliberalism and Institutional Analysis*. Princeton University Press
- Campbell, J. (1949). *The hero with a Thousand faces*. New World Library.
- Carnes, N., Goren, L. J. (2023). *The politics of the Marvel Cinematic Universe*. University Press of Kansas
- Carollo, L (2024). Highest-grossing film franchises and series 2023. *Statista.com* [website]. Retrieved from <https://www.statista.com/statistics/317408/highest-grossing-film-franchises-series/>
- Chomsky, Noam (1999). *Profit over People – Neoliberalism and Global Order*. Seven Stories Press.
- Chung, D. (2017) The Big Five social system traits as the source of personality Traits, MBTI, social styles, personality disorders, and cultures. *Open Journal of Social Sciences*, **5**, 269-295. doi: [10.4236/jss.2017.59019](https://doi.org/10.4236/jss.2017.59019).
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A very brief measure of the Big Five personality domains. *Journal of Research in Personality*, *37*, 504-528.
- Johnson, J., Carroll, J, Gottschall, J., and Kruger, D. (2011). Portrayal of personality in Victorian novels reflects modern research findings but amplifies the significance of agreeableness. *Journal of Research in Personality* *45*, 50-58. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0092656610001650>
- Obschonka, M., Schmitt-Rodermund, E., Silbereisen, R. K., Gosling, S. D., & Potter, J. (2013). The regional distribution and correlates of an entrepreneurship-prone personality profile in the United States, Germany, and the United Kingdom: A socioecological perspective. *Journal of Personality and Social Psychology*, *105*, 104–122. <https://doi.org/10.1037/a0032275>
- Nash Information Services (2023). Movie Franchises. The Numbers.com [website] <https://www.the-numbers.com/movies/franchises>
- Saad-Filho, A. & Johnston, D. (2005). Introduction. in Saad Filho, A. & Johnston, d. (Eds.), *Neoliberalism – A Critical Reader* (pp. 1-6). Pluto Press.
- Smith, N. (2023, June 28). neoliberalism. *Encyclopedia Britannica*. <https://www.britannica.com/money/topic/neoliberalism>

Appendix A

List of Movies Included in the Study (chronological order)

1. *Avengers: Age of Ultron* (2015)
2. *Captain America: Civil War* (2016)
3. *Black Panther* (2018)
4. *Avengers: Infinity War* (2018)
5. *Captain Marvel* (2019)
6. *Spider-Man: Far from Home* (2019)
7. *Avengers: Endgame* (2019)
8. *Spider-Man: No Way Home* (2021)

Appendix B

List of Characters Included in the Study (alphabetized)

1. Alexander Pierce
2. Aunt May
3. Captain Marvel
4. Dr Strange
5. Gamora
6. “Happy”
7. Kill Monger
8. Mantis
9. Maria Rambeau
10. MJ
11. Mysterio
12. Natasha Romanoff
13. Nebula
14. Nick Fury
15. Okoye
16. Peter Parker
17. Sam Wilson
18. Ant Man
19. Star Lord
20. Captain America
21. Talos
22. Thanos
23. The Black Panther
24. Thor
25. Tony Stark
26. Wanda Maximoff
27. Yon Rogg

