# The Intersection Between Anti-fandom and Public Perception: Exploring the Propagation of Hatred Among Generation Z

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#### Abstract

The entertainment industry is experiencing rapid growth due to the mediatization and globalization of modern society. Within this context, fandom and anti-fandom have emerged as two contrasting phenomena. While fandom represents a collective community sharing common interests and affinities towards a particular object, anti-fandom defines a community characterized by its opposition and dislike for the same object. Despite the significance of anti-fandom, there is a considerable gap in the academic literature, particularly concerning Generation Z. Therefore, this study aims to fill this gap by investigating the intersection between anti-fandom and public perception, focusing on the propagation of hatred among Generation Z. The Attribution Theory and Agenda-Setting Theory will be employed to explore the representative anti-fandom behaviors and the motivations behind these behaviors identified by Generation Z. The study will adopt a quantitative methods approach, surveying a minimum of 400 individuals born between 1997 and 2012 to collect primary data. Besides, simple random sampling will be utilized through an Internet questionnaire survey. Through this approach, the research findings are expected to reveal the impact of anti-fandom behaviors on public perception considering the existence of anti-fandom communities and their targeted objects of opposition. The results will provide valuable insights into the mutual influence between anti-fandom, fandom, and the public within specific cultural contexts. Ultimately, this study aims to contribute to the field of subculture media and communication by offering a unique lens through which to examine anti-fandom phenomena.

Keywords: Anti-fandom, Public Perception, Generation Z, Hatred



# Introduction

According to Gray, et al. (2017), fandom refers to identity and collective community which emphasizes the significance of identifying and composing the communities that share similar interests or flavors to a particular subject during the increasing mediatization and globalization of modern society.

A body of literature has focused on fandom, given its influential role in different disciplines, and fandom is often discussed in cross-disciplinary research: McLaren and Jin (2020) examine fandom with affective identity in the digital era, in which the relationship between fans and celebrities in social media is discussed. Besides, Fiesler and Dym (2020) examine fandom with the cross-geographic migration of online platforms, in which the long-standing and technology-free fandom communities are discussed. Additionally, in marketing, Zaucha and Agur (2022) investigate the commodification of fandom, in which fandom commerce in the sports fields is discussed. Furthermore, in anthropology, Smutradontri and Gadavanij (2020) explore fandom with identity construction, concluding that fandom has already become an influential phenomenon in both society and culture. Finally, in communication, Lynch (2020) associated fandom with hierarchy, power, and functions to indicate the stratification of the fandom accelerates some fans to become digital transcultural gatekeepers. Although numerous studies have been conducted on fandom in recent years, there is a lack of research focusing on anti-fandom, which holds an exact opposite definition of fandom: it is a community composed of individuals who share the same hatred or dislike of a particular subject. Therefore, it is a mostly unexplored field, and most of the previous studies associated anti-fandom with its similarity with fandom (Gray, 2005; O'Gara, 2022), political landscape (Williams & Bennett, 2022), hatred toward celebrities on social media (Liew, 2019), considering hate or dislike can be exactly as impactive as strong and admiring emotion, and both can produce just as much activity, identity, intention and "impact", or unite and sustain a community or subculture (Gray, 2005).

To fill the large and unexplored gap in the academic literature on anti-fandom studies that there is merely no research that tries to explore the intersection between anti-fandom and the public, especially toward the group of digital natives, this study aims to investigate the intersection between anti-fandom and the public among Generation Z through the propagation of hatred. By focusing on Generation Z with a Chinese cultural background, this study aims to explore the fundamental motivation behind these representative anti-fandom behaviors by applying the Attribution Theory and provide a deeper understanding of how the propagation of hatred from anti-fandom can influence public perception by applying the Agenda-Setting Theory. Additionally, the study aims to help individuals as well as the public in a certain social network view their behavior and motivation more dialectically. Lastly, the outcome of the study aims to provide basic information for the further study of the anti-fandom community and the network environment around it.

#### Statement of the Problem

This research will employ an exploratory approach to examine the ultimate motivations driving representative anti-fandom behaviors, with a primary focus on satisfaction, self-presentation, competition, metamorphosis of passion, conformity, and interest-driven dynamics. Additionally, the study will investigate the impact of anti-fandom behavior on shaping the public perception of both the anti-fandom community and the opposed objects. To achieve these goals, the research will leverage two theoretical frameworks, namely

Attribution Theory and Agenda-Setting Theory. Specifically, the study aims to address the following research questions and objectives:

# **Research Questions**

- 1. What are the representative anti-fandom behaviors performed by Generation Z?
- 2. Why these representative anti-fandom behaviors can be generated among Generation Z?
- 3. How do these representative anti-fandom behaviors impact the public's perception?

# **Research Objectives**

- 1. To explore the representative anti-fandom behaviors performed by Generation Z.
- 2. To determine the motivations behind these representative anti-fandom behaviors identified by Generation Z.
- 3. To investigate how these representatives anti-fandom behaviors impact the public's perception.

## **Theoretical Framework**

This research delves into the intersection of anti-fandom and public perception by examining the dissemination of hatred within Generation Z, addressing three key research objectives: understanding typical anti-fandom behaviors among Generation Z, uncovering the motivations driving these behaviors, and assessing their impact on public perception. To establish a solid theoretical foundation, Attribution Theory and Agenda-Setting Theory will serve as frameworks guiding the researchers' exploration.

#### **Attribution Theory**

Attribution theory aims to understand how people attribute emotions and intentions to others to comprehend their behavior. Heider (1958) introduced two influential concepts: dispositional attribution, considering internal causes, and situational attribution, considering external causes. This provides a theoretical foundation for the design of questionnaire options in the motivations section. The study found that when people perceive anti-fandom behavior from a bystander's perspective, the public tends to attribute such behavior to internal rather than external factors.

Later, Jones and Davis (1965) emphasized that individuals pay particular attention to intentional behavior, as opposed to accidental or unconscious actions. This serves as a theoretical basis for the design of questionnaire options in the behavior section. The research revealed that when people view the motivations from a bystander's perspective, the public tends to focus on consciously aggressive actions, such as personal attacks, fabrication of facts, and conflicts with fans. Jones and Davis (1965) further noted that when there is a clear alignment between motivation and behavior, individuals are inclined to make attributions.

Finally, Fiske and Taylor (1991) provided a formal definition, stating that attribution theory delves into how social perceivers utilize information to arrive at causal explanations for events.

Overall, in the context of this study, this can assist us in better understanding the underlying reasons why anti-fandom behavior affects public perception.

## **Agenda-Setting Theory**

The Agenda-Setting Theory, initially proposed by Lippmann (1922), posits that the mass media plays a central role in connecting global events with the mental images formed in the public's mind. Besides, Lippmann (1922) contends that the public's response is not directed toward actual events in the environment but rather toward a pseudo-environment, with the term "pseudo-environment" denoting "the pictures in our heads."

According to Lippmann's Agenda-Setting Theory (1922), the anti-fandom community can be regarded as a form of media. Consequently, the propagation of hatred generated by the representative behavior within anti-fandom can be interpreted as a form of media coverage. Furthermore, the public's perception does not directly correlate with real-world events but rather reacts to the pseudo-environment constructed by the anti-fandom. This theory establishes a solid theoretical foundation for comprehending how the dissemination of hatred in Generation Z influences public perception.

Fundamentally, this research will concentrate on two vital aspects of this theory: firstly, the press and the media do not merely reflect reality; instead, they selectively filter and shape it. Secondly, the concentration of media on specific issues and subjects prompts the public to perceive those issues as more significant than others (Dearing & Rogers, 1988). In the study, this is evident as the anti-fandom community consistently filters and reshapes information for the public, potentially deviating from an accurate depiction of the real situation. Additionally, the attention and propaganda generated by anti-fans serve to highlight the significance and impact of information related to the opposing objects in the eyes of the public.

## **Conceptional Framework**

This study adopts the conceptual framework as shown in Figure 1. The framework aims to assist researchers in interpreting the significant findings and understanding the intersection between anti-fandom and public perception among Generation Z in the Chinese cultural setting. The factors identified in this study include the representative behaviors and motivations within anti-fandom, the public's perception of the anti-fandom community, and its opposed objects. Through statistical analysis, the study aims to demonstrate how representative behavior within anti-fandom influences the public perception of the anti-fandom community and its opposed objects.

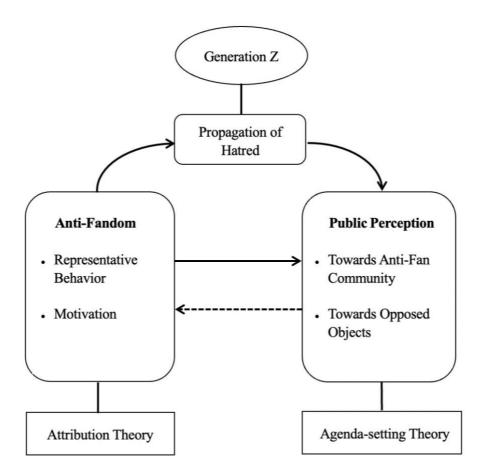


Figure 1: Diagram of the conceptual framework of the study

# **Research Methods**

The study aims to explore the intersection between anti-fandom and public perception, specifically delving into how the behavior exhibited by the anti-fandom community shapes public opinion. To deal with these research questions, a quantitative method is employed, using numeric data and statistical analysis.

The collected data aims to identify the representative anti-fandom behaviors performed by Generation Z, determine the motivations behind these representative anti-fandom behaviors, and investigate how these representative anti-fandom behaviors impact the public's perception. To ensure the accuracy of the research design, random sampling is used to target Generation Z, encompassing individuals born between 1997 and 2012, for primary data collection. Therefore, an online survey questionnaire is used to maintain the confidentiality and anonymity of respondents.

Given the research questions' focus on 'what,' 'why,' and 'how,' questionnaires emerge as the most suitable method for data collection and presentation. Ultimately, the data is gathered, presented, and analyzed at an objective level to ensure the reliability of the results. Overall, this research design significantly helps in providing evidence to answer the research problem as accurately, clearly, and unequivocally as possible.

# **Research Sample**

The focus of this study is the Generation Z demographic within the Chinese community. The objective is to gather a minimum of 400 questionnaires from this population and subsequently analyze the collected data. To achieve this, the researchers employ a straightforward random online questionnaire survey that draws samples from the population. The criteria for selecting questionnaire participants include familiarity with the concepts of fandom and anti-fandom, with a specific focus on individuals born between 1997 and 2012.

## **Research Instrument**

The researchers utilize a self-made questionnaire as the primary research instrument. This online survey consists of a set of questions addressing anti-fandom behavior, motivational factors, and public perception. The questionnaire is structured into four parts: the initial section gathers basic information about the respondents, the second part delves into representative anti-fandom behaviors and motivations, the third part explores public perception of the objects of opposition, and the fourth part assesses the public perception of the anti-fandom community itself. To capture participants' perspectives effectively, the questionnaire incorporates single-choice, multiple-choice, and scale selection options. The researchers aim to accumulate extensive data to achieve a thorough comprehension of the intersection between anti-fandom and public perception.

## Data Analysis

The purpose of this study is to uncover the intersection between anti-fandom and public perception. The analysis of primary data is conducted to address the three main objectives of the study. Descriptive analysis is employed to explore the representative anti-fandom behaviors exhibited by Generation Z (Objective 1), identify the motivations driving these behaviors among Generation Z (Objective 2), and examine the influence of these representative anti-fandom behaviors on public perception (Objective 3).

# **Establishing Quality**

Collecting and analyzing data for the research is essential to reach our goals. The researchers are using a random survey with questions that don't guide the responses, ensuring fairness and representing the whole population. The questions start with basic information and then dive deeper, making sure the research is meaningful.

#### **Ethical Consideration**

The researchers seek to ensure ethical standards and maintain the confidentiality of participants during the entire study. Respondents will be treated with respect, and their personal details will remain private. Participants will be informed about the study's purpose, and their data will be exclusively utilized for this research. The researchers commit not to utilize the data for alternative purposes or disclose it to any external parties. To preserve anonymity, respondents will be referred to by a code number rather than their actual names.

## **Innovation and Significance of Study**

The uniqueness of this study lies in its distinctive perspective. Rather than concentrating on fan communities extensively discussed in academic circles, this research centers on the "anti-fandom" community, which, much like fandoms, wields significant influence and investigates how these behaviors shape public perceptions of anti-fandom and their targeted objects.

In today's rapid development of the internet and social media, the boundaries between fandom, anti-fandom, and the broader public have become increasingly blurred. Many Chinese internet users even take on multiple roles within these categories. This multifaceted identity dynamic has attracted researchers' interest, and the findings from this study provide a distinctive outlook on the anti-fandom phenomenon, enriching the field of subculture media and communication.

## **Results and Discussion**

#### **Research Question 1**

What are the most representative anti-fandom behaviors performed by Generation Z?

| Table 1- The most representative anti-fandom benavior among Generation 2. |                  |            |  |
|---|------------------|------------|--|
| Categorical Variables   | Frequency Counts | Percentage |  |
| Personal attacks  | 158              | 64.49%     |  |
| Fabricating facts   | 118              | 48.16%     |  |
| Engaging in verbal battles/conflicts with fans                            | 88               | 35.92%     |  |
| Stereotyping  | 44               | 17.96%     |  |
| Excessive attention   | 7                | 2.86%      |  |
| Doxxing (seeking private information about a subject)                     | 40               | 16.33%     |  |
| Stalking  | 24               | 9.8%       |  |

#### Table 1- The most representative anti-fandom behavior among Generation Z.

Table 1 illustrates the distribution of respondents' perceptions regarding the most characteristic anti-fandom behaviors exhibited by Generation Z. A majority of respondents, constituting 64.49%, identify personal attacks as the foremost representative anti-fandom behavior. Following closely, 48.16% of respondents consider fabricating facts to be the most representative anti-fandom behavior, while 35.92% associate engaging in verbal battles/conflicts with fans as such. Besides, stereotyping is deemed the most representative anti-fandom behavior by 17.96% of respondents, while 2.86% attribute it to excessive attention. Additionally, 16.33% of respondents identify doxxing as the most representative anti-fandom behavior, and 9.8% associate stalking with this category.

In summary, the dominant consensus among respondents is that personal attacks are the most representative anti-fandom behavior, while the smallest portion of the population views excessive attention as such.

# **Research Question 2**

Why these representative anti-fandom behaviors can be generated among Generation Z?

| Categorical Variables       | Frequency Counts | Percentage |
|-----------------------------|------------------|------------|
| Simply disliking            | 52               | 21.22%     |
| For fun                     | 31               | 12.65%     |
| Following the trends        | 96               | 39.18%     |
| Hatred towards its fans     | 71               | 28.98%     |
| Self-presentation           | 19               | 7.76%      |
| Seeking a sense of presence | 50               | 20.41%     |
| Unpleasant real life        | 40               | 16.33%     |
| For monetary gain           | 31               | 12.65%     |
| Unfollowing & criticizing   | 24               | 9.8%       |
| Fans of competitor          | 47               | 19.18%     |
| Getting on well with others | 4                | 1.63%      |
| Envy of sb/sth              | 14               | 5.71%      |

Table 2- The fundamental motivations behind representative anti-fandom behaviors.

Table 2 displays respondents' perspectives on the fundamental motivations driving representative anti-fandom behaviors in Generation Z. The breakdown reveals that 21.22% attribute these behaviors to a simple disliking, 12.65% to seeking enjoyment, 39.18% to following trends, and 28.98% to hatred towards its fans. Additionally, 7.76% associate self-presentation, 20.41% seek a sense of presence, and 16.33% relate these behaviors to an individual's unpleasant real-life situation. For 12.65%, monetary gain is the motivation, while 9.8% identify unfollowing and criticizing as the driving force. Fans of competitors are seen as the motivation by 19.18%, while only 1.63% connect anti-fandom behaviors with getting on well with others, and 5.71% attribute it to envy.

In summary, a majority perceive following trends as the fundamental motivation, with the smallest faction associating these behaviors with getting on well with others.

#### **Research Question 3**

How do these representative anti-fandom behaviors impact the public's perception?

| Table 3- The ultimate impact on the public's perception of opposed objects. |      |                |  |
|---|------|----------------|--|
| Item  | Mean | Interpretation |  |
| The above behaviors of anti-fans will make you see a more                   | 3.25 | Neutral        |  |
| authentic side of something/someone (the target of hatred).                 |      |                |  |
| The above behaviors of anti-fans will influence your original               | 3.33 | Neutral        |  |
| perspective on something/someone (the target of hatred).                    |      |                |  |
| The above behaviors of anti-fans will impact your level of                  | 3.38 | Neutral        |  |
| participation in discussions about something/someone (the target            |      |                |  |
| of hatred).   |      |                |  |
| The above behaviors of anti-fans will encourage you to scrutinize           | 3.61 | Agree          |  |
| something/someone (the target of hatred) from multiple                      |      |                |  |
| perspectives.   |      |                |  |
| The above behaviors of anti-fans have brought about an                      | 4.03 | Agree          |  |
| increased discussion about something/someone (the target of                 |      |                |  |
| hatred).  |      |                |  |

| Table 3- The ultimate impact on the | public's | perception o | f opposed | objects. |
|-------------------------------------|----------|--------------|-----------|----------|
|-------------------------------------|----------|--------------|-----------|----------|

Table 3 presents respondents' viewpoints on the overarching impact of anti-fandom behaviors on the public's perception of opposed objects. Notably, the statement "The above behaviors of anti-fans have brought about an increased discussion about something/someone (the target of hatred)" stands out with the highest mean value of 4.03, indicative of an "Agree" interpretation. Additionally, the statement "The above behaviors of anti-fans will encourage you to scrutinize something/someone (the target of hatred) from multiple perspectives" holds a mean value of 3.61, indicating an "Agree" interpretation. However, statements such as "The above behaviors of anti-fans will make you see a more authentic side of something/someone (the target of hatred)," "The above behaviors of anti-fans will influence your original perspective on something/someone (the target of hatred)," and "The above behaviors of anti-fans will impact your level of participation in discussions about something/someone (the target of hatred)" all lean towards a "Neutral" interpretation.

| Table 4- The ultimate impact on the public's perception of the anti-fandom community. |      |                |  |
|---|------|----------------|--|
| Item  | Mean | Interpretation |  |
| The above behaviors of anti-fans make you feel that the                               | 2.24 | Disagree       |  |
| positive significance of their existence outweighs the negative.                      |      |                |  |
| The above behaviors of anti-fans make you feel repelled by the                        | 4.1  | Agree          |  |
| existence of anti-fans.   |      |                |  |
| The above behaviors of anti-fans make you feel that the                               | 2.08 | Disagree       |  |
| existence of anti-fans is justicial.  |      |                |  |
| The above behaviors of anti-fans make you feel that the                               | 3.39 | Neutral        |  |
| existence of anti-fans is meaningless.  |      |                |  |
| The above behaviors of anti-fans make you feel that the                               | 4.2  | Agree          |  |
| existence of anti-fans needs to be regulated by relevant                              |      |                |  |
| agreements or institutional rules.  |      |                |  |

Table 4- The ultimate impact on the public's perception of the anti-fandom community.

Table 4 outlines the perspectives of respondents regarding the overall impact of anti-fandom behaviors on the public's perception of the anti-fandom community. Notably, the statement "The above behaviors of anti-fans make you feel that the existence of anti-fans needs to be regulated by relevant agreements or institutional rules" stands out with the highest mean value of 4.2, signifying an "Agree" interpretation. Similarly, the statement "The above behaviors of anti-fans make you feel repelled by the existence of anti-fans" holds a mean value of 4.1, also indicating an "Agree" interpretation. On the other hand, the statement "The above behaviors of anti-fans make you feel that the existence of anti-fans is meaningless" has a mean value of 3.39, reflecting a "Neutral" stance. However, the table reflects a "Disagree" interpretation for the items "The above behaviors of anti-fans make you feel that the negative" and "The above behaviors of anti-fans make you feel that the existence of anti-fans make you feel that the positive significance of their existence outweighs the negative" and "The above behaviors of anti-fans make you feel that the existence."

#### **Main Findings**

This research aims to fill this gap by investigating the intersection between anti-fandom and public perception, focusing on the propagation of hatred among Generation Z.

Regarding the first research question concerning the most characteristic anti-fandom behavior among Generation Z, the findings reveal that personal attacks are the most prominent.

For the second research question, exploring the underlying motivations behind these behaviors, the results indicate that the primary motivation is following trends.

Lastly, in response to the third research question concerning the impact of representative anti-fandom behaviors on public perception, it is found that these behaviors encourage the public to examine the target of hatred from various perspectives and stimulate increased discussions about the target. Regarding the public perception of anti-fandom itself, the behaviors of anti-fans lead to a sense of repulsion and a belief that the existence of anti-fans should be subject to regulation through relevant agreements or institutional rules.

# Conclusion

In summary, drawing from the outcomes of data analysis, it is evident that personal attacks stand out as the predominant anti-fandom behavior within Generation Z. The primary motivation driving such anti-fandom behavior appears to be the inclination to follow trends. Consequently, the dissemination of this animosity prompts the public to critically examine the targeted individuals or entities from diverse perspectives. This, in turn, cultivates a sense of aversion towards the anti-fandom community among the public, underlining the perceived necessity for the establishment and enforcement of pertinent laws in this domain.

# Limitations

- 1. Limited Sample Size: The sample size utilized in this experiment is relatively small, potentially lacking the representativeness needed to encompass all Generation Z students in China. It may predominantly reflect samples from the university where the researcher is based, mainly comprising university students.
- 2. Generalizability Challenges: The study's findings might not be completely applicable to diverse cultures or populations due to variations in cultural values, media exposure, and other demographic factors. Therefore, caution is advised when extrapolating the study's results to different contexts.
- 3. Sample Bias: There is a potential bias in the sample as participants completing the questionnaire are required to analyze issues from a public perspective. If the respondents themselves are members of fan or anti-fandom groups, the questionnaire results may be subject to inaccuracies.
- 4. Data Collection Methods: Limitations can arise from the methods used to collect data. In the online questionnaire, there is a likelihood that the options presented in the research survey may not completely address all representative behaviors of the anti-fandom, the underlying motivations, and the influence of anti-fandom behavior on public perception.

#### References

Fiske, S. T., & Taylor, S. E. (1991). Social cognition (2nd ed.). Mcgraw-Hill Book Company.

- Fiesler, C., & Dym, B. (2020). Moving across lands: Online platform migration in fandom communities. *Proceedings of the ACM on Human-Computer Interaction*, 4(CSCW1), 1–25. https://doi.org/10.1145/3392847
- Gray, J., Sandvoss, C., & Harrington, C. L. (Eds.) (2017). *Fandom, Second Edition: Identities and communities in a mediated world*. (2 ed.) NYU Press. https://doi.org/10.2307/j.ctt1pwtbq2
- Gray, J. (2005). Antifandom and the moral text. *American Behavioral Scientist*, 48(7), 840–858. https://doi.org/10.1177/0002764204273171
- Heider, F. (2013). *The Psychology of Interpersonal Relations*. https://doi.org/10.4324/9780203781159
- Jones, E. E., & Davis, K. E. (1965). From acts to dispositions the attribution process in person perception. *Advances in Experimental Social Psychology*, 219–266. https://doi.org/10.1016/s0065-2601(08)60107-0
- Lippmann, W. (1922). Public Opinion. New York: The Free Press.
- Lynch, K. S. (2020). Fans as transcultural gatekeepers: The hierarchy of BTS' anglophone reddit fandom and the digital east-west media flow. *New Media & amp; Society*, 24(1), 105–121. https://doi.org/10.1177/1461444820962109
- Liew, H. H. (2019). I'd love to hate you: Anti-fandom in microcelebrity culture. ProQuest; The Chinese University of Hong Kong (Hong Kong) ProQuest Dissertations Publishing. https://www.proquest.com/openview/a5d37310582f8997a54f4cf33afd09ab/1?pq-orig site=gscholar&cbl=2026366&diss=y
- Mclaren, C., & Jin, D.Y. (2020). "You Can't Help But Love Them": BTS, Transcultural Fandom, and Affective Identities. *Korea Journal*, 60, 100-127. doi:10.25024/kj.2020.60.1.100
- O'Gara, C. (2022). Fan Studies Must Be on Crack: Anti-Fandom, Fan Convergence, Crackvids, and Riverdale (2017-). *Undergraduate Journal of Humanistic Studies, 12*, Winter 2022.
- Rogers, E., & Dearing, J. (1988). Agenda-setting research: Where has it been, where is it going? *Annals of the International Communication Association*, *11*(1), 555–594. https://doi.org/10.1080/23808985.1988.11678708
- Smutradontri, P., & Gadavanij, S. (2020). Fandom and Identity Construction: An Analysis of Thai fans' engagement with Twitter. *Humanities and Social Sciences Communications*, 7(1). https://doi.org/10.1057/s41599-020-00653-1

- Williams, R., & Bennett, L. (2022). Fandom and Controversy. *American Behavioral Scientist*, 66(8), 1035-1043. https://doi.org/10.1177/000276422110422
- Zaucha, T., & Agur, C. (2022). Newly minted: Non-fungible tokens and the commodification of fandom. *New Media & amp; Society*, 146144482210804. https://doi.org/10.1177/14614448221080481

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