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ABSTRACT

This study examined the application of the binary on animated characters. Specifically, we focused on the application of the binary to Disney animated non-human characters, such as planes, boats, robots and animals. Our main hypothesis was that, even when presented with an object (e.g. a boat, a robot) that has no sex or gender, participants will assign a sex, gender, and even gender expression to the object. This experiment was a within subject design where all participants ($N=28$) were presented with the 14 characters within four levels of the independent variable. The results showed that there was a significant main effect as we found that the binary was applied far more frequently than an application of something outside the binary, despite many of the presented characters having no assigned sex or gender.

INTRODUCTION

Research has shown that society has grown accustomed to placing not only displays of emotion, such as crying, but even financial compensation into the gender binary. While these studies (MacArthur, 2019; Pepin 2019) focus on how people perceive others based on their gender, and how that impacts gendering emotional expressions and pay, not many studies have focused on how people gender non-human objects. Steven Stroessner et al. (2020) studied the application of the binary to shapes and found that certain shapes were perceived on certain extremes of the binary. Although the Stroessner et al. (2020) study starts this conversation of people gendering non-human objects, there is no further research on this topic regarding people applying the gender binary to other inanimate objects. Our study aims to expand on this lack of research.

METHOD

- ★ 28 students (19 females) were recruited from a small liberal arts college. They received course credit for participating.
- ★ Participants were presented with all 14 Disney animated non-human characters from our four independent variable levels (animals, transportation, robots, and spiritual essence).

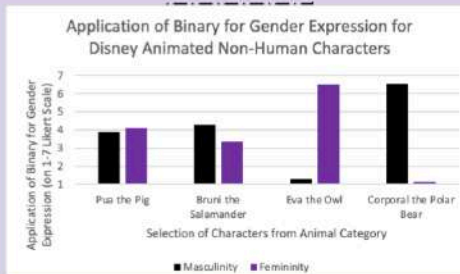
METHOD (continued)

Participants were asked to answer a list of questions regarding each non-human characters' biographical identity. Each page of the study survey presented one character and our 10 survey questions.

Sample Questions:

- How masculine is this character?
- How feminine is this character?

RESULTS



Participants answered five (5) questions that were specific to sex, gender, and gender expression. For three of our characters, Eva the owl, Corporal the polar bear, and Boat Reynolds the boat, almost all participants perceived their gender in the extremes of the binary, with a majority (often 100%) of participants placing their gender on the extreme ends of the Likert-scale.

Only four characters were placed outside of the binary. These characters were Pua the pig, Bruni the salamander, Rochelle the pink plane, and Doris the robot ($F(3,27)=13.07, p < .001$). The range of this application was from 4% of participants (1) to 11% of participants (3), which was not significant for non-binary sex, gender, or gender expression application.

DISCUSSION

We hypothesized that even when presented with the option to fill in the survey with responses such as "no sex assigned", most participants will still apply the binary to all presented Disney animated non-human characters. This was the case for almost all of our characters as only four characters were placed outside the binary in regard to sex assignment, making this hypothesis true. This assigned sex outside the binary for these characters happened so infrequently though, ranging from 4% to 11% of participants.

We utilized our animal independent level as a sort of control level and were lead to believe that a binary sense of sex will more often be applied to this independent variable level. Yet, this was not the case. Characters in our animal independent variable level, such as Pua the pig and Bruni the salamander, were actually two of the four characters (50%) total placed outside the binary when it came to sex assignment. Therefore, the placement outside of the binary was actually most present on our animal independent level category, making this hypothesis false. This may suggest that the binary application came less from a predetermined sex (as the animals had an assigned sex, unlike the robots), and more so from gendered presentation (as Eva and Corporal were assigned extreme gendered presentation as supposed to Pua and Bruni).

REFERENCES

- MacArthur, H. J. (2019). Beliefs about emotion are tied to beliefs about gender: The case of men's crying in competitive sports. *Frontiers in Psychology*, <https://doi.org/10.3389/fpsyg.2019.02765>.
- Pepin, J. R. (2019). Beliefs about money in families: Balancing unity, autonomy, and gender equality. *Journal of Marriage and Family*, <https://doi.org/10.1111/jomf.12554>.
- Stroessner, S., Benitez J., Perez, M., Wyman A., Carpinella C., Johnson, K. (2020). What's in a shape? Evidence of gender category associations with basic forms. *Journal of Experimental Social Psychology*, <https://doi.org/10.1016/j.jesp.2019.103915>.