Apples and Oranges: A Study of "Tend & Befriend" as a Phenomenon in Digital Games

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Abstract. This paper describes the process of developing and collecting data for analysis via a Qualtrics survey on "Tend & Befriend Theory" and the Acute Stress Response, *i.e.* "Fight or Flight Response". We discuss the constraints and implications of current thinking around "Tend & Befriend", the descriptive results of our initial study, present a methodology for categorising Tend & Befriend games, frame our results in the context of gaming experience, and outline our next research steps in addition to areas of future interest. Our study suggests that Tend & Befriend can be considered as a concrete phenomenon in games, supported by data. Our findings show some games can be considered as "archetypal" titles, making them useful references for research and discourse.

Keywords: Tend and Befriend · Fight or Flight · Stress Response · Video Game Design.

1 Introduction

Digital games are increasingly acknowledged as being the most profitable sector in the entertainment industry – regularly out-performing film, TV and music combined [11]. Designers and developers note the rapid expansion of the "gaming" population in which players are no longer limited to public perceptions of teenage youth in basements, or casual cookie-clicking commuters on trains [1]. In recent years, the potential of alternative theories and frameworks[10] as tools for developers to better understand the evolving player-market, as well as the culture of gaming has been demonstrated by the inclusion of psychology and user-research tracks at conferences (e.g. GDC, Develop Brighton).

One such theory that is gaining popularity is "Tend & Befriend" theory (TB) – an alternative theory of physiological stress-response proposed by Shelly Taylor [14]. Taylor suggested that in addition to an adrenal response (commonly thought of as "Fight or Flight") (FF), women may have developed behavioural systems that engage activities of mutual care ("tend") and social connectivity ("befriend") to increase odds of evolutionary survival and self-regulation [13].

Within the space of digital games, TB has been introduced to developers by companies such as TRU LUV, and leaders such as Brie Code [7], who advocate the potential in developing experiences that are accessible for players whom previous design systems have typically excluded (e.g. Flow theory and conflict-based mechanics) [4] [3].

However, to date there has been no empirical study on the phenomenon of TB as a design construct in digital games. Although anecdotally compelling, most work in this area has been based on supposition or borrowed from research in other fields [12]. This can be explained by a number of factors, most likely that it is a relatively new and unknown concept; any active research of TB may be within the confines of propriety development.

We present this paper which outlines the development of a survey and early TB research methodology. We describe our process in creating the survey, the descriptive results, further methods of analysis and our findings. Finally, we present our conclusions, outline our next intent for the research and areas of future interest.

2 Study Aims

When designing the study, we decided on three central questions (aims) to help develop our understanding of TB in relation to digital games.

The first was to establish whether or not TB/FF theory was as robust as it was anecdotally accepted to be. Does it represent a meaningful construct in games and when asked, could players agree with reasonable consistency what constitutes a TB game, or not?

The second aim for the study arose when we decided to assess games for the survey itself. Knowing that we would likely have data on an individual "game-by-game" basis, we wanted to highlight games (if any existed), that researchers could use as evidence-based case studies or "archetypes" when engaging in TB/FF discussion.

The final goal was to develop a method of operationalising TB for study, in order explore its application and context in games and design. TB games are often put into juxtaposition with FF games – however, this is not necessarily accurate. Shelly proposed TB theory as an additional system that builds on FF response, not in direct opposition to it [14]. Using FF as counter-examples when discussing TB conversationally affords a quick and easy way to highlight the distinctions between a so-called "TB game" and other titles which can be misleading. In developing this study, we found that this could imply a false dichotomy, where TB and FF were placed as opposites on a continuum rather than two distinct (but connected) processes. The range of games, players and experiences that exist highlight the limitations to such over-simplifications of this phenomena in digital games. As an example, there are games with features that suggest strongly that they engage both TB and FF responses in players. Take the popular *Pokémon* series published by Nintendo. In these games you are encouraged to form bonds and raise your creatures diligently and kindly - but also

engage with regular "battles" involving harm and domination over opponents, and "wild" pokémon. As a player, you have some agency in how much or how little energy you invest into these mechanics. This level of complexity led us to structure the survey to account for what we hypothesised as "TB-ness" and "FF-ness" (or lack thereof) in order to limit conflation of TB/FF as much as possible.

Although the theory of TB is presented as a gendered difference, there is limited research available on the validity of making such a distinction, particularly for the purpose of games design. As such, we chose to exclude such questions for study at this time and emphasise the important cultural and contextual caveats that would make such a claim for this study of this level inappropriate. Examples include the marketing of games, public perception, social and cultural factors as well as the limitations of the population sample.

3 Survey Development

When developing the survey, we found there is no definition for TB/FF to which participants could refer. TB is relatively niche, so a "common understanding" of it in games, much less other areas of expertise would be unlikely with survey participants. Similarly, it would be difficult to say the extent that respondents might categorise or otherwise conceptualise TB/FF, even if aware of the theories. In order to address these concerns we felt it necessary to present an outline of TB/FF features for participants' use when completing the survey measures. The outline would serve as a loose definition for respondents to use when making their own judgements. It would need to be broad enough to capture the potential range of TB/FF phenomena, but not so wide that anything could fit within the outlines, rendering them unhelpful. We acknowledge the risks in developing our own definitions for TB/FF, and attempted to limit bias from the researchers or the creation of leading/self-fulfilling results in the process. This was done by codifying available literature on TB/FF in digital games and constructing it into the following terms:

"The definition of ***Tend and Befriend*** *includes: The experience of playing a game that affords nurturing behaviour, loving feelings, close relationships and friend-groups, support, the development and maintenance of a network, characters, care, and/or safe spaces.*

The definition of ***Fight or Flight*** *includes: The experience of playing a game that affords combat, threat, violence, escape, fear or danger – as well as featuring patterns of aggression and dominance over another, or confrontation."*

We emphasise that the outlines are not presented as complete definitions of TB/FF in games – but only intended for such use in the survey.

With the basis (outlines) for respondents to refer to while completing the survey decided, presenting a sample of games for users to rate was the next

logical step. A total of 45 games (or game series) were selected for the survey and respondents would rate them along a set of 7-point Likert scales (ranging from "1 Strongly disagree" to "7 Strongly agree"), asking them to indicate the extent to which they felt the game in question was: (1) TB (2) FF and (3) enjoyable.

15 titles were chosen for three separate categories; the categories were pre-coded as potential TB, FF or Other. Games selected for Other were those which featured elements of TB and FF features, or seemly lacked both, such as *World of Warcraft* or *Tetris*. They were selected according to: researcher familiarity with their features; games that are regularly associated with each other or had market-shares; relative popularity or fame in games culture; as well as any reviews or articles commonly associating those games with features of TB/FF consistent with the study aims. The titles and their categories are presented in Table 1.

As it was highly unlikely that participants will have played all 45 games in our survey, we asked respondents to confirm their familiarity with titles prior to rating them. All games (or series) were presented in random order to each participant in the survey. Participants were asked to confirm if they had played (or felt they had adequate experience with the title via other means, such as watching streamers) before continuing. If participants said they did not know the title, it was skipped for the next random game in the queue until all remaining titles were offered. Participants were not presented with the same game more than once, but it was possible to skip "back" to previous answers if they felt they made had made an error at any point.

Although it would be easier to suggest that any game within a particular franchise share similar features, mechanics, aesthetics, etc. this is not the case. The diversity of a franchise can range dramatically with some games only sharing names in common. An example of this would be early survival-horror *Resident Evil* titles versus the more co-op action-orientated *Resident Evil 5*. To account for this, when a franchise had released multiple instalments, respondents were also requested to select a title from a list of options from which they would base their evaluation. This was designed specifically to filter any "outlier" titles considered too removed from others in its series for accurate comparison. Additionally, if there were notable Expansions, Content Modes or DLC (e.g. *Fortnite*) that might drastically skew results - these were also presented as options for survey respondents.

As part of a larger research project, it was decided early on that it would be useful to include measures of individual differences for the survey, in addition to standard demographic data, to complement any TB/FF results for later analysis. Although outside the scope of this paper, participants were asked to complete three measures of individual differences: the Interpersonal Reactivity Index (IRI) [6][5], the Gaming Attitudes, Motives and Experiences Scale (GAMES) [9] and the Ten-Item Personality Inventory (TIPI) [8]. The IRI was selected as a method of quantifying empathy between respondents, while GAMES was selected due to its potential in capturing nuance between game genres and experiences. As the

Table 1. Table with Pre-Coded Games by Category.

	Tend/Befriend	**Fight/Flight**	**Other**
1	*Shelter*	*Call of Duty*	*Tetris*
2	*Monument Valley 2*	*Gears of War*	*Prof. Layton*
3	*Animal Crossing*	*Resident Evil*	*Super Hexagon*
4	*Abzû*	*Metal Gear Solid*	*Temple Run*
5	*Pikmin*	*Destiny*	*Mario Kart*
6	*Neko Atsume*	*Halo*	*SimCity*
7	*Harvest Moon*	*Tekken*	*Candy Crush Saga*
8	*Pokémon*	*Fortnite*	*Mass Effect*
9	*Minecraft*	*Shadow of the Colossus*	*World of Warcraft*
10	*Florence*	*DOOM*	*Final Fantasy*
11	*Journey*	*Tomb Raider*	*Final Fantasy XIV Online*
12	*Flower*	*Silent Hill*	*Euro Truck Simulator*
13	*ICO*	*Souls Series*	*flOw*
14	*The Sims*	*X-COM*	*FIFA*
15	*FarmVille*	*Civilization*	*Surgeon Simulator*

survey was of significant length, the final addition of the TIPI was included for its succinct nature (10 items) in measuring personality.

4 Data Collection and Results

We conducted an online survey of the "Tend & Befriend Response" in games, positioning it in relation to the Acute Stress Response (commonly known as "Fight or Flight") . The survey was hosted on Qualtrics and available in English (UK). It was largely distributed through social media platforms (Twitter, Instagram and Facebook), as well as Reddit, Discord and word-of-mouth.

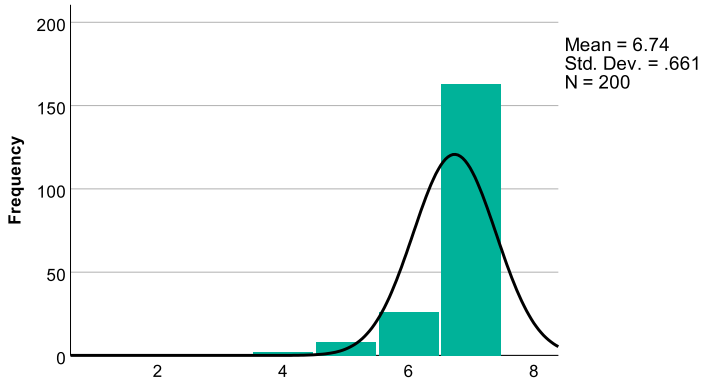
The survey received 510 respondents: 64.9% male, 30% female and a remaining 5.1% which included individuals who identified by specific gender, chose to omit their response or selected "Other". Half of the participants indicated that they fit into the (25-34) age bracket, and a further 26.7% and 16.5% in (18-24) and (35-44) respectively. A majority reported playing games regularly, with a cumulative 87% describing their activity as, "Several times a week" to "Everyday", and 72.4% playing for over an hour per session.

The results were downloaded from the Qualtrics platform server and IBM SPSS Statistics software (ver.27) was used to process the responses. As we had 45 games in the study, it would not be possible to present all of them here. We present a selection that met our criteria as TB/FF archetypes during later analysis (See: Archetype Classification). It is important to note that the results for the games revealed a range of scores, as well as marked difference in opinion between players themselves at times (e.g. the mode for *Abzû* was split between 5 and 7). Games pre-coded as "Other" had less definitive results in some cases, and more complex outputs in others – attributable to a number of factors which we explore further in Discussion.

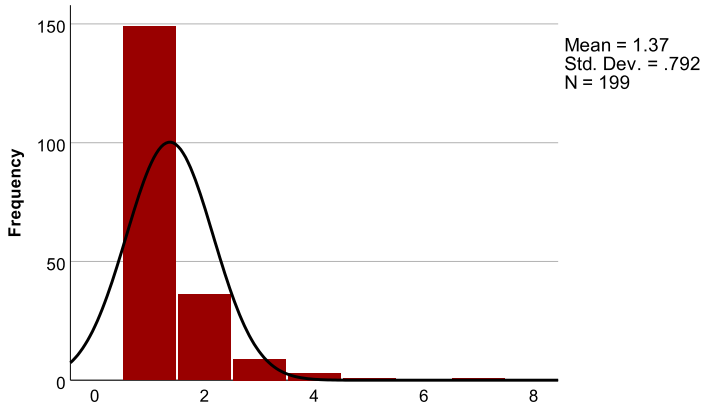
At the end of this section we also present a summary of our descriptive data and the results per game and category.

4.1 Pre-Coded: Tend & Befriend

Animal Crossing Series



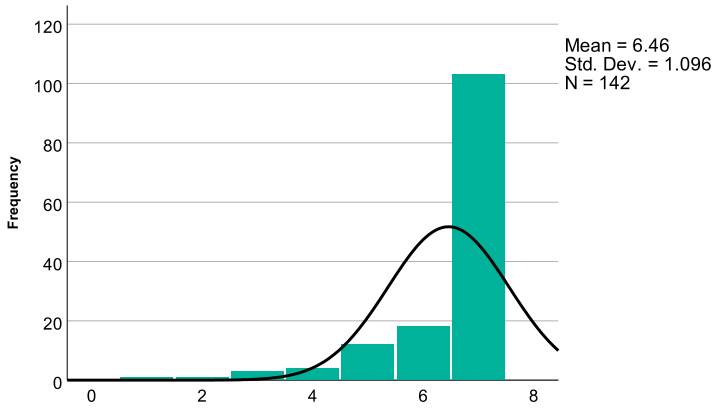
(a) Tend & Befriend



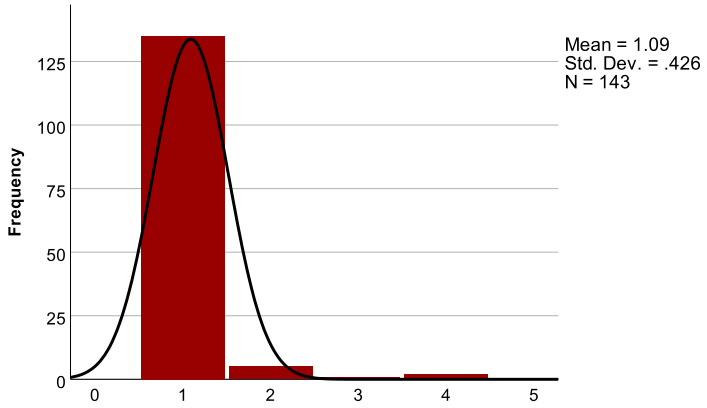
(b) Fight or Flight

Fig. 1. Histogram for *Animal Crossing* Series TB/FF Ratings, demonstrating high TB ratings in green, and low FF ratings in red.

Neko Atsume (Kitty Collector)



(a) Tend & Befriend

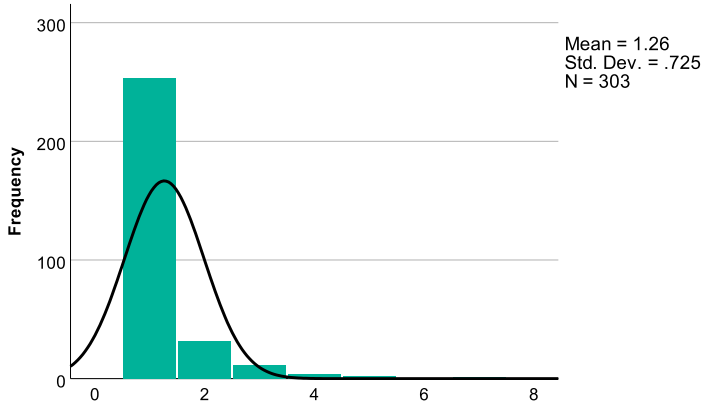


(b) Fight or Flight

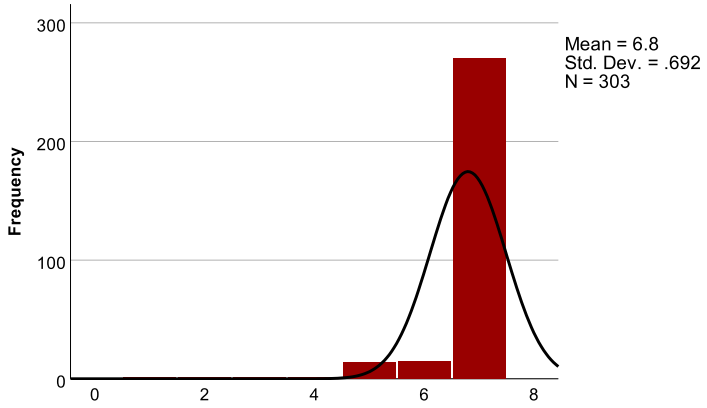
Fig. 2. *Neko Atsume* TB/FF Ratings, demonstrating the pattern of TB-archetype titles, as seen in Fig.1 *Animal Crossing*.

4.2 Pre-Coded: Fight or Flight

DOOM Series



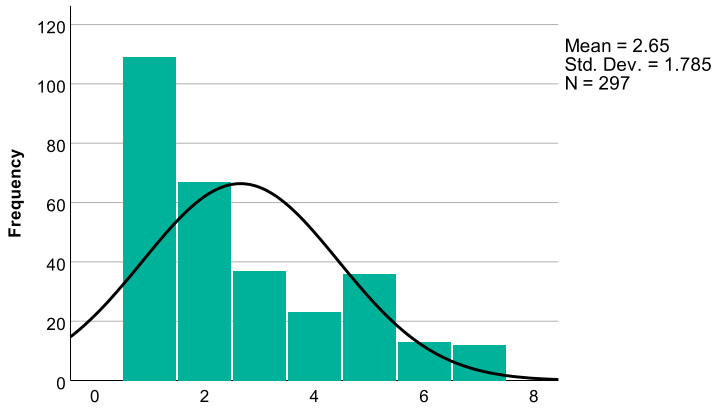
(a) Tend & Befriend



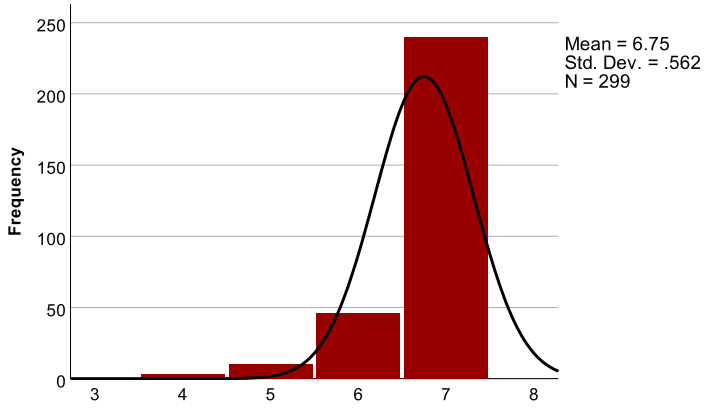
(b) Fight or Flight

Fig. 3. Histogram for FF archetype *DOOM* Series. TB/FF Ratings demonstrating a reverse pattern from TB-archetype titles such as *Animal Crossing* and *Neko Atsume*.

Souls Series



(a) Tend & Befriend

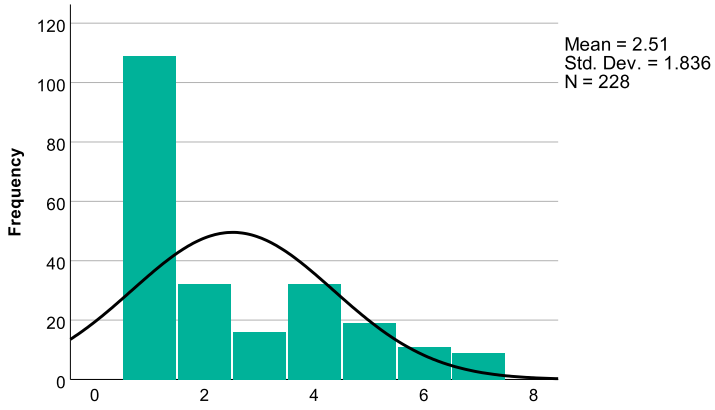


(b) Fight or Flight

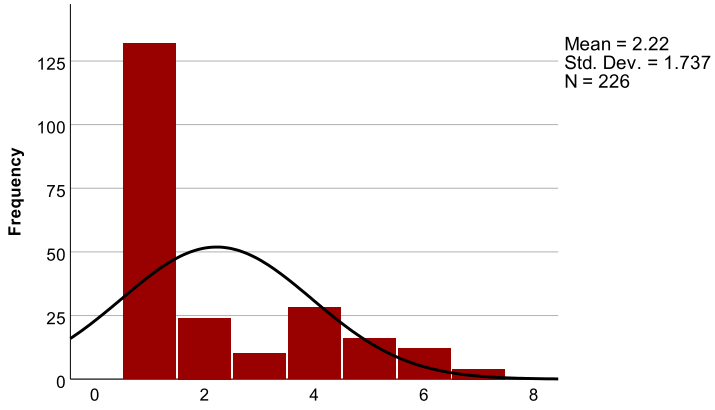
Fig. 4. Histogram for *Souls* Series TB/FF Ratings. TB ratings are still skewed towards the lower end of the scale but with a more gentle distribution. However, FF ratings are still heavily weighted towards to upper end of the scale.

4.3 Pre-Coded: Other

Candy Crush Saga



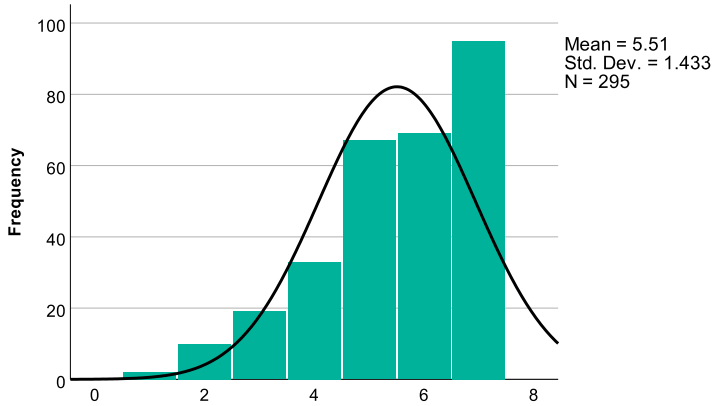
(a) Tend & Befriend



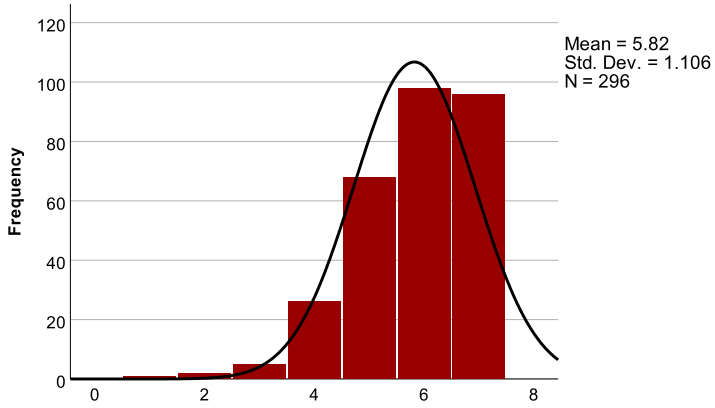
(b) Fight or Flight

Fig. 5. Histogram for *Candy Crush Saga* showing low ratings across both TB/FF scales.

Mass Effect Series



(a) Tend & Befriend



(b) Fight or Flight

Fig. 6. Histogram for *Mass Effect* Series demonstrates mid-high ratings across both TB/FF scales suggesting that the game features elements of both.

4.4 Summary

Tables 2-4 show summaries of the data, separated by pre-coding category. We have included: the number of franchise options (F) when respondents were presented with the titles; the total (N) respondents per game; and the average rating for TB and FF along the 7-point Likert scales (where 1 represented "Strongly Disagree" and 7 "Strongly Agree"). We also included the number of respondents who gave that rating beside them (Nt) and (Nf).

Table 2. Summary Table of **TB** Coded Games and Responses.

Title	**F**	**N**	**TB Average (Mode)(Nt)**	**FF Average (Mode)(Nf)**
Shelter	2	56	7 (24)	5 (20)
Monument Valley 2	-	122	5 (31)	1 (56)
Animal Crossing	3	199	7 (163)	1 (149)
Abzû	-	104	5; 7 (28)	2 (32)
Pikmin	3	146	7 (45)	5(45)
Neko Atsume	-	142	7 (103)	1 (135)
Harvest Moon	5	118	7 (118)	1 (70)
Pokémon	7	355	7 (141)	5 (110)
Minecraft	-	351	6; 7 (95)	5 (106)
Florence	-	61	7 (35)	1 (41)
Journey	-	245	7 (114)	1 (86)
Flower	-	133	7 (40)	1 (65)
ICO	-	157	7 (56)	5(46)
The Sims	4	358	7 (195)	1 (153)
FarmVille	3	163	7 (62)	1 (130)

4.5 Archetype Classification

A criterion for establishing titles as being TB or FF was developed for use in further analysis. This methodology involved taking the percentage of responses which rated a title on the two most extreme ends of the Likert scale (1-2 and 6-7) compared to the its total responses received. We considered games as categorised TB or FF if 80%+ of respondents N for that title rated the game as 6 or 7 ("Strongly Agree") on its relative scale. The three highest-rated games per category are presented in Table 5.

These titles are regularly referenced in media and games discourse (e.g. *Animal Crossing*) as examples of TB-centric experiences, which positively suggests our methodology captures the necessary data [15]. Our methodology was less robust when trying to categorise games that we pre-coded as Other, with results demonstrating reasonably high variability across TB/FF scales.

Table 3. Summary Table of **FF** Coded Games and Responses.

Title	**F**	**N**	**TB Average (Mode)(Nt)**	**FF Average (Mode)(Nf)**
Call of Duty	9	317	1 (133)	7 (235)
Gears of War	4	214	1 (60)	7 (152)
Resident Evil	5	266	2 (79)	7 (178)
Metal Gear Solid	6	256	3 (52)	7 (112)
Destiny	4	218	5 (51)	7 (104)
Halo	4	316	1 (86)	7 (179)
Tekken	7	273	1 (146)	7 (181)
Fortnite	2	235	1 (48)	7 (131)
Shadow of the Colossus	-	258	5 (62)	6 (83)
DOOM	3	303	1 (253)	7 (270)
Tomb Raider	7	312	1 (82)	7 (133)
Silent Hill	6	205	1 (63)	7 (138)
Souls Series	4	297	1 (109)	7 (240)
X-COM	4	229	5 (63)	7 (116)
Civilization	5	295	5 (86)	5 (86)

Table 4. Summary Table of **Other** Coded Games and Responses.

Title	**F**	**N**	**TB Average (Mode)(Nt)**	**FF Average (Mode)(Nf)**
Tetris	-	464	1 (276)	1 (196)
Prof. Layton	6	150	5 (33)	1 (75)
Super Hexagon	-	156	1 (122)	7 (34)
Temple Run	5	216	1 (160)	7 (60)
Mario Kart	6	405	1 (90)	5 (119)
SimCity	3	242	5 (56)	1 (89)
Candy Crush Saga	3	226	1 (109)	1 (132)
Mass Effect	3	295	7 (95)	6 (98)
World of Warcraft	-	312	7 (91)	7 (99)
Final Fantasy	6	280	5 (82)	6 (95)
Final Fantasy XIV Online	-	96	6 (30)	5 (26)
Euro Truck Simulator	2	100	1 (30)	1 (59)
flOw	-	117	1 (22)	1 (29)
FIFA	4	125	1 (29)	5 (34)
Surgeon Simulator	-	213	1 (83)	1 (66)

Table 5. TB/FF Archetype Games and %-age Respondent Agreement

Tend & Befriend	%	**Fight or Flight**	%
Animal Crossing	94.97	*Call of Duty*	90.85
Neko Atsume	85.21	*DOOM*	94.06
Harvest Moon	93.22	*Souls*	96.30

5 Discussion

Of the 15 games pre-coded as TB-centric, 3 titles qualified using our method. Of the proposed 15 FF titles, 11 qualified under the same criteria.

Of the 15 titles classified as Other, none met our expectations for categorisation. We had hypothesised that some games would be rated "low" (1-2) across both TB/FF measures, suggesting that the game in question was "Neither" TB or FF, or that some would be rated "high" (6-7) across the scales, implying that those games featured "Both" TB/FF elements. This area of "Neither/Both" (NB) is of great interest, and will be useful when discussing the limitations of TB/FF. NB supports the increasing need for nuance when utilising a theory such as TB to describe digital games.

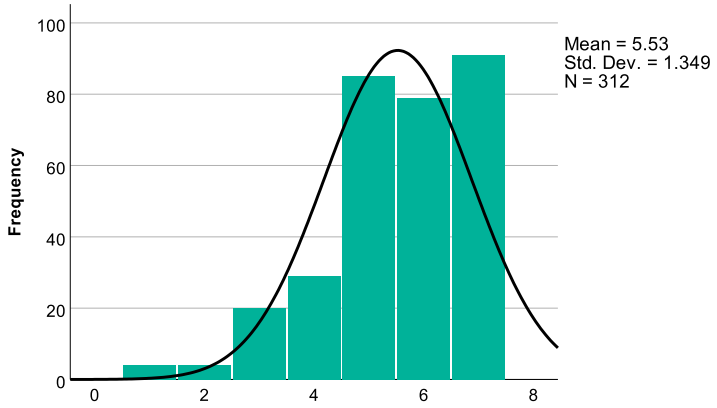
For the purposes of the study, we asked players to score games in their entirety as being TB/FF, however it is our intention to continue this research with greater specificity. That is to say, rather than investigate titles as a whole, perhaps it would be informative to explore them from a mechanic-based lens, aesthetic-lens, motivational-lens, *etc.*

Some games may have a majority of TB features but perhaps an individual level will act as a "surprise" for players or be used to narrative-mechanical effect (e.g. a scenario where a player will suddenly have to flee something). Our survey did not account for such a change in the player journey, and this might explain some variability in the histogram results.

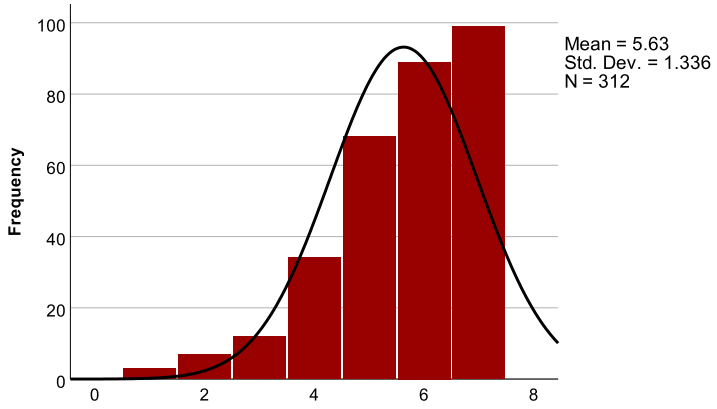
Aside from the potential for TB/FF games and mechanics, it can be noted (e.g. in the case of *World of Warcraft*) that games scored highly along the two scales, but were not Archetypes. This demonstrates a limitation of the current classification method: while we can see that *WoW* leans heavily towards both extremes of the TB/FF histograms, only 54.59% (TB) and 60.26% (FF) is accounted for in the process and therefore it did not meet our benchmark. Interestingly, MMOs (such as *WoW*, *FFXIV*) and games with strong social/multiplayer features (such as *Destiny*, *Fortnite*, and *FIFA*) scored relatively high as TB experiences, though they might not seem as such at first glance. In our study, *FIFA* was pre-coded as Other, while *Destiny* and *Fortnite* were FF. This suggests that games with strong social features are able to engage TB experiences to some degree. Additionally, games that provide players with a broad range of mechanics (such as MMOs) can provide simultaneous TB/FF experiences for individual players and player-groups. In other words, if the game offers a range of TB/FF features, players can engage with which features they most enjoy or desire, and potentially ignore those that they do not.

This implies that not only are there TB/FF games and TB/FF mechanics, but potentially TB/FF players too. By this, we mean there are players that may intrinsically enjoy or navigate towards experiences that allow them to engage with their preferred play-style regardless (or even in spite of) the intended game mechanics. An example of this would be a player who primarily uses *Grand Theft Auto* games as a driving simulator. This echoes Bartle's Player Taxonomy, in which he proposes that players would be willing to switch or engage with activities that are less satisfying, provided that it meets their primary goal in

the end [2] Such an example might be a player who regularly plays a First-Person Shooter (FPS) not because they enjoy shooting targets, but supporting and socialising with their team or clan.



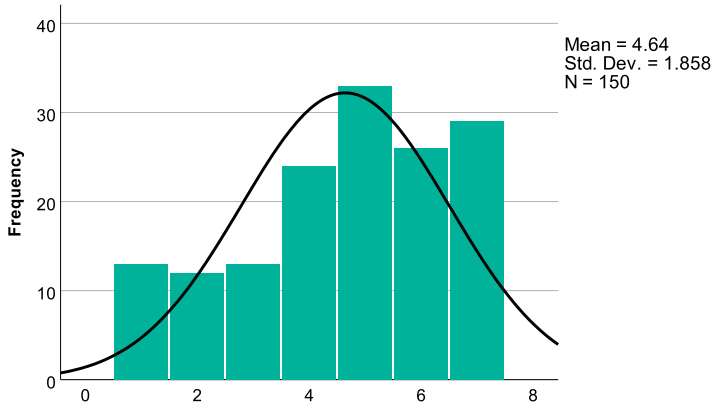
(a) Tend & Befriend



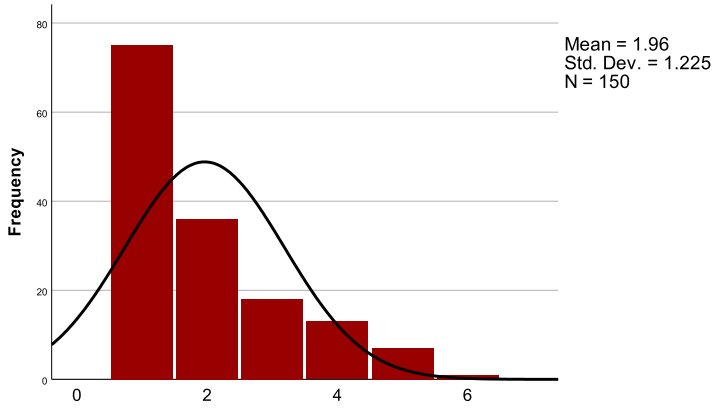
(b) Fight or Flight

Fig. 7. Histogram for *World of Warcraft* TB/FF Ratings

Professor Layton and *Super Hexagon* demonstrate games that scored very low (1-2) along one TB/FF scale, but middling along the other. One potential explanation of this might be that while the games have a average consistency in one factor (e.g. FF in *Super Hexagon*), they could be described as specifically "un-TB" in the other.

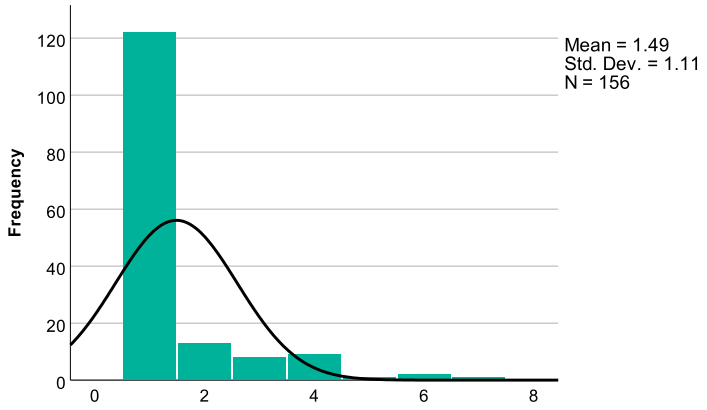


(a) Tend & Befriend

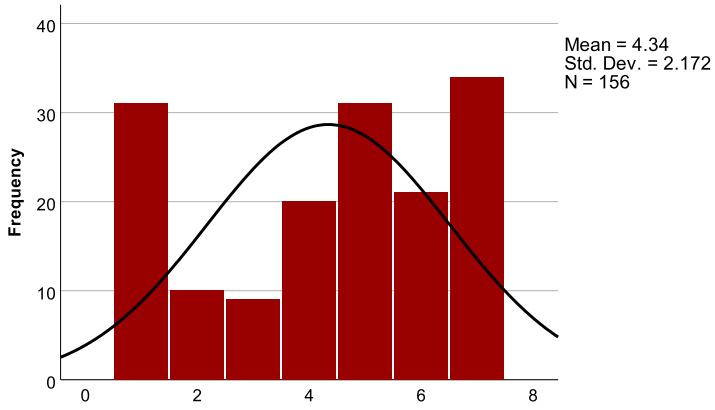


(b) Fight or Flight

Fig. 8. Histogram for *Professor Layton* Series TB/FF Ratings



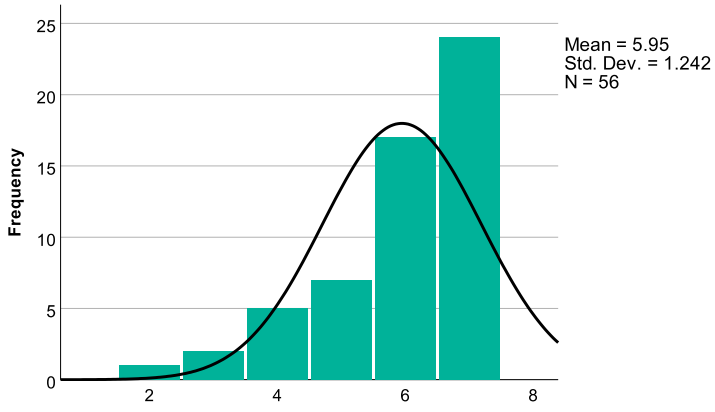
(a) Tend & Befriend



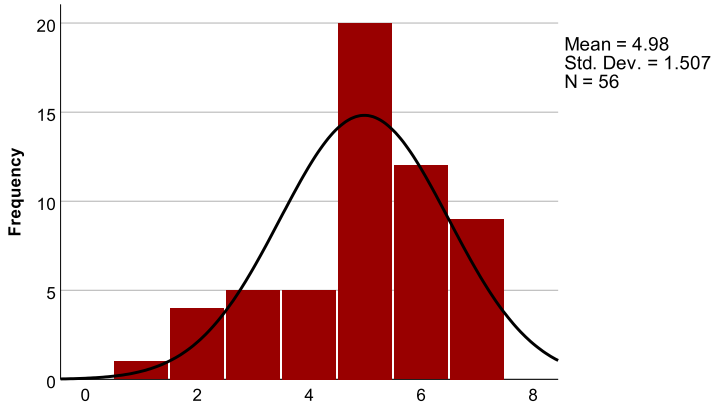
(b) Fight or Flight

Fig. 9. Histogram for *Super Hexagon* TB/FF Ratings

Shelter is an example in which TB is skewed positively, yet it features FF highly in the middle range - not the extreme. This implies that the difference between (for example) an FF archetype game and a game that has elements of FF, could be significant when discussing them.



(a) Tend & Befriend



(b) Fight or Flight

Fig. 10. Histogram for *Shelter* Series TB/FF Ratings

As TB is a gender-based theory, we highlight that the responses to our survey were mostly male (64.9%), but hesitate to comment on the impact this might have on the data. This is because categorisation was made on a game-by-game basis (as not every survey respondent will have familiarity with the complete set of 45 titles), and so the gender distribution of respondents vary accordingly. Looking at the demographic data per game is an area for potential investigation, as well as one possible approach to engaging with the topic.

6 Conclusion

Our data-driven study suggests that TB can be considered as a concrete phenomenon in games; there are archetypal titles which may serve as useful references for research and discourse based on this and other stress-response design theories. These games are presented in Table 5.

We propose that TB/FF are best investigated in relation to one another, and that treating such phenomena as working in tandem (rather than as a dichotomy) will be more productive and representative for future discourse. In addition to this, we encourage the view of TB/FF-ness as two distinct spectrums, and pay particular attention to note that rating of the phenomena may need measurement in both range (*intensity of*) and volume (*amount of*) present in a game.

Some games demonstrated low scores on both the TB/FF scales, which lends support to our hypothesis that TB/FF is not an all-encompassing theory, and some games could be considered "Neither", "Both" – or a new method of classification entirely. Regardless, variability in the results and the limits of this study mean that further investigation is necessary to develop these claims.

As part of our own research, we will continue to analyse our data beyond the descriptive level presented here, and follow up the questions raised by the data thus far.

TB is an nascent area of research in digital games, and the methodology and approaches we present here provide informative starting points. We encourage greater exploration into the way researchers, developers and designers choose to define TB/FF titles; what the shared features or mechanics might be of such titles; how the public may frame or position themselves in relation to these titles; and what the value Tend & Befriend response might bring (or limit) in the evolution of game design.

References

1. Entertainment software association, https://www.theesa.com/wp-content/uploads/2021/03/Final-Edited-2020-ESA_Essential_facts.pdf, retrieved November 10, 2021
2. Bartle, R.: Virtual Worlds: Why People Play. https://mud.co.uk/richard/VWWPP.pdf, retrieved Jan 28, 2022; Chapter in : Massively Multiplayer Game Development 2, Alexander, T. (2005)

3. Code, B.: Slouching toward relevant video games, https://www.gamesindustry.biz/articles/2017-03-08-slouching-toward-relevant-video-games, retrieved November 10, 2021
4. Csikszentmihalyi, M.: Flow: The Psychology of Optimal Experience. Harper Row, https://www.researchgate.net/publication/224927532_Flow_The_Psychology_of_Optimal_Experience, retrieved Nov 10, 2021
5. Davis, M.: Measuring individual differences in empathy: Evidence for a multidimensional approach. Journal of Personality and Social Psychology **44**, 113–126, https://www.eckerd.edu/psychology/iri/
6. Davis, M.: A multidimensional approach to individual differences in empathy. In: JSAS Catalog of Selected Documents in Psychology, vol. 10, p. 85. https://www.eckerd.edu/psychology/iri/
7. Glendinning, M.: How canadian programmer brie code is changing the way we interact with our phones https://fashionmagazine.com/wellness/brie-code-interview/, retrieved November 10, 2021
8. Gosling, S., Rentfrow, P., Swann, Jr, W.: A very brief measure of the big five personality domains. Journal of Research in Personality **37**, 504–528, http://gosling.psy.utexas.edu/scales-weve-developed/ten-item-personality-measure-tipi/, retrieved November 10, 2021
9. Hilgard, J., CR, E., Bartholow, B.: Individual differences in motives, preferences, and pathology in video games: the gaming attitudes, motives, and experiences scales (games). Front. Psychol **4**(608). https://doi.org/10.3389/fpsyg.2013.00608
10. O'Shea, Z., Freeman, J.: Game design frameworks: Where do we start? vol. Article 25, p. 1–10. Association for Computing Machinery. https://doi.org/10.1145/3337722.3337753
11. Richter, F.: Gaming: The most lucrative entertainment industry by far, https://www.statista.com/chart/22392/global-revenue-of-selected-entertainment-industry-sectors/, retrieved November 10, 2021
12. Ruberg, B., Scully-Blaker, R.: Making players care: The ambivalent cultural politics of care and video games. International Journal of Cultural Studies **24**(4), 655–672, https://doi.org/10.1177/1367877920950323
13. Taylor, S.: Tend and befriend: Biobehavioral bases of affiliation under stress. Current Directions in Psychological Science **15**(6), 273–277, https://doi.org/10.1111/j.1467-8721.2006.00451.x
14. Taylor, S., Klein, L., Lewis, B., Gruenewald, T., Gurung, R., Updegraff, J.: Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. Psychological Review **107**(3), 411–429, https://doi.org/10.1037/0033-295X.107.3.411
15. Wilson, C.: Animal crossing and beyond: Why people are falling in love with 'wholesome' video games https://www.abc.net.au/news/science/2020-06-05/wholesome-games-animal-crossing/12318570, retrieved November 10, 2021