



Universiteit Utrecht



# The Merging of Passive and Active

*An analysis of the game elements in the interactive film Black Mirror: Bandersnatch*

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## **Abstract**

In this thesis the interactive film *Black Mirror Bandersnatch* was analysed. Within the 21st century, which has also been proclaimed the ludic century by researchers, games have become the dominant socio-cultural form. With the use of remediation, interactive films are merging active game players and passive film spectators. The convergence of the active and passive and the success of the *Bandersnatch* film brings about the social and academic importance of researching games and game elements within the interactive film *Bandersnatch*. Within this thesis, the following question was answered: *How and to what extent do game elements shape the interactive film Black Mirror: Bandersnatch?* This thesis analysed the film from a games and play studies perspective and was conducted with the game analysis method by Clara Fernandez-Vara (2015). The following five game elements according to Juul (2010) were analysed within the film: (1) rules, (2) variable and quantifiable outcome, (3) valorisation of outcomes, (4) player effort, and (5) player attached to outcome. It has been concluded that all five game elements are present within the *Bandersnatch* film and actively shape the film. However, the extent to which they shape the film differ per element. In addition to this, the balance between the interactivity and narrative construction of the film limit the extent to which game elements can shape *Bandersnatch*, which can be called hyperselectivity. To conclude, the research has been a step forwards to the implementation of a method for the analysis of interactive films, which is highly needed in this “ludic century.”

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## 1. Introduction

Three days after Christmas 2018, a new Netflix Original was uploaded to Netflix. However, this film was different from other films uploaded onto the platform because of its interactivity. *Bandersnatch* is a film about the events in the life of Stefan Butler in 1984. Stefan is living with his father in England. He is a programmer who wants to program a video game based on a choose-your-own adventure novel called *Bandersnatch*. The film belongs to the franchise of *Black Mirror*, which is well known for their dark twists and utopian views.<sup>1</sup> Within *Bandersnatch* viewers make changes to the story via interactive moments. The choices start off with choosing between types of cereal but eventually lead to bigger decisions and decide the eventual ending of the film.

Studying the *Bandersnatch* phenomenon is important since initial experiments with interactive television in the mid-1990s were largely written off as failures.<sup>2</sup> According to Jenkins, critics on interactive television simply wanted to sit back and watch television rather than interact with it.<sup>3</sup> However, the current success of the interactive film *Bandersnatch* is forcing the media industry to rethink some of their assumptions, since active game players and the so-called passive film spectators are now melting together.<sup>4</sup> While the roots of Netflix used to lay in video-rental,<sup>5</sup> their turn to media-streaming makes them an example of the digitisation of film and television content.<sup>6</sup> The popularity of the platform led to the production of Netflix Originals, amongst them the film *Bandersnatch*.<sup>7 8</sup> In addition to this, the amount of online attention which *Bandersnatch* gathered led to Netflix announcing that they are going to produce more interactive content in the future.<sup>9</sup>

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<sup>1</sup> Greg Singh, "Recognition and the image of mastery as themes in Black Mirror (Channel 4, 2011–present): an eco-Jungian approach to 'always-on' culture," *International Journal of Jungian Studies* 6, issue 2 (May 2014).

<sup>2</sup> Henry Jenkins, *Convergence Culture* (New York: University Press, 2006), 59.

<sup>3</sup> Ibid.

<sup>4</sup> Marsha Kinder, "Narrative Equivocations between Movies and Games," in *The New Media Book*, ed. Dan Harries (London: BFI Pub, 2002), 119.

<sup>5</sup> BBC, "Netflix's history: From DVD rentals to streaming success," *BBC NewsBeat*, January 23, 2018, <http://www.bbc.co.uk/newsbeat/article/42787047/netflixs-history-from-dvd-rentals-to-streaming-success>

<sup>6</sup> Gertraud Koch, "Introduction: Digitisation as Challenge for Empirical Cultural Research," in *Digitisations: Theories and Concepts for Empirical Cultural Research*, ed. Gertraud Koch (New York: Routledge, 2017): 1.

<sup>7</sup> Trefis Team and Great Speculations, "Netflix Projects Strong Subscriber Growth In Q4," *Forbes*, October 18, 2018, <https://www.forbes.com/sites/greatspeculations/2018/10/18/netflix-projects-strong-subscriber-growth-in-q4/#7e051f113a36>

<sup>8</sup> David Morris, "Netflix Original Content Has Grown By 88% This Year, But Old TV Still Rules the Remote," *Fortune*, August 12, 2018, <http://fortune.com/2018/08/12/netflix-original-content-has-grown-by-88-this-year-but-old-tv-still-rules-the-remote/>

<sup>9</sup> Nick Pope, "Netflix Is Creating More Interactive Shows, Because You Don't Work Hard Enough For Your Content," *Esquire*, January 22, 2019, <https://www.esquire.com/uk/latest-news/a25986235/netflix-is-creating-more-interactive-shows-because-you-dont-work-hard-enough-for-your-content/>

The growing presence, significance and recognition of play has led researchers to proclaim that the twenty-first century is turning into the ludic century, with games becoming the dominant socio-cultural form.<sup>10</sup> This allows play as a fundamental component of human behaviour to keep unfolding its potential.<sup>11</sup> Regarding play films are also changing, remediating themselves, as computer games.<sup>12</sup> For instance, computer game techniques are influencing the narrative construction of films with their play worlds, ludified quests, controllers and interfaces, player experience, and with their structure resembling that of a game.<sup>13</sup> Films are also remediating themselves as games by being interactive and using a computer program to guide the viewer to the automatically generated next element.<sup>14</sup> Thus, interactivity within films is also an example of the blending of computer into the domain of film.<sup>15</sup> The merging of computer and games into the domain of film and the success of the *Bandersnatch* film indicates the social and academic importance of researching games and game elements within new media, such as this research on the interactive film *Bandersnatch*.

Thus, within this research the following research question is asked:

*How and to what extent do game elements shape the interactive film Black Mirror: Bandersnatch?*

To be able to answer this question, the following sub-questions are posed:

1. What are the rules, game mechanics and goals within the playing of the interactive film *Bandersnatch*?
2. How do the game elements and the interactivity of the film shape the fictional world and narrative of *Bandersnatch*?
3. What are the game dynamics and which approaches can a player take to reach a desired ending within the interactive film *Bandersnatch*?

To answer these questions, a play and game studies perspective is used. Subsequently, by using a play and game studies perspective to analyse the film, new insights are gathered regarding the role of game elements within films. After all, earlier films like Lars von Trier and mind game films were also analysed from a game and play perspective instead of a traditional film perspective.<sup>16 17</sup> Thus, this research is a step

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<sup>10</sup> Steffen Walz and Sebastian Deterding, "Gamification and Learning," *The Gameful World: Approaches, Issues, Applications* (Cambridge: MIT Press, 2014), 15.

<sup>11</sup> Anne Dippel and Sonia Fizek, "14 Ludification of culture," in *Digitisations: Theories and Concepts for Empirical Cultural Research*, ed. Gertraud Koch (New York: Routledge, 2017): 276-292.

<sup>12</sup> Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge: MIT Press, 2000), 47.

<sup>13</sup> Lasse Juel Larsen, "Play and Gameful Movies: The Ludification of Modern Cinema," *Games and Culture* (2017): 2-17

<sup>14</sup> Lev Manovich, *The Language of New Media* (Cambridge: MIT Press, 2002), 37-38.

<sup>15</sup> Joost Raessens, "Cinema and beyond: Film en het proces van digitalisering," in *Filosofie in cyberspace: wijsgerige reflecties op de digitale revolutie*, ed. Jos de Mul (Amsterdam: Prometheus, 1995), 21.

<sup>16</sup> Jan Simons, *Playing the Waves* (Amsterdam: University Press, 2007), 186.

forwards to the implementation of a method for the analysis of interactive films, which is highly needed in this ludic century.

This perspective is further elaborated upon in the theoretical framework. In addition to this, the theoretical framework is going to work as a basis for defining *Bandersnatch*, which can be seen as a narrative and interactive film, but because of its interactivity can also be seen as a game. The method that is going to be used to analyse the film is the game analysis method by Fernandez-Vara.<sup>18</sup> Within this method the five game elements as defined by Juul<sup>19</sup> are going to be analysed by using the building blocks: rules, goals, game mechanics, story, choice design, game dynamics, and control schemes and peripheral within the film. Because of the overlap between game elements and building blocks, the research is structured in three main categories: (1) rules, goals and game mechanics, (2) the story and choices, and (3) dynamics and controls.

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<sup>17</sup> Thomas Elsaesser, "The Mind-Game Film," in *Puzzle Films: Complex Storytelling in Contemporary Cinema*, ed. Warren Buckland (Malden, MA: Wiley-Blackwell, 2009), 16.

<sup>18</sup> Clara Fernandez-Vara, *Introduction to Game Analysis* (New York: Routledge, 2015), 12.

<sup>19</sup> Jesper Juul, "The Game, the Player, the World: Looking for a Heart of Gameness," *Plurais Salvador 1* no. 2 (2010): 254-255.

## 2. Theoretical Framework

This thesis argues to analyse the *Bandersnatch* film from a games and play studies perspective. Thus, the definition of a game is defined in paragraph 2.1. In 2.2 the film and the narrative of the film is elaborated upon. Since the film is going to be analysed from a game studies perspective, the traditional film theory framework is mixed with a game design theory. In 2.3 the interactivity of the film is defined and elaborated upon with the help of the Multivalent Model of Interactivity.<sup>20</sup> By establishing which interactive aspects are going to be analysed within the film, the corpus is confined. Finally, in 2.4 the relationship between interactivity and narrative is portrayed and the position of this research within the ludology/narratology debate is elaborated upon.

### 2.1 *Bandersnatch* the Game

According to Juul a game is a “rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable.”<sup>21</sup> Thus, the game definition that Juul proposes has six elements: (1) rules, (2) variable and quantifiable outcome, (3) valorisation of outcomes, (4) player effort, (5) player attached to outcome and (6) negotiable consequences.<sup>22</sup> Within this thesis the *Bandersnatch* film is analysed from a game and play perspective since earlier films like Lars von Trier and mind game films were also analysed from a game and play perspective instead of a traditional film perspective<sup>23 24</sup> and the branching tree structure used in an interactive film is also used by game theorists.<sup>25</sup> In order to analyse the film from a game and play perspective the game elements within the film *Bandersnatch* are analysed. However, the terminology to describe game elements can come from a variety of sources.<sup>26</sup> The definition by game scholar Jesper Juul is used for this research since he used previous definitions and elaborated upon their similarities and differences.<sup>27</sup> These game elements are combined with the building blocks of the game analysis method in the next chapter. However, the game elements as described by Juul are limited in description when using

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<sup>20</sup> Salen and Zimmerman, *Rules of Play*, 71-72.

<sup>21</sup> Juul, “The Game, the Player, the World,” 255.

<sup>22</sup> *Ibid.*, 254-255.

<sup>23</sup> Jan Simons, *Playing the Waves* (Amsterdam: University Press, 2007), 186.

<sup>24</sup> Thomas Elsaesser, “The Mind-Game Film,” in *Puzzle Films: Complex Storytelling in Contemporary Cinema*, ed. Warren Buckland (Malden, MA: Wiley-Blackwell, 2009), 16.

<sup>25</sup> Simons, *Playing the Waves*, 186.

<sup>26</sup> Juul, “The Game, the Player, the World,” 249-250.

<sup>27</sup> *Ibid.*, 249.

them for the analysis of the film *Bandersnatch*. For instance, the second game element (variable and quantifiable outcome) brings to question the interactivity of the film and how this interactivity influences the narrative. Thus, this theoretical framework uses sources across different study fields in order to define and explain the *Bandersnatch* phenomenon.

## 2.2 *Bandersnatch* the Narrative Film

According to Bordwell, a “narrative film represents story events through the vision of an invisible or imaginary witness.”<sup>28</sup> Within this film the camera lens represents the eyes of a silent observer taking in the action.<sup>29</sup> Since the viewers of *Bandersnatch* observe the story this film is seen as a narrative film. However, the viewers of *Bandersnatch* are no longer passive, or only “taking in the action,” but are also actively contributing to the story events via interactive moments. These interactive moments influence the eventual narrative of the film by giving the viewer the possibility to reach different endings based on their decisions. Thus, it is important to analyse the effect of the interactive moments on the eventual narrative of the film especially in relation to the game elements variable and quantifiable outcome and valorisation of outcomes.

Since narrative is a broad term it is firstly going to be further elaborated upon. Within a narrative film there is the process whereby the film's syuzhet and style interact in the course of prompting and guiding the viewer's construction of the fabula.<sup>30</sup> Within this framework, the fabula refers to the viewer's mental construction of the chronology of events taking place in the film. Since this a personal effect, this mental construction is not researched in this thesis. On the other hand, the syuzhet refers to the structured set of all events as the viewer sees and hears them presented in the film itself, which is researched in this thesis.<sup>31</sup> According to Bordwell, the style is the film's systematic use of cinematic devices and is ingredient to its medium, which in *Bandersnatch* its case is an interactive film that plays on the television.<sup>32</sup> This narration process described by Bordwell and Thompson is written from the point of view of traditional film theory. An approach which can be connected to this film theory is the game design theory by Jenkins.<sup>33</sup> Jenkins elaborates on four narrative approaches that can be used in games: evocative spaces, enacted stories, embedded narrative and emergent narrative.<sup>34</sup> Within this theory the embedded<sup>35</sup> and

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<sup>28</sup> David Bordwell, *Narration in the Fiction Film* (Hoboken: Taylor and Francis, 2013), 9.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid., 53.

<sup>31</sup> Kristin Thompson, *Breaking the glass armor: neoformalist film analysis* (Princeton: Princeton University Press, 1988), 39-40.

<sup>32</sup> Bordwell, *Narration*, 50.

<sup>33</sup> Henry Jenkins, “Game Design As Narrative Architecture,” (2005): 6-13.

<sup>34</sup> Ibid.

<sup>35</sup> Ibid., 13.

emergent<sup>36</sup> narratives share similarities with the previously defined narration process. For example, the embedded narrative corresponds with the previously described fabula.<sup>37</sup> In addition to this, the emergent narrative can be seen as the previously described syuzhet.<sup>38</sup>

The relation between these two frameworks emphasises the missing element style within game theory. This element is argued to be important when researching the *Bandersnatch* film, since instead of being played on a game console, the film is played by using the television remote control. Hence, within this research the way in which game elements shape the narration is analysed with focus on the syuzhet (emergent narrative) and style (medium specificities).

### **2.3 *Bandersnatch* and Interactivity**

*Bandersnatch* is not only a narrative film, but also an interactive film since “the viewer has the possibility to influence the course of events within the film.”<sup>39</sup> Thus, the game elements player effort and player attached to outcome are argued to be related to the interactivity of the film. Salen and Zimmerman further elaborate on the term interactivity within their Multivalent Model of Interactivity.<sup>40</sup> This model is used because Salen and Zimmerman aim to offer a model of interactivity that accommodates each of the previous definitions by authors across the game studies field regarding interactivity, thus making this model the most relevant.<sup>41</sup> This model presents four modes of interactivity that a viewer of an interactive film can have:<sup>42</sup>

- 1) Cognitive: this is the imaginative interaction between a player and a game.<sup>43</sup> It can be argued that this matches the previously defined fabula within the narration process.
- 2) Functional: functional, structural interactions with the material components of the system (whether real or virtual).<sup>44</sup> In the case of *Bandersnatch*, this is the use of the TV remote control and putting effort into making decisions in order to change the story. It can be argued that this matches with the previously defined style within the narration process and the game element player effort.

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<sup>36</sup> Ibid.

<sup>37</sup> Ibid., 9.

<sup>38</sup> Ibid., 13.

<sup>39</sup> Raessens, “Cinema and beyond,” 142.

<sup>40</sup> Salen and Zimmerman, *Rules of Play*, 71-72.

<sup>41</sup> Salen and Zimmerman, *Rules of Play*, 71.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid., 72.

- 3) Explicit: these are the explicit influences the player has within a game.<sup>45</sup> In the case of *Bandersnatch*, choosing the option on the left or on the right.
- 4) Beyond-the-object: this is interaction outside the experience of a designed system, for instance within the fan culture.<sup>46</sup>

While most interactive activities incorporate some or all of them simultaneously,<sup>47</sup> this research focuses on the functional and explicit interactivity of *Bandersnatch*. For instance, the player effort that is made via the TV remote control by making explicit choices within the *Bandersnatch* film. Subsequently, explicit interactivity comes closest to defining what Salen and Zimmerman mean when they say that games are interactive.<sup>48</sup> They mention that an experience does not truly become interactive until a participant decides to make choices that have been designed into the actual structure of the experience.<sup>49</sup> Within *Bandersnatch* these choices are presented within a branching tree structure. In this branching tree structure, the viewer can make decisions and change the narrative.<sup>50 51</sup> When the viewer reaches a scene, the film presents him or her with choices and allows the viewer to choose among them. Depending on the choice, the viewer advances along a particular branch of a tree. In addition to this, Bizzocchi argues that there are two levels of interactivity a player can have with an interactive film.<sup>52</sup> In the first place, there is the level-one interactivity which drives the experience of making the designed choices.<sup>53</sup> Secondly, there is the level-two interactivity which is the ability to replay a scenario and review and compare different parts of the film.<sup>54</sup> So, viewers can use their level-two interactivity in order to suffice their level-one interactive curiosity.<sup>55</sup> Consequently, within this research the focus is on both levels of explicit interactivity. Thus, this analysis focuses on the interactivity, which leads to the choice design of the film, and the relation of the interactivity to the narrative of the film.

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<sup>45</sup> Ibid.

<sup>46</sup> Ibid.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>50</sup> Manovich, *New Media*, 37-38.

<sup>51</sup> Simons, *Playing the Waves*, 186.

<sup>52</sup> Jim Bizzocchi, "Run, Lola, Run -Film as Narrative Database," *Draft* (2005): 8.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

### 2.3 Narrative and Interactivity

Since *Bandersnatch* makes use of both narrative and interactivity it is important to note that critics argue that interactivity can pose a potential threat to the narrative construction of films.<sup>56</sup> One of the critics, Ernest Adams, writes that narrative means the reader's surrender to the author and taking on a passive role.<sup>57</sup> Thus, he argues that interactivity is not like narrative at all since "interactivity is about freedom, power, self-expression."<sup>58</sup> Adams argues that the relationship between interactivity and narrative is contradictory.<sup>59</sup> In addition to this, Thomas Elsaesser argues that what commonly passes for interactivity in narratives is actually hyperselectivity.<sup>60</sup> Within this hyperselectivity the choices are presented from a pre-arranged branching tree structure.<sup>61</sup> These choices can give the illusion of freedom of response even though that is not the case.<sup>62</sup> Thus, since the *Bandersnatch* film uses both interactivity and narrative, it is interesting to further analyse the relationship between these two aspects and see how they have been combined within *Bandersnatch*.

The combination of interactivity and narrative within the film may call to question the position of this thesis within the ludology/narratology debate. Therefore, this thesis argues that neither narratology nor ludology alone are sufficient enough for the study of a phenomenon like *Bandersnatch*.<sup>63</sup> Thus, the debate surrounding these two is ignored.<sup>64</sup> In addition to this, Kokonis argues that there is a need of a wider and more flexible theoretical grid that can incorporate both ludology and narratology as well as other theoretical tools for the comprehensive study of games and thus in this case an interactive film.<sup>65</sup> Subsequently, this thesis establishes such a framework with the use of a game and play studies perspective and by analysing the interactive film with a game analysis method.<sup>66</sup>

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<sup>56</sup> Ernest Adams, "The Designer's Notebook: Three Problems for Interactive Storytellers," (1999).

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

<sup>60</sup> Thomas Elsaesser, "Pushing the contradictions of the digital: 'virtual reality' and 'interactive narrative' as oxymorons between narrative and gaming," *New Review of Film and Television Studies*, 12:3 (2014): 303.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid.

<sup>63</sup> Michalis Kokonis, "Intermediality between games and fiction: The "ludology vs. narratology" debate in computer game studies: A response to Gonzalo Frasca," *Film and Media Studies* 9 (2014): 176.

<sup>64</sup> Janet Murray, "I believe that the Ludology/Narratology discussion has moved on." (2005).

<sup>65</sup> Kokonis, "Intermediality between games and fiction," 176.

<sup>66</sup> Fernandez-Vara, *Game Analysis*.

### 3. Method

The research is done by analysing the five game elements with the game analysis method by Fernandez-Vara,<sup>67</sup> which is explained in 3.1. In addition to this, the relation between the game elements and building blocks from the method are further elaborated upon in 3.2.

#### 3.1 Game Analysis

Within the game analysis method there are three areas of analysis: game context, game overview and formal elements.<sup>68</sup> The context of the game analyses the circumstances in which the game is produced and played,<sup>69</sup> this area of analysis cannot answer the research question and is left out. The game overview focuses on the content and enables the analysis of the basic features within the film.<sup>70</sup> In addition to the game overview area, the formal elements area refers to the phases within the game and its components which allows the researcher to understand how the game works.<sup>71</sup> By using these two areas of analysis the game elements within *Bandersnatch* are analysed. The analysis is done by playing the film with the exhaustive playing strategy and using multiple playing strategies in order to fully analyse the dynamics of the film.<sup>72</sup> This strategy is chosen since Glas and Van Vught suggest that research results and arguments are stronger when they take into account as many different play choices (successful and unsuccessful) and test as many different interpretations as possible.<sup>73</sup> Since each platform has its own set of limitations, it is necessary to define that for this research the *Bandersnatch* film is solely played via the television<sup>74</sup> and that film is revisited again in order to play it critically.<sup>75</sup> The game elements and their matching building blocks are further elaborated upon below.

#### 3.2 Approach

The first game element is that games are (1) rule-based.<sup>76</sup> In order to research the rules of the film, the building blocks ‘Rules and Goals of the Game,’ ‘Game Mechanics’ and ‘Rule-driven versus Goal-driven

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<sup>67</sup> Fernandez-Vara, *Game Analysis*, 12.

<sup>68</sup> Ibid., 13.

<sup>69</sup> Ibid., 14.

<sup>70</sup> Ibid.

<sup>71</sup> Ibid., 17.

<sup>72</sup> Glas and van Vught, “Considering play,” 5-6.

<sup>73</sup> Ibid., 6.

<sup>74</sup> Fernandez-Vara, *Game Analysis*, 72.

<sup>75</sup> Ibid., 26.

<sup>76</sup> Juul, “The Game, the Player, the World,” 256.

games' are used. Within these building blocks the game overview area of analysis is merged with the formal elements area in order to fully analyse this game element. This game element is combined with the first sub-question. The game mechanics have a close relationship to the rules of the game. According to Fernandez-Vara, the rules dictate how the game works, but the mechanics refer to the rules that establish how the player participates in the game.<sup>77</sup> Mechanics are the various actions, behaviours and control mechanisms afforded to the player within a game context.<sup>78</sup> Within the analysis of game mechanics, the focus may be on the core mechanics that focus on reaching the goal of the game, since players have to repeatedly do this in order to achieve the ending of the film.<sup>79</sup> <sup>80</sup> Thus, by analysing both the rules and the mechanics, optional clashes between game design and eventual player interaction can be exposed.

The second game element is a (2) variable, quantifiable outcome.<sup>81</sup> Since this film is interactive, there are many optional paths a player can take. In order to research all these different paths and their outcomes, the following building blocks are used: 'Game Dynamics,' 'Rule-driven versus Goal-driven games' and 'Choice Design'. These building blocks all belong to the formal elements area of analysis. While the rules and game mechanics establish the possible behaviours when playing the game, these building blocks research how these behaviours are shaped.<sup>82</sup> Since *Bandersnatch* has multiple endings, it can also foster different playing styles.<sup>83</sup> Thus, it is necessary to analyse how the game dynamics (player strategies) can influence reaching a different or desired ending. However, Fernandez-Vara argues that the studying of the dynamics of a game can be hard, since there is not a single way of playing most games.<sup>84</sup> For this reason, the research uses the exhaustive playing strategy<sup>85</sup> and a narrative guideline to be able to analyse all possible dynamics.

The third game element is that the different potential outcomes of the game have to be assigned (3) different values, some being positive, some being negative.<sup>86</sup> These outcomes and their positive or negative values are analysed with the following building blocks: 'Fictional World of the Game,' 'Story' and 'Choice Design'. With the help of the narrative guidelines all possible tree branches within the film are analysed.

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<sup>77</sup> Fernandez-Vara, *Game Analysis*, 98.

<sup>78</sup> Robin Hunicke, Marc LeBlanc and Robert Zubek, "MDA: A Formal Approach to Game Design and Game Research," *Proceedings of the AAAI Workshop on Challenges in Game AI*. Vol. 4. No. 1. (2004): 3.

<sup>79</sup> Miguel Sicart, "Defining Game Mechanics," *Game Studies* vol 8, no. 2 (2008).

<sup>80</sup> Katie Salen and Eric Zimmerman, *Rules of Play: Game Design Fundamentals* (London: MIT Press, 2004), 312-313.

<sup>81</sup> Juul, "The Game, the Player, the World," 256-257.

<sup>82</sup> Fernandez-Vara, *Game Analysis*, 136.

<sup>83</sup> *Ibid.*, 138.

<sup>84</sup> *Ibid.*, 139.

<sup>85</sup> Glas and Van Vught, "Considering play: from method to analysis," 5-6.

<sup>86</sup> Juul, "The Game, the Player, the World," 258.

The fourth game element is that in order to influence the outcome, the (4) player has to invests effort.<sup>87</sup> For instance, by making the game challenging. This is analysed by looking at the ‘Game Mechanics’ of the film, optional playing styles (‘Game Dynamics’) and how the player can play the film (‘Control Schemes and Peripherals’).

The fifth game element is that the different outcomes mean that (5) players are attached to the outcomes of the game.<sup>88</sup> For example, in the sense that a player will be the winner and “happy” if a positive outcome happens, and loser and “unhappy” if a negative outcome happens.<sup>89</sup> This is analysed by using the building blocks focused on: ‘Fictional World of the Game,’ ‘Story’ and ‘Choice Design’.

Lastly, Juul mentioned that a game can either be played with or without (6) real-life consequences.<sup>90</sup> This sixth game element falls outside of the scope of this research since it focuses on the game and its relationship to the rest of the world. However, it may be assumed that playing the film does not have any real-life consequences.

It can be established that some of the building blocks are used to analyse multiple aspects of one game element. For this reason, the overlapping aspects between the game elements and the building blocks has been noted down in the table in Attachment I. The building blocks are integrated with the game elements into the following categories: (1) rules, goals and game mechanics, (2) the story and choices, and (3) dynamics and controls.

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<sup>87</sup> Ibid.

<sup>88</sup> Ibid., 258-259.

<sup>89</sup> Ibid.

<sup>90</sup> Ibid., 259-260.

## 4. The Analysis

The questions posed by Fernandez-Vara<sup>91</sup> per building block are used to analyse the game elements within the film. The full answers to these questions have been added to Attachment II. Within the next paragraphs, the results of the game analysis are described and interpreted, and connections are made where the results intersect each other.

### 4.1 Rules, Goals and Game Mechanics

This category has been analysed by the rules and goals,<sup>92</sup> game mechanics<sup>93</sup> and rule-driven vs goal driven<sup>94</sup> questions posed by Fernandez-Vara as can be seen in Attachment II: number 1, 2 and 7.

#### 4.1.1 Rules

It is important to note that the *Bandersnatch* film starts off with a short tutorial on how to play. When playing the film, there are interactive moments presented in which the viewer has 10 seconds to choose between two options in order to continue the story. It may be interpreted that the player can either decide to play the film, or observe, since there is a default option which will be selected selected when a player fails to make a choice in an interactive moment. However, it has been established that this is not favoured by the film itself. Since the default option is not always the choice that results in the ‘right’ continuation of the story. For example, one of the first choices is to decide to work for Tuckersoft or not, in which the default is set on the choice: YES. However, when choosing this the player receives a fast forward to a negative review of the *Bandersnatch* game and the main character, Stefan, saying “I should try again.” This results in the replaying of the film up until the same interactive situation through a fast forward and choosing between the same two options again. As previously mentioned by Salen and Zimmerman, the experience becomes interactive by the participant’s choices and this participation is necessary in order to be able to view and play the rest of the film.<sup>95</sup> In addition to this, another rule is that the player has to make choices and most preferably a choice that will not result in the replaying of the film. This rule is thus a game element which actively shapes the film. By choosing not to participate and letting the default choice be selected, the viewer will go game over and has to replay.

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<sup>91</sup> Fernandez-Vara, *Game Analysis*.

<sup>92</sup> Ibid., 94- 97.

<sup>93</sup> Ibid., 97 - 99.

<sup>94</sup> Ibid., 151 - 154.

<sup>95</sup> Salen and Zimmerman, *Rules of Play*, 72.

#### 4.1.2 The Goal

By using the exhaustive playing strategy, it was established that choices within the film that prevent the creation of the *Bandersnatch* game by Stefan end up with a replay or so called game over. This game over affordance makes sure that, according to Sicart, the “making [of] mistakes is encouraged by means of save/reload mechanisms.”<sup>96</sup> This results in the affordance of replaying the scenario and choosing differently. For example, when the player has to choose between DESTROY COMPUTER or HIT DESK. Since the first option would hurt the making of the *Bandersnatch* game by Stefan, this choice ends up with a replay. However, the second option results in the continuation of the film. As a result of choosing the right choice and making Stefan continue with programming the *Bandersnatch* game, the player can eventually reach an ending.

However, there are different endings a player can reach. One of these endings is the five star review ending. If a player has reached an ending, the film suggests a replay to a previously made choice to enable watching the other branching tree structures. In this case, it can be argued that the goal of the film is either to make the player choose the right choices so Stefan can create the game, or simply just to keep playing and watching the film. Thus, gameplays in which the player decides to watch the credits after getting to the first possible ending would differ from the supposed design of the film and from the goal of the film to make the viewer play everything.

#### 4.1.3 Game Mechanics

It has been established that the core mechanic of the film is making the ‘right’ choices in order to progress in the story. In addition to this, the player has the affordance of pausing the film or reversing the film ten seconds. However, the player does not have the ability to skip ahead or go to an overview of all scenes. Thus, it is mandatory to rewatch already seen scenes in order to continue playing or to be able to choose a different branch. Therefore, there is not much difference between the designed rules and the game mechanics. This may be since the film is limited in rules by only having to make choices occasionally. In addition to this, the ability to go game over and have a limited amount of choices to choose from, enables the interactivity to be less of a threat to the narrative construction of the film.<sup>97</sup>

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<sup>96</sup> Miguel Sicart, “Moral Dilemmas in Computer Games,” *Design Issues*: vol 29, no. 3. (2013): 31.

<sup>97</sup> Adams, “Problems for Interactive Storytellers.”

## 4.2 The Story and Choices

This category has been analysed by the building blocks fictional world of the game,<sup>98</sup> story<sup>99</sup> and choice design<sup>100</sup> questions posed by Fernandez-Vara as can be seen in Attachment II: numbers 3, 4 and 8.

### 4.2.1 The Story

The film takes place in England and starts on the 9<sup>th</sup> of July 1984. The film takes place over the course of several months from July to December, the timeframe in which Stefan Butler is programming the *Bandersnatch* game. Within the film, the player controls Stefan Butler. Before the film starts, a few events already took place. For instance, the train accident in which Stefan's mother passed away. This scene is shown further along in the film with the potential for the viewer to travel back in time. If the viewer decides to travel back in time, he or she has the option to join Stefan's mother on the train, which will result in both their deaths. Thus, the previous event influences the film. Another example is that the history surrounding the death of his mother gets questioned in one tree branch which correlates to one of the possible endings within the film.

It has been argued that the explicit interactivity allows for the player to make choices to the syuzhet. However, this narrative construction is limited by the ability to go game over, have to replay scenarios, choose different and by having a previously determined number of endings. However, this ability to replay and choose differently does contribute to the players second-level interactive curiosity since it enables players to discover alternate tree branches.<sup>101</sup> Game designer Sid Meier defined games as "a series of interesting choices."<sup>102</sup> So, within the *Bandersnatch* film, there are a series of interesting choices that the viewer can take. Each of these choices influences the narrative and the eventual ending of the film. The following 'big' endings have been established based on the biggest differences between the tree branches:

#### 1. The Netflix Ending

Stefan feels controlled. The player explains he is being controlled by Netflix, the online streaming platform from the future. This ending can result in Stefan discussing being controlled with Dr. Haynes and either ends in Stefan fighting her and being dragged out of the office, or Stefan realising he is on a film set.

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<sup>98</sup> Fernandez-Vara, *Game Analysis*, 104 - 106.

<sup>99</sup> *Ibid.*, 106 - 109.

<sup>100</sup> *Ibid.*, 161 - 163.

<sup>101</sup> Jim Bizzocchi, "Run, Lola, Run -Film as Narrative Database," 8.

<sup>102</sup> Meier as quoted in Miguel Sicart, "Moral Dilemmas in Computer Games," *Design Issues*: vol 29, no. 3. (2013): 33.

## 2. The P.A.C.S. Ending

Stefan finds proof that his dad has been controlling and drugging him and that the story of his mother dying has been implanted into his brain. Out of anger, Stefan kills his dad and eventually ends up in jail.

## 3. The Time Travel Ending

By doing LSD with Colin, Stefan learns to travel through time via mirrors. Eventually, he ends up back in time with his mother having to leave for the train. While previously in this scene, the viewer could only choose NO, the option YES becomes available when replaying the scene. By joining Stefan's mother on the train, Stefan dies in the future.

## 4. The Murder Ending Option 1

Stefan does not feel in control, kills his father and buries the body. Stefan ends up in prison and the company Tuckersoft goes bankrupt.

## 5. The Murder Ending Option 2

Stefan does not feel in control. By killing his father and deciding to chop up the body, Stefan does not end up in prison and is able to finish the *Bandersnatch* video game. The video game gets a five star rating.

Within the film, details and endings may differ within these 'big' endings since there are many variables that influence the story. Thus, it can be concluded that the game element variable and quantifiable outcome is present. However, Meier also argues that for players to be fully engaged in the game, they have to be presented with choices to which they feel emotionally attached.<sup>103</sup> So, since players of the film have to choose between two options and cannot choose anything else, the interactivity with the film is limited. It can be argued that this is the so called hyperselectivity as mentioned by Elsaesser<sup>104</sup> and has been done in order to limit the interactive threat to the narrative construction of the film.<sup>105</sup>

### 4.2.2 Choice Design

The film is a psychological thriller. This has been established by analysing the different choices and options within the film. For instance, by having to make a choice between chopping up the body of Stefan's father or to bury the body. In addition to this, it can be said that multiple characters within the film are in unstable and delusional psychological states. For instance, Colin explains how he feels like there are multiple realities happening at the same time and how decisions are never your own choice.

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<sup>103</sup> Ibid.

<sup>104</sup> Elsaesser, "Pushing the contradictions of the digital," 303.

<sup>105</sup> Adams, "Problems for Interactive Storytellers."

Whether the film is fully based on a fictional world or on actual historical settings, is still unclear. However, an article elaborates upon the possibility that the *Bandersnatch* game of the film is based upon an actual computer game which was developed in 1984, but never released.<sup>106</sup> In addition to this, the fictional character Jerome F. Davies plays a significant role in the film as the author of the novel which inspires Stefan to create the video game.<sup>107</sup>

It has been established that the player's choices shape the storyline and the eventual ending of the film. These endings either give the viewer: (1) a number of stars regarding a review of *Bandersnatch*, (2) a summary of where Stefan ends up (jail, death, in the past) and, (3) information on what happened to Tuckersoft, the video game company that Stefan works for. The addition of a 'star' review adds a rewarding element which contribute to the feeling of either 'winning' or 'losing' based on the player's choices within the film and the results.<sup>108</sup> The realisation that choices can have a negative effect, simply to result in a game over and having to retry, can give players a sense of failure. So, there must also be a contrast when the player wins or in this case, reaches a desired ending. As argued by Jesper Juul, failure adds information to the film by making the player see new meanings in the film.<sup>109</sup> This aspect attributes to the game element value assigned to possible outcomes. Thus, the player has to make choices within the film and there is a certain value assigned to the possible outcomes. *Bandersnatch* comes with five 'big' endings, in which the eventual details may differ, based on the previous choices the player has made. In addition to this, some endings may become impossible to reach based on the choices made by the player, unless they opt to fully restart playing. Only this action will erase all stored information about previous choices. Within the following of one ending (and not replaying) the player must make a choice approximately eleven times. Most often the player must choose between two options, for instance THROW TEA AT COMPUTER or DESTROY COMPUTER. However, in certain scenarios the player can only choose one thing or gets their choice taken away from them. For example, when Stefan first has a flashback to his youth with his mother asking him if he wants to go, the viewer can only choose for the option NO. Subsequently, after a certain replay the option YES becomes available for the player.

The moments in which the player must make a choice are clearly presented by a black girder appearing and showing the choices. However, the consequences of certain choices are not always clear since some choices have an effect further in the future of the storyline, while others have a direct effect.

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<sup>106</sup> Caroline Westbrook, "What was Bandersnatch, the 1980s game which inspired Black Mirror?" *Metro*, December 2018, <https://metro.co.uk/2018/12/30/bandersnatch-1980s-game-inspired-black-mirror-8292996/>

<sup>107</sup> Ibid.

<sup>108</sup> Jesper Juul, "Fear of Failing? The Many Meanings of Difficulty in Video Games," in *The Video Game Theory Reader 2*, edited by Mark Wolf and Bernard Perron (New York: Routledge, 2009), 237-252.

<sup>109</sup> Ibid.

To illustrate, when the player must decide between Frosties or Sugar Puffs the consequence stays unclear for a long period of time. The viewer does not notice the consequence of this choice until later in the film when the player receives a tape from Colin with a Jerome F. Davies documentary on it and a cereal commercial plays - which is then based upon the chosen cereal in the beginning of the film.

There are also choices in which the consequences do not - or barely - have any influence upon the story. For instance, when talking to Dr. Haynes about being controlled, the player must choose between PULL EARLOBE or BITE NAILS. However, both choices end up with Stefan stopping himself and thus have no value attached to them. There is also the scene in which Stefan and Colin are together, and Colin invites him to do LSD. However, if the viewer decides to not do this, Colin will still add the LSD to Stefan's drink without him noticing. Thus, sometimes the choices are taken away from the viewer. The limitation on choices and their consequences is also argued to be an effect of the interactivity on the narrative construction of the film<sup>110</sup> and can be seen as hyperselectivity.<sup>111</sup>

### **4.3 Dynamics, Control Schemes and Peripherals**

This category has been analysed by the building blocks game dynamics<sup>112</sup> and the control schemes and peripherals<sup>113</sup> questions posed by Fernandez-Vara as can be seen in Attachment II: numbers 5 and 6.

#### **4.3.1 Dynamics**

Because of the wide range of possible endings, players have to use different strategies to be able to get to their desired ending. The first choices within the film are based around the goal of the film, to choose the path that will help Stefan to make the *Bandersnatch* video game. Within all the endings, the following main strategies can be used by players: (1) they can choose to get the highest review score on the *Bandersnatch* game (possible scores: 0, 2.5, 5), (2) they can explore and choose the most intriguing / out of the box option (for example the Netflix ending), (3) they can decide to play all the optional timelines by continuously replaying after having reached an ending (making it possible to find all the 'Easter Eggs'), and finally (4) players can look for the most beautiful/emotional ending (for example the ending where Stefan learns to travel back through time and joins his mother on the train). By enabling the player to visit previously made choices and change these choices, their second-level of interactive curiosity can get satisfied.<sup>114</sup> So, to reach these different endings, different player styles and the game element player

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<sup>110</sup> Adams, "Problems for Interactive Storytellers."

<sup>111</sup> Elsaesser, "Pushing the contradictions of the digital," 303.

<sup>112</sup> Fernandez-Vara, *Game Analysis*, 136 - 139.

<sup>113</sup> Ibid., 142 - 145.

<sup>114</sup> Bizzocchi, "Run, Lola, Run -Film as Narrative Database," 8.

effort are necessary. However, the struggle of choosing the ‘wrong’ path and having to replay may be a hindrance for players in using their own play style which results in them having to change their style. For instance, to be able to reach the five-star review endings, players need to kill Stefan’s father and chop up the body. This can be a moral choice that some players just might not want to take but which the film makes necessary in order to receive the right ending. However, it is argued that this morality is not a problem within the *Bandersnatch* film. Sicart refers to this as instrumental play in which the players make decisions based on strategies afforded by the game design, rather than on the moral meaning of their actions.<sup>115</sup> In this case, the design of the *Bandersnatch* film does not force players outside of their behavioural patterns since choices are defined in advance and - most importantly - are reversible by the ability to replay or choose differently.<sup>116</sup> As a result, when viewers are playing the *Bandersnatch* film, they thus think strategically and not morally.

Throughout failure, players adjust their perception and change their playing strategies in order to win.<sup>117</sup> Whether there is the possibility to return to a specific game state can change how a player tackles this challenge.<sup>118</sup> In addition to this, Sicart writes that computer games are often designed to encourage instrumental play by using goals and rewards and the prevention of catastrophic or irreversible failure.<sup>119</sup> Thus, this computer game aspect has been implemented in the *Bandersnatch* film by the affordance of replaying.

#### *4.3.2 Control Schemes and Peripherals*

The functional interactivity within the film is established when using the physical TV remote control.<sup>120</sup> The remote control allows the player to make choices within the film by using the selection button. However, the film is played via the Netflix platform and this has also been implemented into a meta-scenario. This may contribute to the game element of giving the players more attachment to the eventual outcome. The use of this alternative storyline makes the player feel more involved in the fictional world of the film, although the player still stays invisible to the characters.<sup>121</sup> So, the medium specificity of the film - by playing it on the television and choosing with the television remote control - enables the player to further immerse into the film and be involved into the meta-scenario of the Netflix ending.

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<sup>115</sup> Sicart, “Moral,” 31.

<sup>116</sup> Ibid.

<sup>117</sup> Juul, “Failing,” 237.

<sup>118</sup> Fernandez-Vara, *Game Analysis*, 138.

<sup>119</sup> Sicart, “Moral,” 31.

<sup>120</sup> Salen and Zimmerman, *Rules of Play*, 72.

<sup>121</sup> Bordwell, *Narration*, 9.

## 5. Conclusion

While interactive television in the mid-1990s was a big failure, no more than thirty years later this has turned out different. This research has been a step towards the implementation of a method for the analysis of interactive films.

By firstly looking at the rules, goals and game mechanics it has been established that although the rules are limited within the film, they are present. In addition to this, the basic rule within the film is to make choices and to participate. To simply leave the default and observe is not possible since this results in a game over. The goal of the film is to make choices that result in the right ending. However, it may be established that from the developer's point of view the goal was to make the viewers discover all possible endings since the player is afforded to replay a scenario after getting to an ending.

By secondly analysing the story it has been established that the viewers shape their own syuzhet by playing. This is done by choosing the different values of branches within the storyline in which either the value of an ending can change, or details within the syuzhet change. Based on this decision there are variable and quantifiable outcomes. However, not all choices influence the direct future and not all the choices have a value.

Thirdly, the game dynamics and player approaches have been analysed. It has been concluded that by enabling viewers to satisfy their level-one and level-two explicit interactive curiosity, their player strategies also get influenced. However, players can change their player styles in order to reach different endings. If they choose wrong, the game over screen affords them with the ability to review and replay a scenario and change their strategy. So, in order to receive the desired ending, the viewer has to use the television remote control and make an effort by making choices that either fit into their player strategy or they have to change their player strategy. The attachment that players have to the outcome of the film is high since decisions within the story decide the eventual ending of the film.

Finally, by analysing the rules, goals, core mechanics, story, choice design, game dynamics and controls of the film, the main question can be answered. *“How and to what extent do game elements shape the interactive film Black Mirror: Bandersnatch?”*

The film *Bandersnatch* is actively shaped by the five game elements that have previously been established upon. All five game elements are present and shape the film, player experience and eventual syuzhet. However, the extent to which they are present differs per element. As a result, the film does not have many rules: you should simply play and make choices. By participating, users can use their own strategies to reach desired endings but they cannot change the narrative in their own way. Therefore, the

interactivity with the film is limited and can be seen as hyperselectivity instead. It is argued that the film has been created this way to be able to keep a balance between interactivity and narrativity. By making sure that there is no clash between these two aspects, the extent to which game elements shape the film are limited.

This research did bring with it several limitations. For instance, while the method provided by Fernandez-Vara is aimed at computer games, it has also been used to study the phenomenon of the interactive film. By using this game studies perspective, certain cinematic aspects may have been overlooked. However, it is argued that to be able to focus on the analysis of the game elements, the game analysis method was a good choice. The game analysis method provided certain questions to research different aspects within the film. As a result of this other aspects that were not mentioned in the questions have not been analysed.

Within this research the combination of film and game studies elements and frameworks has been used in order to provide the research with a relevant framework for the study of this interactive film. Subsequently, within the theoretical framework definitions have been chosen by authors who based their definitions on previous works by multiple authors. By doing so, the starting point of this research and the used perspective has been the most relevant. In addition to this, the exhaustive playing strategy enabled the research to consider as many different player styles and test as many different interpretations as possible. Thus, the research is positive to have provided an accurate view of the *Bandersnatch* film and how and to what extent it is shaped by game elements.

It has been established that within this research the relationship between interactivity and narrative plays an important role. They have a close relationship and influence each other greatly. Future research on the balance between interactivity and narrative in interactive films can thus be useful for analysing the consequences of using both.

The increase in interactive television content will call to question the effect of this “ludic century” on the society we live in. Future research aimed at analysing this relationship will be useful and can reflect upon the real life consequences when transforming from passive spectator to active game player.

## Bibliography

Adams, Ernest. "The Designer's Notebook: Three Problems for Interactive Storytellers." December 29, 1999. Accessed via [http://www.gamasutra.com/view/feature/131821/the\\_designers\\_notebook\\_three\\_php](http://www.gamasutra.com/view/feature/131821/the_designers_notebook_three_php)

BBC, "Netflix's history: From DVD rentals to streaming success," *BBC NewsBeat*, January 23, 2018. <http://www.bbc.co.uk/newsbeat/article/42787047/netflixs-history-from-dvd-rentals-to-streaming-success>

Bizzocchi, Jim. "Run, Lola, Run - Film as Narrative Database." (2005). Accessed via <http://web.mit.edu/comm-forum/legacy/mit4/papers/bizzocchi.pdf>

Bolter, Jay David, and Richard A. Grusin. *Remediation: Understanding new media*. Cambridge: MIT Press, 2000.

Bordwell, David. *Narration in the Fiction Film*. Hoboken: Taylor and Francis, 2013.

Debnath, Neela. "Black Mirror Bandersnatch location: Where is Bandersnatch filmed? Where is it set?" *Express*. December 28, 2018.

<https://www.express.co.uk/showbiz/tv-radio/1064531/Black-Mirror-Bandersnatch-location-Where-is-Bandersnatch-filmed-Croydon-Netflix-series>

Dippel, Anne, and Sonia Fizek. "14 Ludification of culture." in *Digitisation: Theories and Concepts for Empirical Cultural Research*, edited by Gertraud Koch, 276-292. New York: Routledge, 2017.

Elsaesser, Thomas. "The Mind-Game Film" in *Puzzle Films: Complex Storytelling in Contemporary Cinema*, edited by Warren Buckland, 13-41. Malden, MA: Wiley-Blackwell, 2009.

Elsaesser, Thomas. "Pushing the contradictions of the digital: 'virtual reality' and 'interactive narrative' as oxymorons between narrative and gaming." in *New Review of Film and Television Studies*, 12:3 (2014). DOI: 10.1080/17400309.2014.927182.

EngineeringMySadness. "FULL BANDERSNATCH FLOWCHART (All Branches + Story Line + Prerequisites)." Reddit, January, 2019.

[https://www.reddit.com/r/blackmirror/comments/aajk5r/full\\_bandersnatch\\_flowchart\\_all\\_branches\\_story/](https://www.reddit.com/r/blackmirror/comments/aajk5r/full_bandersnatch_flowchart_all_branches_story/)

Fernández-Vara, Clara. *Introduction to game analysis*. New York: Routledge, 2015.

Glas, René and Jasper van Vught. "Considering play: from method to analysis." in *DiGRA* (2017). Accessed via [http://digra2017.com/static/Full%20Papers/56\\_DIGRA2017\\_FP\\_Vught\\_Considering\\_Play.pdf](http://digra2017.com/static/Full%20Papers/56_DIGRA2017_FP_Vught_Considering_Play.pdf)

Hunicke, Robin, Marc LeBlanc and Robert Zubek, "MDA: A Formal Approach to Game Design and Game Research," in *Proceedings of the AAAI Workshop on Challenges in Game AI*. Vol. 4. No. 1. (2004).  
<https://www.aaai.org/Papers/Workshops/2004/WS-04-04/WS04-04-001.pdf>

Jenkins, Henry. "Game Design As Narrative Architecture." (2005). Accessed March 11, 2019 via  
[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwj194aKhffgAhUIEVAKHfXrBAEQFjAAegQICRAC&url=http%3A%2F%2Fhomes.lmc.gatech.edu%2F~bogost%2Fcourses%2Fspring07%2Ffcc3710%2Freadings%2Fjenkins\\_game-design.pdf&usg=AOvVaw3NpXmuxLEPjj8GTE3-1Fj](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwj194aKhffgAhUIEVAKHfXrBAEQFjAAegQICRAC&url=http%3A%2F%2Fhomes.lmc.gatech.edu%2F~bogost%2Fcourses%2Fspring07%2Ffcc3710%2Freadings%2Fjenkins_game-design.pdf&usg=AOvVaw3NpXmuxLEPjj8GTE3-1Fj)

Jenkins, Henry. *Convergence culture—Where old and new media collide*. New York: New York University Press, 2006.

Juul, Jesper. "The Game, the Player, the World: Looking for a Heart of Gameness." in *Plurais Salvador* 1 no. 2 (2010). Accessed via <http://www.revistas.uneb.br/index.php/plurais/article/view/880>

Juul, Jesper. "Fear of Failing? The Many Meanings of Difficulty in Video Games." in *The Video Game Theory Reader 2*, edited by Mark Wolf and Bernard Perron, 237-252. New York: Routledge, 2009. Accessed via.  
[.https://www.sfu.ca/cmns/courses/2011/260/1-Readings/Juul%20%20Fear%20of%20Failing%20Video%20Games.pdf](https://www.sfu.ca/cmns/courses/2011/260/1-Readings/Juul%20%20Fear%20of%20Failing%20Video%20Games.pdf)

Kinder, Marsha.. "Narrative Equivocations between Movies and Games." In *The New Media Book*, edited by Dan Harries. London: BFI Pub: 2002. <http://www.marshakinder.com/pdf/e12.pdf>

Koch, Gertraud. "Introduction: Digitisation as Challenge for Empirical Cultural Research," in *Digitisations: Theories and Concepts for Empirical Cultural Research*, edited by Gertraud Koch, 1. New York: Routledge, 2017.

Kokonis, Michalis. "Intermediality between games and fiction: The "ludology vs. narratology" debate in computer game studies: A response to Gonzalo Frasca." in *Acta Universitatis Sapientiae, Film and Media Studies* 9.1 (2014).

Larsen, Lasse Juel. "Play and Gameful Movies: The Ludification of Modern Cinema." in *Games and Culture* 1-23 (2017).

Manovich, Lev. *The language of new media*. Cambridge: MIT Press, 2002.

Morris, David. "Netflix Original Content Has Grown By 88% This Year, But Old TV Still Rules the Remote." *Fortune*, August 12, 2018.  
<http://fortune.com/2018/08/12/netflix-original-content-has-grown-by-88-this-year-but-old-tv-still-rules-the-remote/>

Murray, Janet. "I believe that the Ludology/Narratology discussion has moved on." 2005. Accessed via <https://inventingthemedium.com/2013/06/28/the-last-word-on-ludology-v-narratology-2005/>

Pope, Nick. "Netflix Is Creating More Interactive Shows, Because You Don't Work Hard Enough For Your Content." *Esquire*, January 22, 2019. <https://www.esquire.com/uk/latest-news/a25986235/netflix-is-creating-more-interactive-shows-because-you-dont-work-hard-enough-for-your-content/>

Raessens, Joost. "Cinema and beyond: Film en het proces van digitalisering." In *Filosofie in cyberspace: wijsgerige reflecties op de digitale revolutie*. Edited by Jos de Mul. Amsterdam: Prometheus, 1995.

Salen, Katie and Eric Zimmerman. *Rules of play: Game design fundamentals*. London: MIT press, 2004. <https://gamifique.files.wordpress.com/2011/11/1-rules-of-play-game-design-fundamentals.pdf>

Sicart, Miguel. "Defining Game Mechanics," in *Game Studies* vol 8, no. 2. (2008).

Sicart, Miguel. "Moral Dilemmas in Computer Games," in *Design Issues*: vol 29, no. 3. (2013).

Simons, Jan. *Playing the Waves*. Amsterdam: University Press, 2007.

Singh, Greg. "Recognition and the image of mastery as themes in Black Mirror (Channel 4, 2011–present): an eco-Jungian approach to 'always-on' culture." in *International Journal of Jungian Studies* (2014).

Thompson, Kristen. *Breaking the Glass Armor: Neoformalist Film Analysis*. Princeton: Princeton University Press, 1988.

Trefis Team and Great Speculations. "Netflix Projects Strong Subscriber Growth In Q4." *Forbes*, October 18, 2018. <https://www.forbes.com/sites/greatspeculations/2018/10/18/netflix-projects-strong-subscriber-growth-in-q4/>

Walz, Steffen P., and Sebastian Deterding. "Gamification and Learning." in *The Gameful World: Approaches, Issues, Applications*, edited by Walz and Deterding, 629-652. Cambridge: MIT Press, 2014.

Westbrook, Caroline, "What was Bandersnatch, the 1980s game which inspired Black Mirror?" *Metro*, December 30, 2018. <https://metro.co.uk/2018/12/30/bandersnatch-1980s-game-inspired-black-mirror-8292996/>

## Attachment I: Similarity between Game Elements and Method Chapters

With help of the building blocks by Fernandez-Vara,<sup>122</sup> the game elements are analysed. However, game elements can overlap with multiple building blocks at the same time. The overlap between the game elements and building blocks is shown in the table below.

	A Rules	B Variable and quantifiable outcome	C Valorisation of outcomes	D Player Effort	E Player Attached to outcome
1 Rules and Goals of the Game	X				
2 Game Mechanics	X			X	
3 Fictional World of the Game			X		X
4 Story			X		X
5 Game Dynamics		X		X	
6 Control Schemes and peripherals				X	
7 Rule-driven vs Goal-driven Games	X	X			
8 Choice Design		X	X		X

<sup>122</sup> Fernandez-Vara, *Game Analysis*.

## Attachment II: Questions for the Film

The questions posed per category by Fernandez-Vara have been used to answer the sub-questions and eventually the main question of this research.<sup>123</sup> Within this attachment only the findings are noted down. Within the paper the relationship between different aspects, the interpretation and the connection to the theoretical framework are established upon. The questions are gathered by the areas of analysis Game Overview and Formal Elements and various building blocks as stated per number.

### 1. Game Overview – Rules and Goals of the Game

*What are the rules of the game?*

The rules of the film are to make a choice within 10 seconds. If the player does not choose to make a choice but leave the default option selected, the left option is chosen. If a player is replaying a scenario, the previously not chosen option is automatically selected.

*What are the constraints?*

Constraints within the playing of the film are as follows:

- The player is sometimes presented with only one choice (in case of saying no to mother).
- The player's choice can get taken away by other characters in the film. For example, Colin choosing for Stefan to give him LSD in his drink instead of Stefan taking the drugs voluntarily.
- When the player makes the 'wrong choice', the storyline ends and obligates the player to navigate to the previous choice moment.
- There are (only) five main endings within which the player can influence details but not everything. Eventually the player receives several stars on the game review from *Bandersnatch*, and the follow-up description of what happened to Stefan (dead, murdered someone, in prison, etc.).
- The player must make the decision to play the game and make choices, because the default option is the left one and results in a continuous replay of the first scene (work for Tuckersoft).
- When the player has selected a choice option it is not possible to change this choice.

*What are the affordances?*

The player has the affordance of replaying scenarios and choosing differently. However, previous choices

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<sup>123</sup> Fernandez-Vara, *Game Analysis*.

influence the redoing of choices and can enable the player to reach different paths than previously possible. In addition to this, when the player has reached an optional ending, he or she can decide to either keep playing and return to a previous scenario or to watch the credits.

*Is there a goal in the game?*

By playing multiple times it has been established that actions which prevent the creation of the *Bandersnatch* game by Stefan (for instance, throw tea over the computer) end up with a 'game over' and the option to navigate to the previous choice and re-do it. For instance, the choice is to either DESTROY COMPUTER or HIT DESK. The first option would hurt the making of the game and ends up in a replay, the second option results in the continuation of the film. Subsequently, at a point in the film the player must choose between THROW TEA OVER COMPUTER or DESTROY COMPUTER, from the point of view of the player thus an impossible choice. Eventually, either decision makes Stefan stop himself and become aware of being controlled. It has been concluded that the goal of the film is to make sure Stefan gets to program the video game.

*Does achieving the goal end the game?*

If the goal of the game is to create the best *Bandersnatch* game (get a five star review) the player can get a possible ending achieving this. It is necessary to murder the dad and choose to chop up his body to achieve this ending. However, if the player reaches this ending before having seen other scenarios, the film will still suggest the player other alternate timelines/stories to continue playing. The player can opt to simply watch the credits and end the film. It has thus been established that this is not the ultimate ending, but simply the ending with the highest rating. In addition to this, there is also the ending in which Stefan learns to time travel and goes back in time to join his mother on the train which derails and results in the ending in which he dies in the future. This does not align with the desired goal of the game, to program the video game. It can thus also be interpreted that the goal of the film is simply to keep the viewers playing and discovering all the alternate timelines.

*What are the different modes of the game?*

The film can only be played by one player at a time. However, if a group of people would decide to play it together and make choices based on the average of votes it is also possible to play the film as a group effort. It is, however, a film that is played on the television, in relation to other games that are more individually taking place behind someone's computer.

*How does each mode change the core rule set of the game?*

This question is not applicable to the *Bandersnatch* film since there are no different game modes.

## **2. Game Overview – Game Mechanics**

*What does the player do in the game?*

The player can decide to either ‘play’ the film or observe, since the default option on the choices allows the player to only watch and not have to select anything to continue the film. However, the default choice is always the left option and eventually results in the continuous replay of a scenario in which the other option must be chosen. For instance, if the player lets the default be selected and goes and works for Tuckersoft, it results in the reply by Colin with, “Sorry mate, wrong path.” This results in the continuation of a scenario in which *Bandersnatch* receives a game review in which the reviewer says: “It’s way too short. No stars out of five, terrible.” And Stefan replying: “I should try again.” Which results in the replaying of the film and a fast forward to the scene in which the player must make the choice, and this time choose differently to continue playing the film.

If the player decides to play the game, the *core mechanic* is the making of the ‘right’ choices to continue the storyline.

*What are the verbs that describe the basic actions?*

Choosing for either the choice on the left or on the right within ten seconds.

*What actions are less frequent?*

The player can pause the film or go backwards with ten seconds. However, the player does not have the ability to skip ahead on the timeline or go to an overview of all scenes and chose a scene to continue playing.

*How does the player perform the action in the game?*

The player makes choices by using the selection buttons on the television remote controller.

### 3. Game Overview – Fictional World of the Game

*Where does the game take place?*

The film takes place in England and starts on the 9<sup>th</sup> of July 1984. The film takes place over the course of several months from July to December, the timeframe in which Stefan Butler is programming the *Bandersnatch* game. It is not confirmed, but it looks very much like Croydon in South London where the scenes take place.<sup>124</sup> Some scenes take place at Colin's flat, in town and the shops and much of the action takes place in Stefan's home and his bedroom.

*Is the fictional world associated with a specific genre?*

The film is a psychological thriller. This has been established by analysing the different options within the film. For instance, having to make a choice between chopping up the body of Stefan's father or to bury the body. The topics within the film are based on the myth of having a free will and are related to taking drugs and becoming disillusioned. This emphasises the unstable and delusional psychological states of the characters. For instance, at the film progresses Stefan has difficulty in distinguishing what is real and what is fake anymore and is having awareness problems.

DR HAYNES: What sort of things [is he no longer deciding himself]?

STEFAN: What I have for breakfast. What music I listen to. Whether I bite my fucking nails.

DR HAYNES: You feel you're not...

STEFAN: Making these decisions, no, and we've talked about this before. I'm sure we have. And you tell me I feel guilty about my mum and you up my dose. And, yes, I am taking my medication, OK?

The same can be said about the character Colin, he also has an unstable and delusional psychological state. During an LSD trip, Colin explains how he feels like there are multiple realities happening at the same time and how decisions are never your own choice.

COLIN: People think there's one reality but there's loads of them, all snaking off, like roots. And what we do on one path affects what happens on the other paths. Time is a construct. People think

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<sup>124</sup> Neela Debnath, "Black Mirror Bandersnatch location: Where is Bandersnatch filmed? Where is it set?" *Express*, December 2018, <https://www.express.co.uk/showbiz/tv-radio/1064531/Black-Mirror-Bandersnatch-location-Where-is-Bandersnatch-filmed-Croydon-Netflix-series>

you can't go back and change things, but you can, that's what flashbacks are, they're invitations to go back and make different choices.

When you make a decision, you think it's you doing it, but it's not. It's the spirit out there that's connected to our world that decides what we do and we just have to go along for the ride. Mirrors let you move through time. The government monitors people, they pay people to pretend to be your relatives and they put drugs in your food and they film you.

There's messages in every game. Like Pac-Man. Do you know what PAC stands for? P-A-C: "Program and Control." He's Program and Control Man, the whole thing's a metaphor, he thinks he's got free will but really he's trapped in a maze, in a system, all he can do is consume, he's pursued by demons that are probably just in his own head, and even if he does manage to escape by slipping out one side of the maze, what happens?

He comes right back in the other side. People think it's a happy game, it's not a happy game, it's a fucking nightmare world and the worst thing is it's real and we live in it. It is all code.

If you listen closely, you can hear the numbers. There's a cosmic flowchart that dictates where you can and where you can't go.

In which Colin even takes this scenario further by moving the conversation to the balcony.

COLIN: I will prove it to you, one of us is going over [the balcony]. It doesn't matter, because there's multiple timelines Stefan. One of us is jumping, so who's it going to be?

In addition to this, the novel that inspires the *Bandersnatch* video game is written by Jerome F. Davies, a fictional writer who ended up going crazy and decapitating his wife.

*Is the fictional world based on an actual historical setting?*

While the film is a work of fiction, the actual *Bandersnatch* did indeed exist back in the 1980s.<sup>125</sup> *Bandersnatch* – which shares its name with a character created by Lewis Carroll in *Alice Through The Looking Glass* – was also the name of a computer game which was developed in 1984 but never actually released. According to the article, the game was created by a Liverpool-based company called Imagine Software – and was advertised as a different type of game to those available at the time. However, Imagine Software went bust after 18 months, leaving the game unreleased. The remains of the game were

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<sup>125</sup> Westbrook, "What was Bandersnatch, the 1980s game which inspired Black Mirror?"

believed to have been picked up by another company, Psygnosis, and released in 1986 as a sci-fi role-playing game called Brataccas.

The fictional writer Jerome F. Davies plays a significant role in *Bandersnatch*, as the author of the novel which inspires the game. But while the game itself might have existed the author is established to be a fictional character indeed.<sup>126</sup>

*What is the player's role in the fictional world?*

The player's role is to make decisions for Stefan and reach the goal of the film, to make sure his game get published and reviewed with five stars.

#### **4. Game Overview – Story**

*What is the story premise of the game?*

The story is about programmer Stefan Butler who wants to adapt a 'choose your own adventure' novel by writer Jerome F Davies into a video game. However, the novel has many different choices and storylines. Thus, Stefan has difficulties in translating this to a video game because of all the different branches that must be programmed. Stefan makes the game for the video game company Tuckersoft, which is run by Mohan Thakur and employs the game creator Colin Ritman, of whom Stefan is a big fan and has played all his games. By making different choices within the film the player's goal is to make sure Stefan can finish the *Bandersnatch* game and get a positive review. However, as Stefan progresses in the programming of the game, he starts to feel like he is being controlled (by the player, perhaps?). However, if the player decides to act on Stefan's feelings and focus on his health (for instance by taking the mandatory pills), the player receives a negative game review. It can be established that the health of Stefan is not important, and it is necessary to make him become 'crazy' (just like Jerome F. Davies, the writer of the *Bandersnatch* novel) in order to successfully program the game.

While the story progresses, the player can get stuck in multiple loops or replays in order to finish the film. It is noticeable that the characters within the film are also aware of being 'replayed'.

COLIN: We've met before [when first meeting Stefan in a replay].

Or for instance, characters reply differently when in a replay scenario than at first. For instance, their knowledge is different.

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<sup>126</sup> Ibid.

STEFAN: Those eyeball sprites overshot the video memory [when a computer goes error].

THAKUR: How did you know that?

STEFAN: Just did.

Before having to replay a specific scene, the player can hear a voice-over of Colin.

COLIN: How many times have you watched Pac-Man die? Doesn't bother him. He just tries again.

This suggest that doing multiple replays and discovering multiple timelines is possible.

*Who does the player control?*

The player controls Stefan Butler, the programmer making the *Bandersnatch* video game. However, it can be argued that the player controls all the characters by replaying scenarios and creating alternate timelines. For example, Colin becomes aware of already having met Stefan in a replay scenario and other characters reply differently.

*What has happened in the fictional world before the game starts? How does it relate to the gameplay of the game?*

In the past, Stefan his mother has gotten into a train accident. Depending on the choices of the player this has either happened or was as a memory implanted in Stefan's brain. In his mother's things Stefan finds the *Bandersnatch* novel on which he bases his video game. At the start of the film Stefan goes to Tuckersoft to program his game and sell it via them.

The previous events before the film starts highly influence the film in the way that the history surrounding the death of his mother is real or not real, and if the player goes time traveling into the past, he or she has the option to decide Stefan's mother on the trail which will derail and cause both their deaths. In addition to this, Stefan does not like his father and is living alone with him. After he murders his father he talks about his feelings regarding his father to Dr Haynes.

STEFAN: It's been good actually. Not having him [talking about his dad].

*How do the player's actions constitute events in the game?*

The player's choices shape the storyline and the eventual ending of the film. Within the film there are multiple optional endings. Upon analysing the multiple endings, it has been established that there are five 'big' endings that differ from each other the most. However, there are many alternate endings or storylines, to give an example:

- BEGINNING: Stefan decides to work at Tuckersoft and program his game there, which does not result in success and ends in a zero star review on the *Bandersnatch* game.
- NETFLIX 1: There is the Netflix ending in which Stefan realises he is being controlled by someone from the streaming platform. When choosing to escape through the window he ends up on the set of the filming of the film (meta ending).
- NETFLIX 2: There is the Netflix ending in which Stefan fights Dr Haynes and his dad and eventually gets subdued.
- KILLS DAD 1: The ending in which he kills his dad and chops up his body, the game gets a 5 star review.
- KILLS DAD 2: The ending in which he kills his dad and buries his body. He ends up in jail and gets a 2.5 star review on the *Bandersnatch* game.
- KILLS DAD 3: The ending in which he kills his dad and buries his body, Colin comes over and he lets Colin go. In this ending Stefan also ends up in prison but the game also tanked the company Tuckersoft. In addition to this ending, Stefan can choose to also kill Colin.
- P.A.C.S.: Stefan kills his dad and phones either a known or an unknown number. Game rating is 2.5 stars, the company released the game even though it wasn't finished.
- SUICIDE: Stefan jumps off the balcony. Four months later the game is on the shelf. The reviewer says: "It's not a good game."
- MOTHER: Stefan travels back to the past, joins his mother on the train and dies in the future.

The player's actions can also influence other details within the film such as the commercial on the TV (by in the beginning choosing a cereal brand) and the soundtrack of the film (by choosing music).

*What events of the story are told in non-interactive media? Which happen during gameplay?*

Events in the story are chosen by interactive moments but are all told in non-interactive media. The scene playing while the player must make a choice does not 'freeze', but simply keeps repeating itself in certain ways by changing angle or making a certain character repeat a question.

*How does the system of the game bring about story events?*

By making choices within the film, the story continues. If the player makes the ‘wrong’ choices, he or she can return to the previous scene in which a choice got made.

## **5. Formal Elements – Game Dynamics**

*Does the player have the possibility to develop different ways to tackle the challenges of the game?*

By replaying the film, it is possible to receive different options when choosing. For instance, the TOY timeline in which Stefan gains the ability to travel back in time and go with his mother, is only available when doing the timeline in which Stefan follows Colin and does LSD. This timeline then resets to before making this option and going to Dr Haynes’ office. Thus, the system remembers previously made choices. Consequently, a player may have to do a complete restart of the film to fully be able to open different endings as well.

*How do specific formal elements encourage or discourage certain ways to play the game?*

If the player chooses the ‘wrong path’ there is a replay in which the player must return to the previous moment of choice. This may interrupt the immersion of the player within the film, but it also discourages the player to make other ‘wrong choices’ further along (which may make players follow the goal of the film, which is to make the game). However, the viewing of alternate endings or timelines is encouraged by offering this replay screen as well, in which the player sometimes can also chose to return even further back and choose a totally different path altogether and thus end up in a different storyline.

In some cases, the same segment is reachable in multiple different ways, but will present the viewer with different choices based on the way they reached the scene. In other cases, certain loops guide viewers to a specific scene regardless of the choices they make. Some endings may become impossible to reach based on choices made by the viewer, unless they opt to restart the film. This action will erase all stored information about which options they had selected while watching the episode on that device.

*What are the dominant strategies that players have developed?*

There are certain ways in which players can play the film. They can either choose to simply get the highest review score on the *Bandersnatch* game, they can explore and choose the most intriguing option (for instance the Netflix timeline), they can decide to play all the optional timelines by using the replay option or they can choose to get the most beautiful ending (perhaps the one in which the mom takes Stefan on the train as well and they both die).

The average viewing time of the film is about 90 minutes and the quickest timeline path ends after 40 minutes. However, after reaching only one ending the film suggests a replay to discover another timeline.

In addition to this, there are different scenes for Stefan his nightmares to unlock by using different passwords when entering them into Stefan's father locked file cabinet. Another player strategy can be to play all these passwords and see what that results in. These are also called the 'Golden Egg Findings' or the 'Easter Eggs'. Online there is a lot of controversy about other Easter Eggs within the film and how to get to them.

*What types of gameplay may seem to differ from what the game was supposedly designed for?*

Since the film tries to make the players discover alternative endings, it can be established that the film is designed with many replays in mind. Gameplays in which the player immediately decides to watch the credits after getting to the first possible ending would thus differ from the supposed design of the film.

## **6. Formal Elements – Control Schemes and Peripherals**

*Does the game use standard hardware (keyboard, mouse, game controllers) or does it need custom/specialized hardware?*

Before the film begins the player watches a brief tutorial, specific to the device being streamed on, which explains to the viewer how to make choices. In this case, the player plays the film via the television and uses their selection buttons on the remote control to make choices within the film. The player always has ten seconds to make a choice before the default option (left) is selected. Thus, players do not need any specialised hardware.

*Do the actions of the player map to the controller following the conventions of a specific genre? Or does it provide a new way to use the hardware?*

The controls on the remote control that are being used are the arrows to the left/right and the selection (ok) button. These buttons are used for the same sort of purposes when watching television.

*Can the player customise how to use the controls?*

No, the player cannot customise their controls. However, if the player is playing via computer or mobile phone, the controls work differently.

*What type of familiarity with game controls and games does the game require?*

The player does not need any familiarity with game controls nor games to be able to play the film. However, it is necessary for the player to keep the remote control nearby to be able to make a choice within the ten seconds.

*How does the hardware extend the fictional world to the space of the player?*

The remote control allows the player to make choices within the Netflix film. However, the film works via the Netflix platform and this is also implemented in the film as a meta-scenario.

DR HAYNES: So, all of this is happening to entertain someone. Someone who's controlling you.

STEFAN: Uh-huh.

DR HAYNES: So why aren't you in a more entertaining scenario?

STEFAN: What do you mean?

DR HAYNES: Well, look at you. You're in a small ordinary room, in an ordinary part of the world, talking to an ordinary woman. If this was entertainment, surely you'd make it more interesting. Inject a little action, isn't that right? I mean, wouldn't you want a little more action if you were watching this now on telly?

By this alternative storyline the player gets even more attached to the fictional world of the player since he or she really gets involved.

## **7. Formal Elements – Rule-Driven versus Goal-Driven Games**

*What is the balance between how the rules and the goals dictate gameplay?*

The film does not have many rules – simply to make choices. However, if these choices do not correlate with the goal of the film, the player will understand this when he or she must replay the scenario (perhaps multiple times).

*If you had to write how to complete the game, would it be a strategy guide, a walkthrough with a set of specific actions, or a combination of both?*

For this research the narrative guideline by Reddit user EngineeringMySadness has been used.<sup>127</sup> Within this guideline all the possible narrative branches have been drawn out. Thus, this guideline provides the researcher with an overview over the possible storylines and optional other storylines.

*Does the gameplay change every time you play, even if the content is the same?*

Yes, the different choices within the film change the following content. For instance, choosing the cereal *Frosties* in the beginning of the film, influences which cereal advertisement plays further along in the film. The same counts for ‘big decisions’ like trying again when choosing to work for Tuckersoft. Suddenly Colin and Stefan have the feeling as if they have already met, even though the player is technically ‘replaying’ this scenario. These choices and the choice design will be further elaborated on in the next formal element of the choice design.

In addition to this, some endings may become impossible to reach based on the choices made by the viewer, unless they opt to restart the film. This action will erase all stored information about which choices have previously been made.

## **8. Formal Elements – Choice Design**

*How often does the player have to make a choice?*

*Bandersnatch* comes with five ‘big’ endings, in which the eventual details may also differ based on the previous choices the player has made. Within the following of one ending (beginning to this end and then quitting and not replaying) the player must choose approximately eleven times.

*What types of choices are there?*

Most often the player must choose between two options, for instance THROW TEA AT COMPUTER or DESTROY COMPUTER. However, in certain scenarios the player can only choose one thing or gets its choice taken away from him/her. For example, when Stefan first has a flashback in his youth with his mother asking him if he want to go, he can only answer with NO. However, after a certain replay the option YES becomes available for the player. Another example is when Colin asks Stefan is he would

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<sup>127</sup> EngineeringMySadness (u/EngineeringMySadness), “FULL BANDERSNATCH FLOWCHART (All Branches + Story Line + Prerequisites),” Reddit post, January 2019, [https://www.reddit.com/r/blackmirror/comments/aajk5r/full\\_bandersnatch\\_flowchart\\_all\\_branches\\_story/](https://www.reddit.com/r/blackmirror/comments/aajk5r/full_bandersnatch_flowchart_all_branches_story/)

also like LSD. If Stefan decides to decline, Colin puts it in his drink without him noticing. Thus, his choice has been taken away.

STEFAN: What have you done?

COLIN: I choose for you.

Most often the choices are between two options that have already been entered on the screen. However, there is a scenario in which the player must enter a number (20541) by selecting the numbers that are shown. In addition to this, there are also moral choices related to killing Stefan's dad. The player can then decide to kill his dad or not, and to either bury the body or chop up the body.

*Are the choices obvious?*

The moments in which the player must make a choice are indeed obvious, and always presented in the same way with a black girder appearing underneath with two options available in it. In addition to this, while the player has to make a decision the scene is sort of frozen and nothing new happens. The music sometimes gets more tense, and questions by a character can be repeated.

*Is the relationship between the choice and its consequences clear? How far is the choice made from the resulting consequence, in space or in time?*

When the player must decide between Frosties or Sugar Puffs the consequence stays unclear for a long period of time. Until later in the film when the player receives a tape from Colin with a Jerome F. Davies documentary on it and a cereal commercial plays. Another example of a late consequence is the decision to let Colin jump off the balcony. The player is then forced through a replay and suddenly Colin has disappeared. It is not until a few scenes later that Colin's girlfriend, Kitty, comes and looks for him. However, some choices have immediate consequences like the choosing of music. By picking either the Thompson Twins or Now 2, the soundtrack of the film changes and starts playing the chosen music. In addition to this, deciding to chop up the body of the killed father will always result in the ending of the perfect game (5 star review).

*Does each choice have a value attached to it?*

There are also choices in which the consequences do not or barely have any value attached to them. For instance, when talking to Dr Haynes about being controlled, the player must pick PULL EARLOBE or BITE NAILS for Stefan to do, however, either choice ends up with Stefan stopping himself. This is also

the scene when the player has to choose between THROW TEA OVER COMPUTER or DESTROY COMPUTER. Both options result in Stefan resisting to do it and asking who is there (controlling him). There is also the choice between the passwords JFD and PAX. However, both entering of these passwords end with a specific jumpscare (either Jerome F. Davies who appears behind Stefan or the monster PAX). Apart from this scene, this choice does not further influence the storyline. However, since not all choices have a value attached to them the whole film sort of becomes a meta-scenario because the film is about the illusion of choice. In the five star ending Stefan talks about what had been bothering him so much when programming the *Bandersnatch* video game.

STEFAN: I'd been trying to give the player too much choice. So, I just went back and stripped loads out. And now they've got the illusion of free will, but really... I decide the ending.