Ethics of Interactive Storytelling

Sami Hyrynsalmi, Kai K. Kimppa and Jouni Smed

Abstract When used in its best way, interactive storytelling has the power to create unique, adaptive and unforgettable stories for an interactor. However, the same mechanisms that are able to create elements of surprise and joy can be used to construct ethically questionable and even malevolent experiences. As the creators are often held responsible for their work and their consequences, whether these are intentionally done or not, ethical consideration should be taken into account as early as possible. This chapter seeks to line out possible threats and their ethical consequences in the design and implementation of interactive stories. To approach the ethical issues at hand, we divide interactive storytelling into four key elements – designer, platform, storyworld and interactor – and review separately the ethical considerations related to them.

Key words: Interactive storytelling, Digital storytelling, Ethics, Responsible Design, Game Design, Dark Side

1 Introduction

Interactive storytelling refers to the process of telling stories so that the audience has a chance to take part and change the story being told. Conventional storytelling is often non-interactive: books, movies, television shows or podcasts do not usually offer one a chance make changes, but one is a passive receiver.

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The difference between interactive storytelling and conventional, non-interactive storytelling is easiest to understand with the spectrum of interactivity illustrated in Fig. 1 (Smed et al., 2021). Let us imagine that we have a range – a spectrum – where on the lefthand side we have no interactivity but we are passive receivers who cannot affect anything. On the righthand side, we have total interactivity and we are free to do anything we want – or, at least, anything that we are capable of doing. Within this spectrum, conventional storytelling would reside at the lefthand side. If one is watching a film, one does not get the chance to change the scenery, characters, mood or plot of the film, but all of that has already been determined among others by the scriptwriter, the director, the producers. One's input to the story is non-existing; one cannot interact with it.

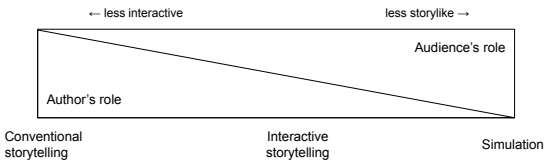


Fig. 1 The spectrum of interactivity.

If we go to the other extreme, we have a simulation. In a pure simulation, nothing is imposed but you are free to do whatever you will – or whatever the simulation allows you to do. For example, in a flight simulator you have a total control over your plane and can choose to do whatever you want, whether it is making aerial manoeuvres with a jumbo jet or landing upside down on a grassy pasture.

In this spectrum, interactive storytelling lies somewhere between these two extremes. It is more interactive than conventional storytelling but not as free as a simulation. The more we move to the left, the less interactive the application becomes. And if we move to the right, the more interactive it becomes. But it also becomes something else at the same time. On the very left we have a controlled and authored experience – just a like a film. Once we start moving towards right, the less control the author of the story has. Actually, the story starts getting looser as there is more possibility for interaction. First, there might be two or three alternate endings that the user can choose from. Then there can be couple of parallel plots. After that things start to get really complex and it would be hard to pinpoint or enumerate the possible story instances.

We can safely say that the more we move to the right, the less storylike the application becomes. A pure simulation does not offer any ready-made stories, but one would have to invent them oneself. In fact, we can think that as interactivity increases, the control over the story shifts from the author to the audience. It is worth noting that although in this illustration the transition from conventional stories to simulation looks smooth and non-discrete, in reality the transition is likely to go through categories of different types of storytelling.

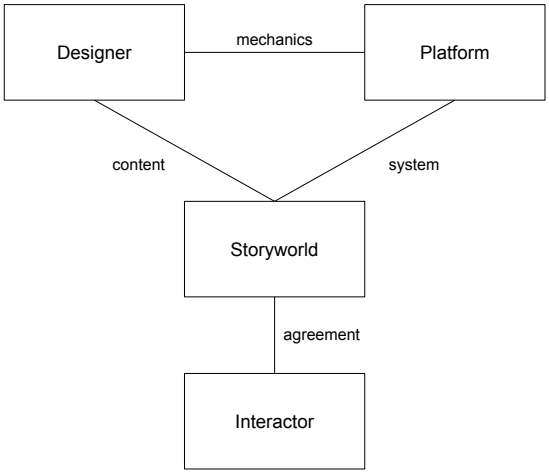
In conventional storytelling, the author's role is more important. The author has the control over the story. The more interactive the application becomes, the smaller the author's role and control gets. Vice versa the audience's role is at minimum

in conventional storytelling and it increases the more interactive the application becomes. In a pure simulation, there is no pre-authored story but the audience or the player can invent themself whatever story they like. The interesting area lies between the extremes, where we find interactive storytelling.

1.1 Elements of interactive stories

When thinking about the ethical dimension of interactive storytelling, we have to realize that we are focusing on what human beings are doing. We have organized this paper according to the classification by Smed et al. (2021) and take each of the partakers — platform, designer, interactor and storyworld (see Fig. 2) – and look at them from this perspective one by one.

Fig. 2 The four partakers.



In this categorization, the *platform* refers to the software that provides mechanics for running the storyworld. It also provides the user-interfaces to the designer to create a storyworld and for the interactor to experience an interactive story.

In conventional storytelling, we talk about having an author – someone who has authored the story and has authority over the story. In interactive storytelling, this not the case because the audience can take part in shaping up the story. The 'author' would not be the only author and definitely would not have a complete control over the story. To discern we call this diminished author a *designer*. We could even say that author is a special case of a designer, when the situation is limited to conventional storytelling.

The designer creates a *storyworld*. Again, there is a difference in the term, because the designer is not creating a single story, but an intermingling bundle of them. In other words, the designer creates a world where different stories can take place. It

includes all the characters, props, scenes and events as well as the mechanics that combine them together into a living world.

Next, we have yet another change of term. Whereas in conventional storytelling we can talk about the passive recipient of the story as a spectator, audience or reader, here that person has an active, or rather an interactive role. We could call that person with many names such as 'player', 'actor', 'user', 'agent' or 'participant' but the term 'interactor' emphasises being an interactive actor in a storyworld created by a designer. The interactor is the one who experiences the story as it unravels.

Now, let us take a look at the whole structure. Interactive storytelling puts the interactor in a key role. The designer is providing the characters, props and external events forming the storyworld. Based on this and the interactor's choices a story instance is generated, which is the result of not the designer alone but also the interactor who has made choices and provided input into the story.

1.2 Moral philosophy

Ethics or moral philosophy is a classical philosophical branch which addresses concepts of right and wrong behavior. The ethical effects of ICT have been considered for a long time; for example, the oldest academic journal in publication in the field, *Ethics and Information Technology* was launched already in 1999, and others, such as *Journal of Information, Communication and Ethics in Society*, which started year 2003 have been launched since. It is worth noting, however, that the effects of computers in society from an ethical perspective have been discussed at least from early 1960s, when Norbert Wiener gave his series of lectures in Yale in 1962, the content of which was later published as the book *God and Golem, Inc.* in 1964.

In the field of computing, as in the general ethical theory based on the analytical tradition of philosophy, there are four major ethical theories which are used. These are utilitarianism (see e.g. Mill, 1879 / 2004), deontology (see e.g. Kant, 1785 / 2004), contractarian (see e.g. Rawls, 1999) and virtue ethics (see e.g. Aristotle, 350 BCE / 2003).

The most common problems for interactive storytelling are utilitarian (see e.g. Mill, 1879 / 2004) especially in regard to ICT and ethics (Moor, 1999), e.g. *consequences* of either designers or other interactors. They can promote wellbeing or cause harm, and an analysis aiming for the good effects can be done for different practices in the interactive story. Both designers and interactors can cause harm, either intentionally or accidentally. designers would do this by inserting features to the story itself which are harmful for the interactors, such as extensive advertisements or psychological traps (see e.g. Kimppa et al., 2015). On the other hand, harmful consequences other interactors can cause are somewhat different to those in typical computer games, although many of the same ones are also present, such as harmful utterances, e.g. racial or sexist slurs. In computer games, other harmful consequences by other players can be present, for example, as cheating, which tend to be less common in interactive storyworlds. Although utilitarianism has tradition-

ally been used to analyse specific actions in specific situations by specific persons, the theory has since been extended to consider any effects harmful to people anywhere, and thus computerised systems, which after all can produce those, can also be analysed through the theory.

Deontology (see e.g. Kant, 1785 / 2004), on the other hand is interested on the *intent* of the actors. Are the persons an act affects considered as "ends in themselves", i.e. persons worthy of respect; as all people ought to be considered? Would the actor, if being the target of the cation, consider the act done good intentioned; would the actor consider the act as a potentially good universal rule all ought to follow, whether they were the target or not? Typically the theory is used to analyse ones own actions, as telling whether others' actions are good or evil intentioned is difficult at best, and often impossible to know. However in the case of intentions included into systems, such as inserting psychological traps (see e.g. Kimppa et al., unpublished), can actually be known to some degree.

Contractarian theories (see e.g. Rawls, 1999) are based on a *contract* between those who are affected. For example James H. Moor (1999) has already early on used contractarian theory in the ICT and ethics field. Typically this concerns societies at large, but it can be applied to any group of people, such as designers and interactors in an interactive storyworld. More often than not, the contract is implicitly accepted, e.g. in case of computer games choosing to play the game or, when it comes to interactive storytelling to enter the storyworld. Some tools are, however, available to analyse whether the contract is fair, namely, does it treat those in the weakest position (in this case the interactors) fairly, or do all the participants find the rules acceptable. In the case of interactive storytelling, the typical solution if one finds the storyworld to be unfair is to leave the storyworld. This is true when it comes to computer games as well, although some people breaking the implicit contract by cheating for example can interrupt the game enough to make it unplayable even if the other participants would want to play it. A similar situation in which the implicit contract is broken can happen in interactive storyworlds, and this is, of course true for computer games as well: if the environment becomes toxic enough through slurs or other too disturbing acts the interactors may feel they cannot participate in the story, even if they would otherwise prefer to do so.

Finally, virtue ethics (see e.g. Aristotle, 350 BCE / 2003) is interested in building the character of the participants, specifically oneself, but also providing an environment in which this growth is possible (see e.g. Heimo et al., 2018). If the interactive storyworld is created in such a manner as to help build ones character, as Sicart (2009) for example suggests, those participating can choose their moral actions, and thus possibly grow as human beings. Choosing the right action because it is right and thus strengthens ones character can, if done intentionally, make oneself a better person.

All of these theories, as can be seen from the examples given above, are visible in one form or another in interactive storytelling. Although the examples given are specifically directed towards computerised storyworlds, many are applicable also to non-computerised interactive storytelling, such as interactive storybooks or even role-playing games such as *Dungeons & Dragons*. Even though it is typically not

made explicit in the following which theory is relevant in each situation, the words "consequence", "intent", "contract" and "character", or other concepts do tie the instances of potential ethical issues to the theories.

Extant literature has already touched on the ethical issues related to interactive storytelling. For example, Fisher and Schoemann (2018) address ethical considerations of dark tourism and specifically settings where virtual reality and interactive storytelling is used in a real-world location with dark history. In addition, Melcer et al. (2020) have used interactive storytelling application to teach ethics.

2 Platform

When thinking about the platform where the interactive storytelling application run, we expect it to be reliable, maintain our private information and not be open for hacking. The interactor should be able to trust that the information they share is treated respectfully and with care. The platform can be compromised by attacks utilizing either technical or social weaknesses. For example, passwords can be stolen by cracking them (technical attack) or pretending to be the administrator and asking the players to give their passwords (social engineering attack). These demands on data security are typical for any kind of application nowadays.

We can extend this to include also to what is done with the log data and interactors' profiles. Apart from collecting data from the interactor's decisions, the platform can also record the their decisions on advertisements (e.g. whether the interactor decide to click it or skip it). Although this data is not related to the actual story, it is a valuable asset for the platform owner, because it can be used to recognize the most potential advertisers. Moreover, when this data is combined with the log data, the platform owner can try to modify the application to be more advertisement friendly, which can lead to blurring the demarcation between advertorial and actual content.

A special challenge would be profiling the interactor as they make many choices. For instance, the game *The Walking Dead* (Telltale Games, 2012) computes a morality of the player after each level. We can well imagine how this profile could include much more information. Even though the choices might not represent the person as such, it could still give a strong indication of their traits, preferences and personality. This would again leave the interactor at the hands of the platform owner when it comes to how this possible sensitive information could be utilized for the benefit of the platform owner – or the harm of the interactor.

Generally, the ethical problems present in the platform are related to how it is taking away the interactor's control of their resources such as money, time, attention, social capital, mental and physical energy and security (Hyrynsalmi et al., 2020). When one uses an interactive storytelling application, one is willing to invest these resources: the interactor invests money to use the application, reserves time for experiencing the story, uses social capital to invite others to join in the platform, exerts mental and physical energy to progress in the story, and assumes to be secure in the real world whilst engaged in virtual risks in the storyworld.

Furthermore, there are some aspects relevant also for other kinds of platforms that should be taken specially into account due to their unexpected results of mixing them with the storyworld. For example, location-based games – which mix the gaming world with the real world by using a real-world location as a gameplay mechanism – pose the ethical questions of their own (Hyrynsalmi et al., 2021). Yet, mixing location-based mechanisms with interactive storytelling should be considered with care as unexpected storyline could potentially move a player in a dangerous or restricted area.

3 Designer

As the creator of the storyworld, the designer has the burden to define its ethical dimension. Adams (2014, pp. 159–162) lines out this ethical dimension so that the designer defines "what right and wrong means within the context of that world". Sicart (2009, p. 41) shares this view and asserts that the "designer is responsible for most of the values that are embedded in the system and that play a significant role during the game experience". Sicart also points out that in this way the player, or in this case the interactor, can choose ethically relevant actions in the game, or in this case interactive story, be they positive or negative; the emphasis being on the choice. Katsarov et al. (2019) present a similar cases as negotiating with NPCs (non-player characters) to find an agreement on an ethical problem and how to mediate a conflict between NPCs, the aim being to resolve a conflict between the NPCs. Even negative choices can be positive in real world as tools for analysis of action and consequence. Katsarov et al. (2019, p. 351) also point out that the interactor may have to "understand a complex case of unethical behavior". Although they do not necessarily actively choose ethical or unethical participation, they have to go through the part of the story where these situations are depicted, if the designer inserts them into the story. Typically though, these interactions need to be intentionally designed into the game or interactive story, and care must be applied on what kinds of choices are available, and how they are presented to avoid situations where all choices are inherently evil.

Broadly speaking, many of the same ethical considerations that apply to video games also apply to interactive storytelling. It would be possible to imagine how appealing such a storyworld could be for product placement or advertising. The characters could be harnessed for promoting products or services that are then needed in proceeding. Also, props could be based on real-world products. The line here is vague: It could be argued that this is just a way for monetization and as long as it follows the judicial guidelines (e.g. promoting smoking is forbidden or including material that is suitable for the intended younger audience) it would be on the safe side. A counter argument would require these connections to be made visible as it might be hard to differentiate what is promotion and what is not. Of course in the extreme, promotion by the characters might look like in the film *The Truman Show*, where pushing the products becomes too intrusive to go unnoticed.

Also, psychological traps, like used in many freemium games (Søraker, 2016) can be used in interactive storytelling environment. The intention is to trap the interactor into the story for as long as possible. It can be either for seeing and clicking as many advertisements possible or to have the interactor spend as much money as possible in the environment, and can thus cause direct harm to the interactor. (see e.g. Heimo et al., 2018) It is also typical in freemium games to obscure the amount of money spent by only allowing the player to use money by buying some kind of in-game money. These are typically diamonds, in-game coins or similar. The same method can be used in interactive story worlds. The designer can - in the worst case - insert actual victimising elements into the story. If, as pointed out by Katsarov et al. (2019) elements such as threathening, bullying, ridiculing, kidnapping the interactor are included with the interactor having minimal control over the actions, this could at least frustrate, if not even cause distress on the interactor.

There is a short step from here to propaganda. One could easily imagine interactive storytelling as a tool for political, religious or cultural propaganda. This is not uncommon as the controversy around games such as *America's Army* (United States Army, 2002), *Quest for Bush* (Global Islamic Media Front, 2006) and *Left Behind: Eternal Forces* (Inspired Media Entertainment, 2006) have shown. Interactive storytelling might make this propaganda even more effective as it possibly immerses the interactor even deeper in the storyworld. It could be used to confirm already existing stereotypes, racist, misogynous or other prejudices. In this sense it is closer to social media than video games as its characters reacting to the interactor and situation can create a similar echo chamber effect. This could be even more pronounced if we have multiple interactors, who might even be able to hijack an existing platform to their use, which reminds how other Twitter users turned Microsoft's chatbot Tay in a short time into a proxy spewing out misogynous and racist hatespeech.

4 Interactor

Having multiple human interactors also opens the door for ethical questions, the obvious one being cheating. Apart from technical cheating such as hacking the software, this is about what belongs to the agreement the interactors are committed to. Cheating means achieving the goal by breaking the rules, but what are the goals and rules in a storyworld? Cheating that takes place inside the storyworld is just a part of the story, since every action within the storyworld – no matter how civil or rude – are part of the experience and should be valid. This kind of cheating can be called managed or explicitly possible. However, cheating that is not comprehended as a part of the interactors' agreement may ruin the experience, depending on if the cheat becomes accepted as a way to broaden the conflict aspect of the storyworld. That is, the agreement may evolve, with mutual approval.

Multiple interactors can also bring about cyberbullying and other unethical behaviour that riddles, for example, multiplayer games and social media. Preventing this kind of behaviour can be hard to realize but it should be a conscious aim of every-

one taking part in the implementation, design and use of an interactive storytelling application. Katsarov et al. (2019) point out that other players can intentionally take a role in which they attempt to perform unethical choices in the story. This is not a problem as long as they do this in a single player game, but if there are multiple interactors in the story, it can lead to exactly the kind of behaviour suggested above.

Modding blurs the line between the interactor and designer. It also makes the modder to face the same ethical questions as the designer. The content created by the modder might differ radically from the original storyworld. For example, a storyworld intending to promote social integration of refugees could be modded to be a tool for rightwing indoctrination. Moreover, modding might yield results unexpected by the modder as well as the original designer. A simplified case example is *Cyperpunk 2077* (CD Projekt S.A., 2020) where modders had enabled a player have an intercourse with the game character Johnny Silverhand, portrayed by the actor *Keanu Reeves*. The mod was quickly removed with the statement by the game developers that mods "can't be harmful towards others"[1]". As illustrated with this example, a modder can intentionally or unintentionally create content that is harmful for a person. In the case of interactive storytelling applications, the unintended outcome is a risk.

5 Storyworld

We can mainly attribute events in the storyworld to the other three partakers who are obviously humans. However, it is worth considering whether there could ethical issues that stem from the computer-controlled creations alone.

As the systems become more complex, it is possible that there emerges a phenomenon that is ethically questionable. At the moment, this might seem a highly hypothetical possibility, but it is possible to imagine a scenario where an ethically problematic phenomenon cannot be explained away by the intentions of the platform developer, designer or interactor. One can pose the question, if we could then talk about the ethics of computer-controlled character. The second question would be, whether we would be able recognize such a behaviour in a character (e.g. psychopathy)?

It seems likely that we could, but then we would have to frame the question *inside* the storyworld. As the character lives there, it does not know the existence of a world outside of it – the world of the humans who created it, populated it and participate in it. It does not know what its gods are doing. We can only judge it within its own world and hold it responsible there.

[1] Rich Stanton (2021) "CDPR shuts down Cyberpunk mod that let players have 'sex' with Keanu Reeves". PCGamer. https://www.pcgamer.com/cdpr-shuts-down-cyberpunk-mod-that-let-players-have-sex-with-keanu-reeves/ Accessed April 28, 2021

6 Conclusion

In this chapter, we reviewed ethical considerations related to the interactive storytelling applications. The research on interactive storytelling has been focusing mainly on the technical or design challenges and studies on the ethical aspects are practically non-existent. This chapter aimed to map the field and line out the relevant questions that the should be answered. Proceedings as pioneers we were able to raise questions more than give answers, but we hope that this would be start for further studies and call for other researchers to provide their take on the matter. This chapter provides an approach to analyse ethical challenges of interactive storytelling applications by using the four key elements.

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