RE:PUBLIC

PHILOSOPHY AND INTERACTIVE FICTION

by

HANNES ALKIN, TOBIAS HAIDER & ANDREAS KIRCHNER[*]

During a project in 2008/09 at the University of Vienna, a group of people discussed Plato's Republic and tried to implement the results in a piece of interactive fiction written in the programming language Inform 7. Interactive fiction (IF) is software that allows the user to engage with the plot of a story. By means of Inform 7 – which is based on regular English sentences – it is quite simple to build up an imaginary world and express ideas on various levels. The participants working on the project contributed different sets of competences and possibilities. This fact introduced a new layer of complexity: the creation (the software) itself became an interactive process between the creators. Problems arose which are located on the at times conflicting levels of task sharing, philosophizing, narrating and programming. The project addresses questions regarding the potential of IF and collaboration from a range of different perspectives: Can philosophical ideas be expressed in IF? And is there an added value for the producers and/or for the players of the resulting game/work? Our experiences show which valuable results such a project may produce and which limitations it involves. Moreover, we outline some of our results with respect to the collaborative work done in the course of our project, which made extensive use of wiki software and version management. Thus, our experiment is a contribution to new media research that itself makes heavy use of new media.

KEYWORDS

Plato, Politeia, interactive fiction, new media, Inform 7

---

[*]   The authors are students at the Institute of Philosophy of the University of Vienna. Contact: http://philo.at/re-public. E-mail: tobias_haider@gmx.at

1. INTRODUCTION

In this paper we will present the results of a project seminar we attended at the Institute of Philosophy of the University of Vienna last year. The aim of the seminar was to read and discuss Plato's famous philosophical dialogue *The Republic* (*Politeia* in the Greek original) and to translate the findings into a new interactive textual form commonly referred to as *interactive fiction*, while at the same time reflecting on our experiences as the task progressed. The objective of this experiment was to explore the possibilities and conditions of expressing philosophical ideas in interactive fiction. Part of the project was to include people with very different skills and affinities to information technology and Plato studies. The following paper will present some of our observations and results made during and after the project.

2. WHAT IS INTERACTIVE FICTION?

2.1. OVERVIEW AND DEMONSTRATION

Interactive fiction (IF) is a term that is commonly used synonymous to *text adventure*. It refers to a kind of software that creates a purely textual virtual world. This world provides the framework for a story in which the user of this software is allowed to participate by taking over the role of the protagonist. The user/reader/consumer/interactor is usually presented with a specific situation (e.g. a protagonist waking up in an unknown room with complete amnesia). He can then control the protagonist's actions by entering a limited set of commands (e.g. go, take, examine, open, eat, ask etc.). Thus, he moves in a sort of textual labyrinth that provides a choice of predefined endings (e.g. the protagonist finds out who he is, finds an invaluable treasure, has marvelous sex or dies a terrible death).

For the sake of illustration we have prepared a transcript of a session in a little sample IF environment. Lines starting with a ">" represent text entered by the user:

```
classroom
You are in a rather small and dusty chamber.
Through the window you can see a garden outside.

You can see a desk (on which is a piece of paper)
here.

>examine paper
It seems to have been torn out of a book. Appar-
ently a schoolbook about plants or food or
```

something, with a lot of stuff on nutritional value
and healthy and dangerous fruits.

>take it
Taken.

>inventory
You are carrying:
a piece of paper

```
>look
classroom
You are in a rather small and dusty chamber.
Through the window you can see a garden outside.

You can see a desk here.
```

>go outside

garden
You are in a romantically savaged garden lit by a
warm sun.
You can see an apple and a mushroom here.

>eat paper
That's plainly inedible.

>eat apple
(first taking the apple)
You have chosen a valuable source of vitamins and
fibers.

*** You have won ***
In that game you scored 0 out of a possible 1, in 7
turns.

2.2. SOME CHARACTERISTICS

Classic text adventures are designed as games whose objective is to steer the protagonist towards a happy ending by exploring his world and figuring out the right course of action. Text adventures provided a profitable market in the early 1980s, but have since been replaced by more advanced multimedia products. There is, however, still a lively community of hobbyists who use interactive fiction as a literary genre, usually producing their own works while exchanging and discussing them with each other. The older

term *text adventure* stresses the aspect of playing a game, while *interactive fiction* emphasizes the role the software can play for the production of literary texts, though this is not to say that there was no room for exploring IF as an art form in the commercial era (Cf. Kaplan & Maher 2009).

Nick Montfort (2003) describes IF as follows: "A work of interactive fiction is a program that simulates a world, understands natural-language text input from an interactor and provides a textual reply based on events in the world." Notably, what characterizes IF is the software used for the implementation of a virtual world rather than the details of the simulation itself. In particular, not all IF programs are necessarily games (which is why Montfort suggests referring to them as "works" instead). A work of IF can be described as a program using the software concepts developed for text adventures. (While this is the most common usage of the term, it is not the only one, but it will be used exclusively in that sense in our paper.)

Interactive fiction differs from traditional fiction by the structural role of the reader: the reader becomes a player or interactor, gets involved in the world and has to take a stand in order to develop the story. Montfort calls a work of IF a "potential narrative" (ibid.), meaning that it provides a set of potential narratives one of which is actualized during a traversal (and documented in the transcript). This may sound trivial, as the interactor is restricted to the basic plots and outcomes the developer has included, but it is notable that the interactor can choose at will what aspects of the simulation to focus on, thus shaping the narrative according to his own individual view of the world.

The player is free to test the reaction of the fictional world by typing any character string he wants. This means new demands for the developer. She has to provide a sense of freedom of action and consistence of reaction at the same time. While it is inherent in the simulated world that only a certain set of actions will lead to some significant change, every string entered should at least trigger a response consistent with the overall experience (if only an adequate wording of "I didn't understand that").

Playing IF is still fun. This is why it is perfectly suited to serve pedagogical ends. In this regard, IF can be used merely to depict or illustrate a philosophical idea in order to make it more accessible for a non-expert audience. But we would like to argue that the change of medium can lead to a change of perspective that brings new insights even for experienced philosophers. As with *writing* IF, we experienced that this means an examination of the subject matter that may lead to astounding discoveries.

3. RE:PUBLIC

3.1. PLOT AND IDEAS

During and after the project seminar we developed a work that is called *Re:Public. Ghost train to justice[1]*, based on or inspired by our reading and discussions of the first half of Plato's Republic. Our reflections centered on two main focal points: the political vision described in books 2-5 and the challenge to Socrates' justification of justice posed by Glaucon in the beginning of the second book, especially in the myth of Gyges (*Politeia* 359d-360d). Gyges finds a ring that makes him invisible, enabling him to commit crime without prosecution. He uses it to kill the king and take over lordship. Through this myth, Glaucon claims that those who adhere to justice do so only for lack of power to further their own ends at the expense of others.

Over the course of our work we came to treat Plato's political vision as a thought experiment within the IF – as it is presented as a thought experiment within the dialogue – and confront it with a situation that presses the protagonist toward an unjust action. Eventually we set the plot in an amusement park where the player is encouraged to sneak into a magical ghost train without paying. The protagonist (who is actually referred to by the name Gyges) gets caught by a policewoman who inexplicably distracts the owner and shoves the protagonist into the ghost train, where without further explanation he is transferred to four consecutive scenes that are all set in a Platonic state, demonstrating aspects such as eugenics, the treatment of the sick, the division of labor, education, the freedom of art or community. Finally, he gets to reflect on his experiences with the policewoman.

It is well known that Plato's rather totalitarian ideas are among the greatest sources of irritations for the modern reader in his work. So we tried to underline the reasoning behind his demands by setting them into contrast with an unjust situation they are (among other things) meant to prevent, thus underlining the problem rather than providing answers. (However, this is counteracted by the fact that the quintessential unjust action the amusement park setting suggested is *fare dodging*.) It is the protagonist's violation of regulations that indirectly triggers the images of the Platonic state, mediated by the policewoman who will discuss them with him afterwards. (In earlier drafts the policewoman was called *Skoraste*, which is an anagram of the Greek and German *Sokrates*, but this idea was lost somewhere along the way because the current version does not offer a natural opportunity to introduce her by name.)

---

[1]   Cf. http://philo.at/re-public/ [accessed Dec 28 2009]

3.2. WORK AND DESIGN PRINCIPLES

Major principles in our assignment were that the work was to be an open (source) project, that it should result from a collaborative effort and that it was to be regarded as an experiment where the findings made along the way were to be regarded as no less important than the final product and our reflection on our work as no less important than its progress. Due to all those factors our IF can still be seen as a work in progress that could always be taken into new directions, and also as an eternal beta version.

One of our main concerns was to minimize entrance barriers for people without programming experience. An important means to achieve this was to develop in Inform 7, a programming language designed specifically for writing interactive fiction that aims for broad accessibility by imitating the grammar of natural English. This makes it easier for non-programmers to understand code when they read it and to write simple passages on their own (although in order to write more complex functions one has to study Inform 7 no less than ordinary scripting languages). For example, the source code for the sample game used above looks like this:

```
"Input value" by "Re:Public Team"

The maximum score is 1.

The classroom is a room. The description is "You
are in a rather small and dusty chamber. Through
the window you can see a garden outside."

The desk is a supporter in the classroom. It is
fixed in place. The description is "A few crude
boards glued together."

A piece of paper is on the desk.
The description of the paper is "It seems to have
been torn out of a book. Apparently a schoolbook
about plants or food or something, with a lot of
stuff on nutritional value and healthy and danger-
ous fruits."

The garden is outside from the classroom. The de-
scription is "You are in a romantically savaged
garden lit by a warm sun."

The apple is an edible thing in the garden.
The description is "It looks fresh and shiny."
```

```
The mushroom is an edible thing in the garden.
The description is "It is red with white dots."

After eating the apple:
say "You have chosen a valuable source of vitamins
and fibres.";
end the game in victory.

After eating the mushroom:
say "You feel somehow dizzy, and you see images
that cannot really be explained on the basis of the
source code.";
award 1 point;
end the game saying "You take off towards a differ-
ent reality."
```

Additionally a tool was developed, based on MediaWiki[2] software and the Semantic MediaWiki extension[3] that generates executable Inform 7 code out of form fields while at the same time visualizing the topology of the world by hyperlinking its objects. It was hosted in the wiki of the Institute of Philosophy, where documentations and discussions about our readings of Plato and the development took place. Apart from that, the source code was maintained using the development environment provided by the Inform 7 project[4] in combination with Subversion[5] as a version control system.

4. POTENTIALS AND CHALLENGES OF PHILOSOPHICAL IF

4.1. IF AS A NARRATIVE

We decided to use Plato as the source of our work partly because we assumed that the dialogue, as a perfect example of interaction, would be perfectly suited for transformation into interactive fiction. However, it turned out that transferring a piece of dialogue from Plato to IF is impossible without completely restructuring it. This is mainly due to the linear nature of the source medium. Any time an interlocutor says "Yes, you are right, Socrates" an interactive medium ought to provide at least a choice between "yes" and "no", so it's pointless to transfer the "yes" together with Socrates' reaction without supplementing a "no" together with Socrates' reaction to that.

---

[2]   Cf. http://www.mediawiki.org/ [accessed Dec 28 2009]
[3]   Cf. http://semantic-mediawiki.org/ [accessed Dec 29 2009]
[4]   Cf. http://www.inform7.com/ [accessed Dec 29 2009]
[5]   Cf. http://www.subversion.tigris.org/ [accessed Dec 28 2009]

Once this challenge has been met successfully, however, IF bears a potential that especially Plato might have found interesting. As he pointed out in his Phaedrus, for example, Plato considered the written word dead, unable to react to the questions and objections a reader might pose (*Phaedrus* 275d). If we consider his dialogues as an attempt to simulate actual communication, one might argue that IF can go one step further, integrating statements into the actual narrative only when the interactor asks for them. As mentioned in the introduction, an IF player is restricted to the framework the developer considered, but within that framework he is free to follow paths that correspond to his own priorities.

It must be noted, however, that IF is oriented more towards actions than dialogue. The focus of the world model in question is on the manipulation of objects, its basic features are that you can (or cannot) pick something up, eat it or insert it into a container. So while a chatterbot simulates a world that consists of communications, a work of IF can in a certain sense be seen as built out of *things*. In Inform 7 conversations aren't even a core functionality. While possibilities of implementing dialogue are abundant, the strengths of the medium are elsewhere. IF might be most useful for philosophy in scenarios where philosophical thoughts are expressed through tangible objects – metaphors, examples, case studies, thought experiments, parables etc. (With this said, just as the object-centered virtual world can be extended to include conversations, the text-only nature of the medium makes it quite feasible to simulate purely abstract entities or combine a realistic simulation with reflective or philosophical passages. Displaying quotations among the descriptions of the protagonist's surroundings is actually a built-in function in Inform 7.) It is telling that the most prominent use of a myth in the earlier part of the *Republic*, the tale of Gyges, became a focal point of our work almost automatically.

Another track we followed was to implement the thought experiment that is Plato's ideal state, but this led to entirely different problems. Socrates shows Plato's vision from a bird's eye view. This rather corresponds to simulation games such as *Civilization* where the player looks down on a map of her realm. But IF is designed to provide the perspective of an individual *within* the simulated world. Not that it isn't an established technique to present a social system by narrating how it is perceived by a citizen or visitor, but translating Plato's state from an omniscient to a limited point of view, so to say, requires a massive effort of transformation. This is made even more difficult by the important role factors such as restrictions imposed on individuals in favor of the greater good play in Plato's considera-

tions. If the depiction is to be more than just polemic, it will be necessary to provide the bigger picture as a key part of the player's experience no less intense than his impression of the constraints he encounters.

4.2. IF AS A WORLD MODEL

A work of IF consists of a set of rules that build up a world. It is a well-known idea in narrative theory that a narrative takes place in a fictional world the author has built behind the scenes, and also that the story will benefit if this world is as detailed and at the same time as coherent as possible. However, having to construct one's world with so much accuracy that it can be expressed in source code that will compile without errors takes that idea to a new level. This makes IF particularly interesting for thought experiments. If a thought experiment can be described as an implementation of an idea in a virtual reality with the intention of finding out possible unexpected consequences or hidden inconsistencies, a computer-generated virtual world can be seen as a thought experiment evaluated by a particularly pedantic judge.

How can the principles of a fictional world be thought of as connected to the principles of our world? Among the terms used to express this relation are such as *model* and *simulation*. These two terms are connected to different nuances of meaning that come in handy for our train of thought. *Model* is a word used in, e.g., scientific theory, where it is commonly understood as an abstract and simplified representation of an aspect of the world. Simulation can for example be used to refer to the simulation of lighting in a 3D video game. The difference is that a model is meant to be examined and understood by recipients. When a physics teacher explains an atomic model to her students, she wants them to get a grasp of it. A simulation in the aforementioned sense, in contrast, is meant to produce a realistic effect, without the user necessarily knowing why. To fully understand the relations, one would have to look at the source code. This means that usually what is a model for the developer is a simulation for the user.

Thought experiments are probably a combination of both of these aspects. If a biologist wants to simulate the development of a bacteria colony, she has to *model* its behavior following her theories and wait for the outcome, and a simulation of a certain situation following a philosophical theory (e.g. a society as described by a political philosopher) can be conceived as following the same pattern. This means, of course, that the biologist has to participate in the modeling process, although she doesn't have to be the software developer herself.

It has to be said, however, that this approach is still rather hypothetical. So far IF has mainly been utilized as a vehicle for a narrative or for riddles designed for mental exercise or pure entertainment value rather than a means of deeper insight, and also in *Re:Public* and most of our experiments on the way, the philosophically relevant ideas have been expressed rather in the plots implemented than in the rulesets. What a simulation based on a philosophical model, analogue to the simulation based on a biological model, would look like is a question that yet has to be researched. An unpredicted consequence would likely have to be an epiphenomenon of the program, and interesting epiphenomena would require a highly complex code base.

One of the questions that arise in this connection is how the underlying model can be communicated to a non-developer who only perceives the simulation. The classic way to direct his attention to the underlying rules of a world in IF is to have him interact with the simulation in a way that encourages him to try to predict its reactions. That means, give him a goal to achieve that presupposes solving puzzles, which in turn presupposes understanding the model/simulation. This is actually not very far from the description of what constitutes a text adventure. Only if the user understands the workings of his surroundings correctly can he successfully manipulate them in a way that furthers his ends.

This seems to beg the question of what "furthering his ends" means in a world where there are no ends to further. In a philosophic model it may be problematic to mark one end as defeat and the other one as victory. However, this question is less problematic than it seems. It has always been considered an integral part of the player's task in an IF to find out about the goal (Do I have to find a treasure, or is this game about rescuing some beloved relative?). This is valid no less if the outcomes aren't judged by the developer. Every piece of IF can be considered as a game in a broad sense, since even if the world doesn't provide a goal to accomplish, the player is still facing the challenge of finding out how the world works.

It is arguable whether solving riddles amounts to understanding the world in the way a philosopher demands. Some riddles could always be solved by trial and error, and it is imaginable that the player knows how the simulation behaves, but without necessarily understanding the underlying structures. A philosophical IF might aim for a combination of experience and explanation. If the model is not explained, it may not fulfill the demands of philosophy, and if it is not experienced, it may not utilize the full potential of IF. We found that a narrative can provide an intense impression

followed by an opportunity to reflect about it, a structure that was eventually realized in *Re:Public*.

5. CONCLUSION AND OUTLOOK

We wish to conclude our paper by trying to outline some research questions which could be relevant for further work in this field:

- Are there any patterns for IF riddles which are suitable for expressing philosophical ideas and allowing the player to understand them? Are there small examples which successfully demonstrate philosophizing in IF? This may give an idea of how IF opens up a space where philosophical topics can be expressed and developed.

- Is interactive fiction merely a medium for expressing philosophical ideas developed in another medium? Or can it actually provide a substrate for addressing philosophical research questions in new ways? In other words: Is it possible to use it as a research tool (or medium) to introduce new perspectives and methods for dealing with philosophical questions?

- Is the medium fruitful for all philosophical disciplines and topics? Are there some disciplines for which interactive fiction is more suitable?

Our work was an experiment aimed at finding new places where philosophical ideas can be tested and re-considered. Re:Public is an attempt not only to express but also to advance philosophical ideas in an unusual medium, while philosophizing in and about this medium. This is a difficult and sometimes circular venture that requires the coordination of a multitude of different participants with different backgrounds, interests and competences. We think that such a collaborative process of creation is a powerful and beneficial tool for bringing together ideas and the competences needed to realize them. Re:Public – an experiment about justice and about uncommon ways of thinking – is open for participation. The game, source code, further information and contact addresses are available at the project website: http://philo.at/re-public/.

REFERENCES

[1] Kaplan, H. & Maher, J. 2009, Interactive fiction, from birth through precocious adolescence: a conversation with Jimmy Maher. Available at: http://www.adventureclassicgaming.com/index.php/site/features/503 [Accessed Dec 31 2009].

[2] Plato 1969, Plato in Twelve Volumes, Vols. 5 & 6 (Politeia) translated by Paul Shorey. Cambridge, MA, Harvard University Press; London, William Heinemann Ltd. Available at: http://www.perseus.tufts.edu/hopper/text.jsp?doc=Perseus:text:1999.01.0168 [Accessed Dec 29 2009].

[3] Plato 1925, Plato in Twelve Volumes, Vol. 9 (Phaedrus) translated by Harold N. Fowler. Cambridge, MA, Harvard University Press; London, William Heinemann Ltd. Available at: http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3atext%3a1999.01.0174%3atext%3dPhaedrus [Accessed Dec 29 2009].

[4] Montfort, Nick 2003, Toward a Theory of Interactive Fiction. Available at: http://nickm.com/if/toward.html [Accessed Dec 27 2009].

[5] Montfort, Nick 2005, Interactive Fiction as 'Story,' 'Game,' 'Storygame,' 'Novel,' 'World,' 'Literature,' 'Puzzle,' 'Problem,' 'Riddle,' and 'Machine.'. Available at: http://www.electronicbookreview.com/thread/firstperson/montfort   [Accessed Dec 29 2009].