

XIMPEL FOR ETHICAL FRAMEWORKS

S.V. Bhikharie and A. Eliëns
Business Web & Media
Department of Computer Science
Faculty of Sciences, VU University
De Boelelaan 1081
1081 HV Amsterdam
The Netherlands
E-mail: svbhikha@few.vu.nl & eliëns@cs.vu.nl

KEYWORDS

ximpel, ethics, interactive video

ABSTRACT

Videogames provide us with possibilities to think and reflect about moral dilemmas in an applied and interactive way. Ethical frameworks for videogames can be similarly applied to XIMPEL, an interactive media platform. Through the exploration of two examples we abstract the relevant properties and combine them with the knowledge about ethical frameworks for videogames to define a template that can be used to apply ethical frameworks to XIMPEL. This is practically achieved by properly structuring a XIMPEL playlist with a compelling narrative.

INTRODUCTION

We are confronted with moral dilemmas in the real world in places like our neighbourhood and workplace and in virtual worlds in places like online communities and videogames. Videogames in specific are interesting tools for exploring dilemmas, because they provide us with possibilities to think and reflect about choices in an applied and interactive way.

(Zagal, 2009) proposes that a videogame can be seen as an ethical framework if it couples the evaluation of in-game actions with the narrative framework that contextualizes them. He concludes that a game is ethically notable if the ethical framework in a game is both discernible and consistent and that the dilemma is actually a moral one and that the player is the one facing it.

Similarly, we can apply the concept of ethical frameworks to other digital interactive media. In this paper we explore how ethical frameworks can be applied for XIMPEL, the eXtensible Interactive Media Player for Entertainment and Learning.

WHY XIMPEL FOR ETHICAL FRAMEWORKS?

XIMPEL is a platform for creating interactive media productions. It resolves the tension between immediate attention and convenient exploration by allowing viral clips to act as an interface to a rich repository of other (interactive)

video material, as well as other interactive applications including casual mini-games and geographical maps (like Bing or Google Maps). In other words, XIMPEL allows for interactive storytelling with an immersive navigational structure. On www.ximpel.org you can find tutorials, examples and downloads to get started.

Unlike videogames, XIMPEL aims to be accessible to a wide audience as an authoring tool, since it allows for the creation of an interactive story through an XML-based playlist, offering a standardized and well-known way to define your own interactive experience. With the release of version 3.0 of XIMPEL, YouTube video support has been included to make it even easier to add video content to your interactive production, directly streaming from the popular video portal. Just knowing a YouTube id is enough to make your first interactive creation using the online playlist editor at <http://ximpel.few.vu.nl/tester/>.

In short, XIMPEL provides a convenient and accessible way to create ethical frameworks. In fact, since its inception in 2007, many XIMPEL applications have been created (see <http://ximpel.few.vu.nl/showcase.html> for a selection), with quite a few dealing with moral dilemmas. In the next sections two applications are discussed, which have an ethical framework encoded into them.

XIMPEL EXAMPLE: CLIMATE PROFILER

The Climate Profiler, developed by the XIMPEL team, is an application that determines how important the climate is for the player through a series of choices. Each choice affects one or more of the 3 p-values: people, planet and profit.

Depending on the choices you make, you get to see a specific narrative path. After the player reaches the end of a path, the state of the world is shown with an image that contains a positive or negative visual representations of each p-value.

The player can also view the path that was taken and see how each choice made affected the p-values.

By giving feedback on the choices made, the player is encouraged to reflect upon the choices made and replay and explore other paths of the Climate Profiler.



Figure 1: Climate Profiler with 1 of the Possible 8 End Images

Furthermore, certain choices made are not necessarily good or bad, but are presented as dilemmas to create conflict for the player. For example, the choice between nature and luxury is not necessarily one that players need to make in real life, but in the context of the Climate Profiler, the player is challenged to think about the trade-offs being made and how it affects the ethical system.

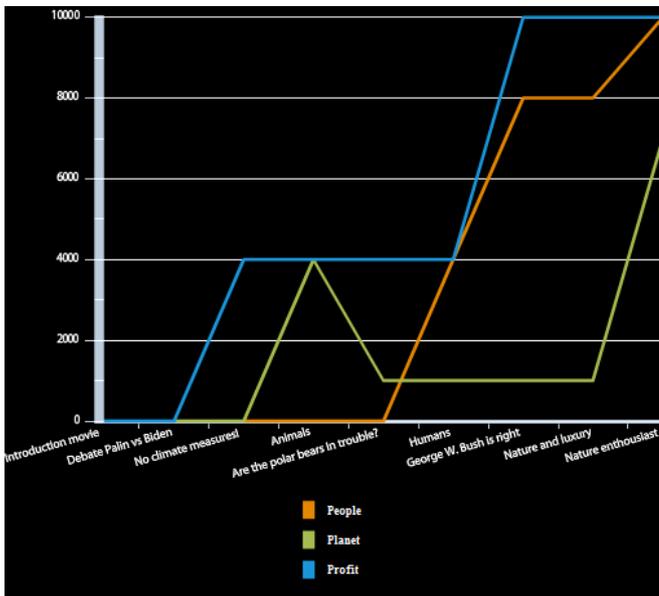


Figure 2: The Climate Profiler Graph Shows the Player How Each choice Affected the P-Values

XIMPEL EXAMPLE: HEALTHY EATING

The Healthy Eating application¹, developed by students Frederieke Nieuwland en Jorien van Ginkel at VU University, deals with ethics on a personal level, namely eating habits.

The application is structured in a linear way. After a short videoclip, the player is asked to make a choice concerning food. Each choice influences your health score. After 6 choice segments, the player views the ending message, which is followed by an evaluation of their health score.

The dilemmas presented are quite lighthearted of nature, like choosing between eating or skipping breakfast. Furthermore, the videoclips used are quite humorous. Therefore, when the player makes a choice that has an unexpected outcome, not only does it grab your attention, but it makes players reflect on their choices.



Figure 3: Healthy Eating – Choice Between Two Pastries

Because the goal of this application is to create more awareness about eating habits, it creates a positive environment to do so. It never forces its ethics on the players, but cleverly shows how certain eating choices affect them.

ETHICAL FRAMEWORK TEMPLATE

Both the Climate Profiler and Healthy Eating give us a valuable insight in how to use XIMPEL to create ethical frameworks. The Climate Profiler does this by showing how a choice affects the outcome, both in a visual way with the end image and with a detailed graph after playing. The Healthy Eating application uses a more personal approach that tries to engage and surprise the player.

What both have in common is that they present the player with immediate feedback after a choice is made. Another important aspect is the narrative. The player is giving a certain context that makes it clear why choices have to be made. Both applications do this by means of an introduction video that sets the tone for the coming dilemmas.

If we abstract these properties from the examples and combine this with the knowledge from (Zagal, 2009), we can define a template that allows us to effectively use XIMPEL for ethical frameworks:

1. The player is made familiar with the ethical system through a narrative.

- The player should get proper feedback when making a choice in a dilemma.

The question that now remains is how can we translate these two rules in a concrete way to XIMPEL?

APPLYING THE ETHICAL TEMPLATE

The template we defined in the previous section can be applied concretely to the XIMPEL playlist, which is the heart of an application.

We start out by specifying an introduction videoclip. This clip introduces the main narrative and context we as creators want the player to explore.

Next up is adding dilemmas with choices and proper feedback. The dilemma can be introduced through a videoclip. The choice moment itself can be a short looping video or an image. The possible choices are marked with overlays: visual clickable markers over specific sections of the application screen. Note that it is also possible to give a player a limited amount of time to make a choice. If no active choice is made, the player can be forced to go along with another path. This creates additional tension and could possibly enrich the moral dilemma, especially if you want the player to act quickly.

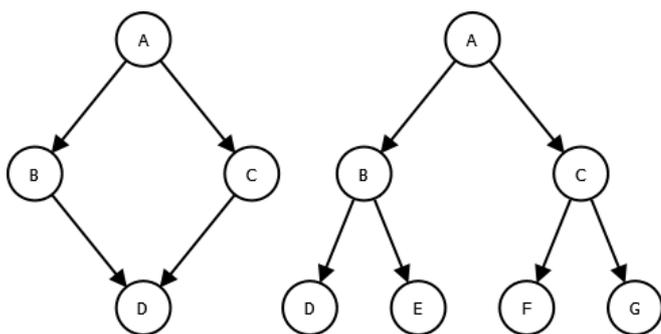


Figure 4: XIMPEL Story Graph Structures

Depending on the (non-)choice made, the player gets feedback in the form of a videoclip that shows the consequence(s) of their action. It is up to the creator to determine what happens afterwards: the story graph for the narrative can reflow into one path or branch out into multiple paths (figure 4).

Figure 5 lists a sample of the introduction of a playlist applying the ethical template. The *subject* is the main building block in a XIMPEL playlist. Each subject always has a unique id, a description and a list of one or more *media* elements. Available media types are local *video*, *picture* and *youtube* type.

The first subject contains the optional *leadsto* property. This property is used to link one subject to another. In this case, after playback of the local video *intro.mp4*, the next subject that will be loaded is “*dilemma1*”. This subject is our first dilemma and displays a picture still with a *canvas*, containing two clickable *overlays*.

```

<ximpeL>
  <subject id="introduction"
    leadsto="dilemma1">
    <description>
      Introduction
    </description>
    <media>
      <video file="intro.mp4"/>
    </media>
  </subject>
  <subject id="dilemma1">
    <description>
      Dilemma 1
    </description>
    <media>
      <picture file="1.png">
        <canvas>
          <overlay x="114" y="120"
            width="120" height="342"
            leadsto="1a"/>
          <overlay x="585" y="124"
            width="100" height="340"
            leadsto="1b"/>
        </canvas>
      </picture>
    </media>
  </subject>
  <subject id="1a"
    leadsto="dilemma2">
    <description>
      Dilemma choice 1a
    </description>
    <score value="-10"/>
    <media>
      <video file="d1a.mp4"/>
    </media>
  </subject>
  <subject id="1b"
    leadsto="dilemma2">
    <description>
      Dilemma choice 1b
    </description>
    <score value="5"/>
    <media>
      <video file="d1b.mp4"/>
    </media>
  </subject>
  <subject id="dilemma2">
    <description>
      Dilemma 2
    </description>
    <media>
      ...
    </media>
  </subject>
</ximpeL>
  
```

Figure 5: Sample of XIMPEL Playlist Structure for Ethical Frameworks

Overlays can be customized using various properties, with the basic ones being x, y, width and height. Each overlay links to a specific subject (“1a” and “1b”), one for each of our available choices.

After making a choice, either subject “1a” or “1b” is loaded and a *score* value is added to the player’s current score. Note that a score value can be both positive or negative, which could possibly lead to certain choices canceling each other out.

After playback of the media of a the chosen branch, both subjects redirect the player to the same next subject, “dilemma2” (partially listed). The graph structure of the playlist in figure 5 equals that of figure 4a.

PRACTICAL CONSIDERATIONS FOR APPLYING THE ETHICAL TEMPLATE

As can be seen from the sample playlist in figure 5, the amount of subjects grows quite fast depending on the number of choices for each dilemma. When creating a more branched out graph structure like in figure 4b, having multiple links to one subject makes creating a playlist more manageable in terms of playlist authoring and gathering of necessary media elements.

Furthermore, by having a limited amount of end points, a narrative can be closed off in a natural way working towards a specific ending and lets the player achieve the same goal in multiple ways.

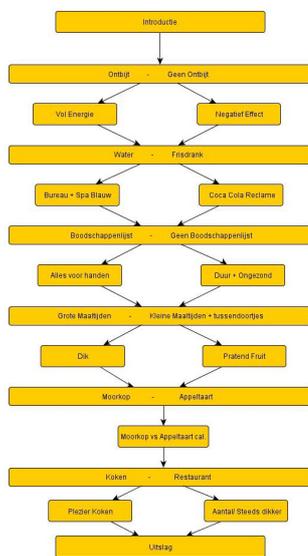


Figure 6: Example of Story Graph for the Healthy Eating Application

Independently of the chosen branching structure, XIMPEL provides a default scoring mechanism to give weight to your choices. This makes it possible to evaluate the player after finishing a path. With some additional (Actionscript 3) programming, it is possible to keep track and evaluate multiple score values. This allows for more depth and precision in keeping track of decisions. Likewise, it allows

for a custom way to provide feedback to the player, for instance with an image like in the Climate Profiler (figure 1).

We can repeat the process of creating dilemmas and choices with overlaid videos/images as many times as needed. However, in doing so we also need to make sure that the narrative properly supports the ethical framework. If we do not enforce this throughout the whole narrative, the interactive experience becomes disjointed and the dilemmas become meaningless. One practical way to tackle the issue of structuring dilemmas is by creating a story graph, which provides a blueprint for the XIMPEL playlist you will be building (figure 6).

When the player finally reaches an end point of a path, some form of reflection should be offered, whether this is in the form of an ending videoclip, or by using the scoring mechanism to inform players about how well they did. This is essential for creating a meaningful experience within the ethical framework.

CONCLUSIONS

By looking at two notable examples of XIMPEL applications with a solid ethical framework, we have defined an ethical framework template, using insights from ethical frameworks within a videogame context. This template can be practically applied to XIMPEL by creating a playlist according to the principles:

1. The player is made familiar with the ethical system through a narrative.
2. The player should get proper feedback when making a choice in a dilemma.

Practical considerations like playlist size, overall narrative structure and score evaluation are important as well.

FUTURE WORK

XIMPEL is an ongoing effort and new ways to interact with different media types are currently being explored:

- Geographical maps. This allows the player to use the map as an interface for accessing other media types.
- Minigames. These games be anything, from classics like memory to platform games or even more complex like 3D games. The challenge here is to find minigames that work well together with other types of media.

Other research topics include (but not limited to) alternative interfaces like XIMPEL TV and Pixel Video and generating video summaries.

REFERENCES

- Zagal, J.P. 2009. “Ethically Notable Videogames: Moral Dilemmas and Gameplay.” In *Breaking New Ground: Innovation in Games, Play, Practice and Theory* (DiGRA, London, September 2009).