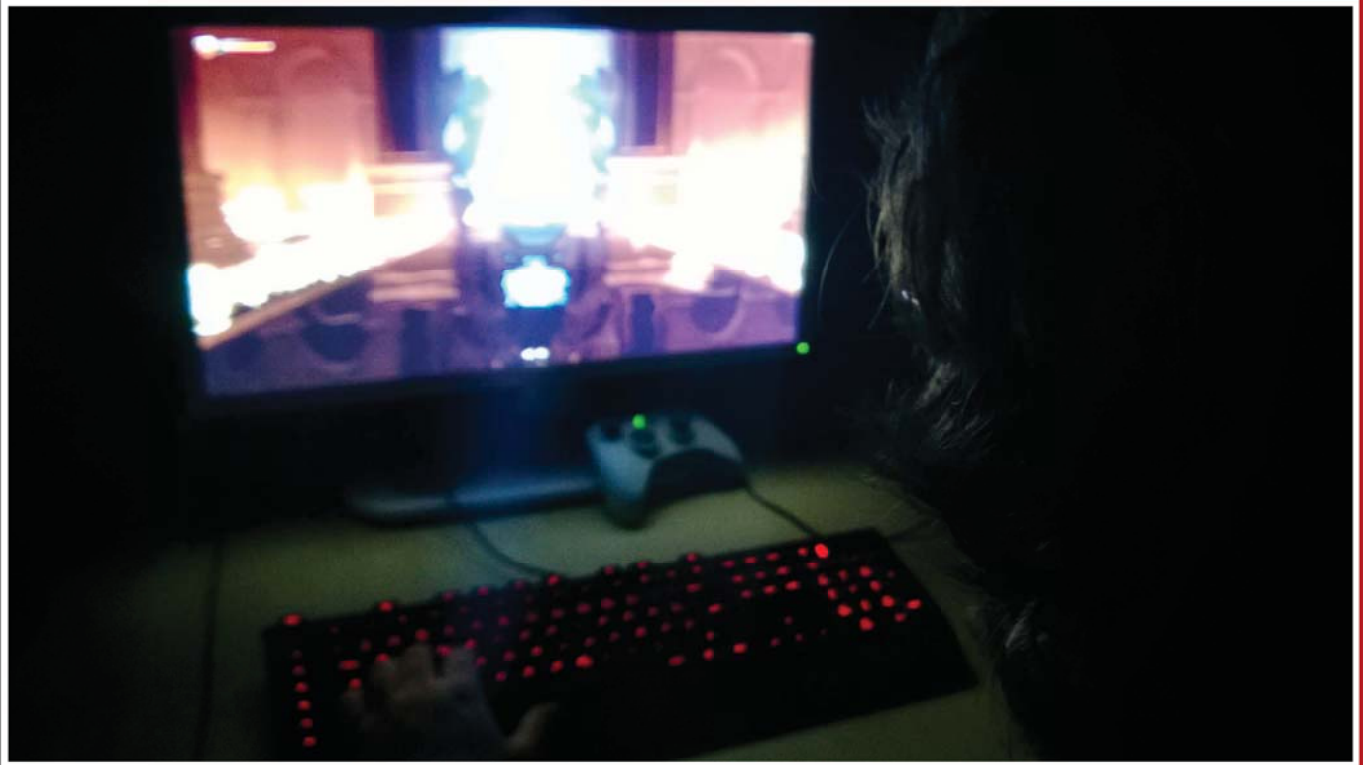




online

HEIDELBERG JOURNAL OF RELIGIONS ON THE INTERNET



Simone Heidbrink, Tobias Knoll (Eds.)

# Religion in Digital Games

Multiperspective & Interdisciplinary Approaches

Volume 05 (2014)

Institute for  
Religious Studies

University  
of Heidelberg

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## Fátima Postmortem

Luís Lucas Pereira, Licínio Roque

### Abstract

In this paper we report on the game design and evaluation process of a religious themed videogame: *Fátima*, available at <http://playfatima.net>. *Fátima* is a videogame that places the sightings of Our Lady of Fátima (Portugal, 1917) in a playful context. The overarching aim was to enable a play experience around the Fátima phenomenon by confronting players with a dilemma between a materialistic dimension (herding sheep) and a spiritual one (praying to the Virgin Mary). The player takes the role of a young shepherdess (Sister Lúcia) represented by an avatar that moves around discreetly in the game world, represented by a green meadow. At the start of the game there are six sheep in the meadow; they move randomly and may leave the game scenario altogether. By moving the avatar, the player is able to influence the movement of the sheep, herding them within the game scenario. In line with the original accounts of the phenomenon, there are a total of six sightings throughout the game. These sightings come up approximately every minute. In each appearance it is possible to pray to the Virgin Mary for 10 seconds. In addition to the reporting of the game design process, we describe the evaluation of the gameplay experience. This evaluation is based on gameplay metrics and allows us to analyse how players acted facing the meaningful possibilities existing in the videogame.

### 1 Introduction

Sensemaking is an essential aspect of the experience of playing a videogame. It would be challenging to think about a gameplay activity that does not involve some kind of construction of meaning. One of the key features of the videogame medium is the fact that gameplay activity require the participation of players due to their participatory nature (Arseth 1997, Raessens 2005, Roque 2005). Videogames may be viewed as power structures that mediate the participation of players (Sicart 2005) giving them predetermined free spaces for action. This feature of participative nature of the medium videogame distinguishes it from all other and naturally this has impact on how meaning is encoded and decoded in this medium.

Over the last years the videogame medium has been subject to a process of legitimization as a means of expression that goes beyond the scope of mere entertainment and fun (Tavinor 2009). Actually, therein lies our motivation to design and develop the Fátima videogame (Pereira et al 2010): to cross two fields which at first may seem antagonistic - to represent a religious phenomenon through a medium often associated with mere entertainment and escapism, exploiting the significant function of play (Huizinga 1970). Fátima is a videogame that places the sightings of Our Lady of Fátima (Portugal, 1917) in a playful context.

In the next section we present a model for a game design and evaluation we have been developing (Pereira & Roque 2013a) that will help us to analyze the design and evaluation of the Fátima videogame. Then we present the game design case including the description of the design and the evaluation of player participation based on gameplay metrics.

## 2 Participation-Centered Gameplay Experience Model

In this section we summarize the model used to guide the activity of game design (Pereira & Roque 2013a). The model was instrumental in our attempt to address the question of: how to reframe the design of a videogame from the perspective of players' participation? This model is intended to have a guiding role, assisting the designer in considering how the player takes part in the game. To achieve that we consider six perspectives on participation:

*Playfulness*: The videogame as a context of free, informal, and unstructured participation.

*Challenge*: The videogame as a context of structured participation, of a proposed challenge, or according to a formal goal.

*Embodiment*: The videogame as a context of physical participation, both virtual and actual.

*Sociability*: The videogame as a context of social participation, of establishing relationships between players.

*Sensemaking*: The videogame as a context of significant participation, of creation of meaning.

*Sensoriality*: The videogame as a context of multisensory involvement.

These dimensions seek to assist the designer in thinking, in a comprehensive manner, about the range of possibilities at her disposal to define or give a certain character to a game. The perspectives considered result from the synthesis of the literature on the nature of play activity, the conceptualization of the gameplay experience and the motivation of the players.

The number of perspectives considered comes from the criteria used in the conceptualization of the model. This number was reduced to a minimum to ease the model appropriation and rationalization that still allowed us to approach the design of the medium and the gameplay experience in a wide and inclusive way. In turn, we expect these six forms of participation can also be used to characterize gameplay activities, so as to confront actual player participation with the intention originally set. These lenses are mostly complementary and when successfully integrated they should provide a holistic perspective. Moreover, it can be quite complex to establish a rigid boundary between these views of interaction as, often, different forms of participation share common aspects when realized in a game artifact.

With the purpose of using the referred model thus presented in the context of design activities, we identified three operative focus: defining design intentions, characterizing game artifacts and mapping and analyzing player participation. Those three focuses derive directly from the conceptual base that supports the proposition of the model centered in the concept of participation: bearing in mind that the videogame, as an artifact, mediates the players' participation from which the potentially intended playing experience emerges. In the following subsections we will describe the three focuses along the six participation perspectives. In Table 1 we map the three analyses focuses and the six perspectives synthesized in the model.

The first operational level concerns Intention: What is the participation ideal that the videogame is suggesting? It is often from a design intent that the conception of a gameplay experience emerges. As already noted, we assume that a design exercise departs from a proposed experience ideal, by configuring certain forms of participation. At the intent level of operation we generate and organize the proposed forms of participation and, implicitly, the kind of experiences to be enabled. This focus analyses and rationalizes the character or style of the proposed or idealized game, meaning, the essence or value of the game activity.

The second operational level concerns the Artifact: How does the artifact supports the idealized forms of participation? At this level we envision an object as medium that enables an interaction context calling for the intended forms of participation. In other words, we aim to align the features of the artifact with a model of player interaction supportive of the intended player participation. This focus analyses and rationalizes the artifact videogame as network of mediators that support the participation, helping us to think about the nature of the mediators used in the artifact.

Finally, the third operational level concerns Participation: What characteristics of the actual player activity are consistent with or revealing of the participation idealized? This level of operation is meant to focus observation, analysis and evaluation of actual player participation, in particular, to examine if the game activity meets the design intent, and to point towards the indicators and metrics

we can define that would be revealing of progress towards that intent. This focus allows characterizing player participation, measuring the level of alignment between the real appropriation of the game by the player and the idealized.

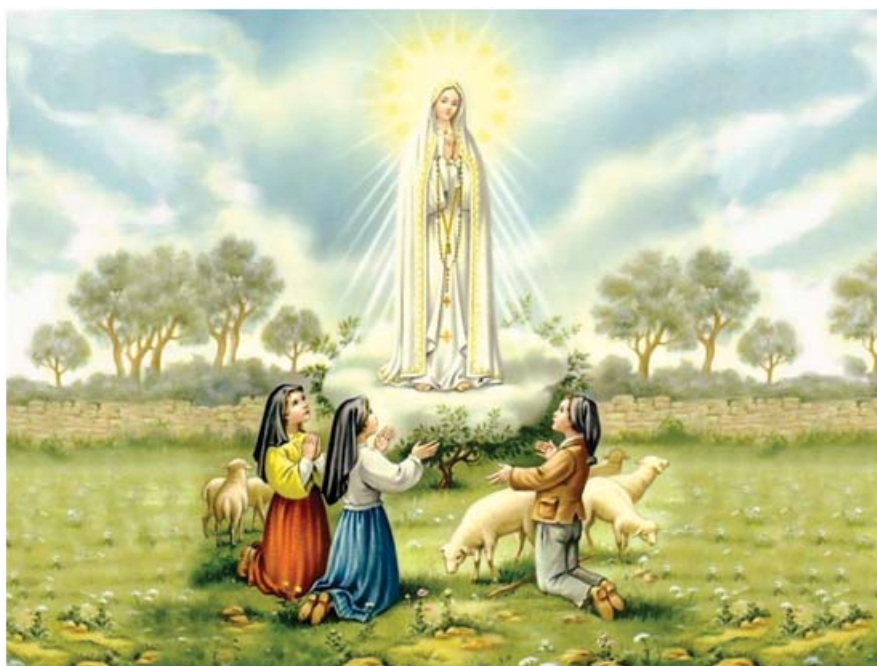
	<b>Intention</b>	<b>Artifact</b>	<b>Participation</b>
<b>Playfulness</b>	exploring, discovering, recreating, customizing	the nature of a player’s agency, the variety of interactive elements of the game (objects, characters, actions, etc.)	degree, variety and tendency of exploration
<b>Challenge</b>	overcoming a challenge, creating a strategy, defeating an opponent, mastering a skill	nature of challenges proposed, type of penalties and rewards, intensity and organization of challenges	control, pace, progress, efficiency in performing tasks
<b>Embodiment</b>	physical involvement, physical performance	representation of the physical game world, player's representation on the game world, interpretation of player's movement	control and rhythm of movement, aesthetics of the movement
<b>Sensemaking</b>	interpretation of a role, fantasy, self-expression	theme and underlying narratives, models and representations of phenomena, roles and motives, significant actions	alignment between actions and roles, understanding and or critique of the represented phenomenon
<b>Sensoriality</b>	contemplation, wonder	style, nature of the stimuli, visual and sonic compositions, synesthetic explorations	degree of exposure and responsiveness to stimuli, interaction or engagement with sources
<b>Sociability</b>	competition, cooperation, friendship, identification, recognition	diversity and nature of social interactions and relationships, models of social structures (team, hierarchy, etc)	the intensity and types of interactions between players, effectiveness bonds

Table 1: Characterizing players’ participation along the three foci of analysis.

### 3 The Fátima Game Design process

The idea of designing a game about the phenomenon of the ‘Our Lady of Fatima’ apparitions had interested us for almost as long as had research and exploration of the videogame medium. Our interest mainly lied in exploring a subject matter - religious phenomena - that has proved marginal to what is traditionally represented in videogame territory, thus allowing it to reflect on the very nature of the medium, thinking about its borders in terms of expressive power and fruition. Apart from questions intrinsic to the medium itself, we were attracted to the potential of exploring such a theme because it remains a phenomenon that is culturally rooted in contemporary Portuguese society, and hence symbolically very rich.

For quite some time we came to consider different perspectives on how to tackle this religious subject matter. Initially we pondered addressing pilgrimage and oath keeping (two aspects very closely related to Fatima), and in so treating Fatima as a direct way of questioning faith and religious beliefs. However, such explorations never lead us to practicable game concepts that were worthy of developing based on these ideas.



We ended up following an agenda that came to us inspired by popular visual representations of the Miracle of Fatima – containing Our Lady and the three little shepherds (see fig.1).

Fig. 1 – Image representative of popular Fatima phenomenon depictions.



In a way, we were interested in the iconic power of this image, and how it became so significantly popular and a symbol of the phenomenon itself. So in a first instance, our design served as a transmediation of this image, gathering all its symbolic figures into the videogame medium. Following that line of thought, the theme of the game evolved naturally to the contrasting dilemma between the material and the spiritual, where one of the little shepherds was confronted with the possibility of either praying to the Virgin Mary or tending to his flock. In so doing, we proposed to explore sensemaking around a dichotomist reflection on the valorization of a contemplative attitude (solemn praying to a divine spirit), as opposed to a pragmatic, earthly nature (tending to possessions).

Once the basic concept was established, it was followed by a strategy for its concretization. One fundamental aspect of this project was that it was motivated solely by intrinsic desires, having no ulterior purpose. Therefore, it was made resorting to a small circle of friends, from which a workgroup with different skills and competences was established. It was composed of Joana Sobral, Mafalda Maia, Mafalda Nobre, Pedro Santa, Tiago Alves and Luís Pereira; once the team was gathered, preparation phase ensued. Even though all members of the team had some relation to the phenomenon, at the very least, due to its cultural ubiquity and weight, we opted to carry out some bibliographical research. It was not so much in our interest to find more or less scientific arguments on events' veracity or lack of, rather to investigate on crucial aspects of how a narrative was constructed based on the experience of the phenomenon. Towards that end, it was essential to read the book "Memórias da Irmã Lúcia" (Kondon 2007) ("Memories of Sister Lucia", the youngest of the three shepherds), and that came about to become the basis of some of the details in the game; for example: the textual discourse was based on actual speech that is attributed to sister Lucy and the Virgin Mary, and some scenic element, such as the ray of lightning that precedes each of the 6 apparitions.



Fig 2. Cover of the book “Memorias da Irmã Lúcia” (Kondon 2007)

This being a pet project, a minimalist approach was carried out in terms of development, trying to focus all the effort in prototyping. Considering the simplicity of the chosen dualist concept, the gameplay was made equally simple: The player takes the role of a young shepherdess (after Sister Lúcia) represented by an avatar that moves around discreetly in the game's world, represented by a green meadow. At the start of the game there are six sheep in the meadow; they move randomly and may leave the game scenario altogether. By moving the avatar, the player is able to influence the movement of the sheep, herding them within the game scenario. In the playing field there is a holly oak tree representing the site where the Virgin Mary sightings took place. In line with the original accounts of the phenomenon, there are a total of six sightings throughout the game. These sightings come up approximately every minute. In each appearance it is possible to pray to the Virgin Mary for 10 seconds; to do so the avatar must be moved to a marked location, near Virgin Mary's image. While the avatar is praying, a progress bar comes up on top of it indicating the praying time up to that point. While praying there is a possibility that some sheep will exit the playing field - here lies the game's dilemma which opposes praying to the idea of caring for the flock of sheep.

One of the questions that was initially discussed was what role to give to the player, and consequentially how to establish his identification with the game and its characters. We considered giving him the means to choose which of the little shepherds he wished to personify. This possibility seemed interesting on a symbolic level, since according to reports of the aforementioned

book, each of the shepherds had his own distinct relationship with the Virgin Mary as the apparitions occurred. However, an issue of effort rationalization eventually led us to opt to only represent Lucia, given her pivotal role in the events.

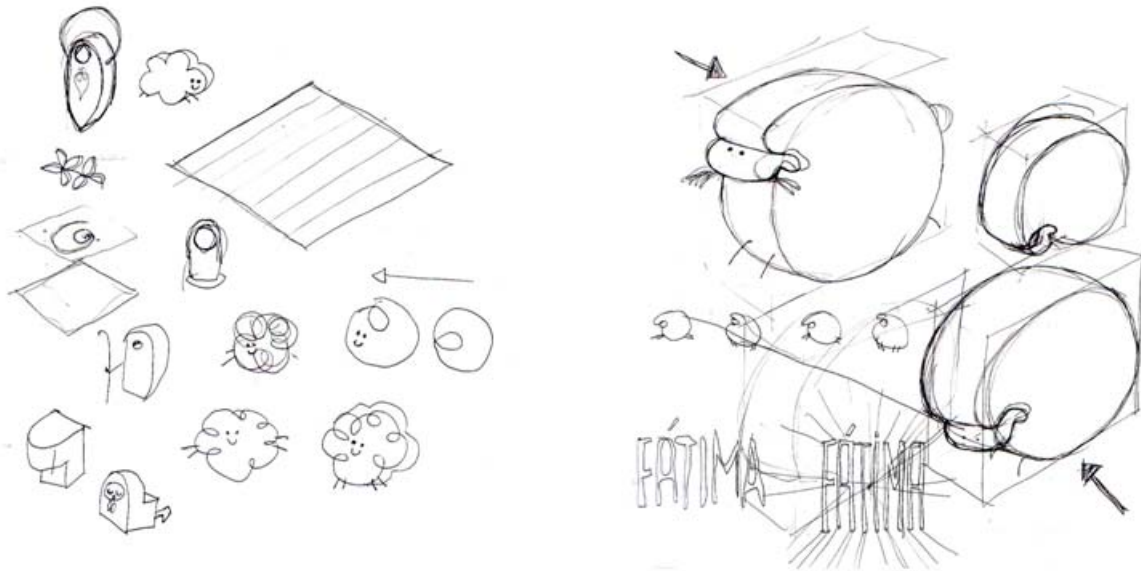


Fig 3. Initial sketches of concept art

Representation would become one of the most interesting challenges in this project. The initial motto was to create an environment with a minimalist and cartoony aesthetic. This choice was backed by the intention of referencing the very videogame medium, so as to formalize the crossing of these two different territories: videogames and religion. The significant game elements then were the Virgin Mary and the holly oak, the little shepherd and the sheep she tended to. The scenario also included some rocks that served as obstacles for the generation of different spatial movement dynamics. Images above show some of the sketches that trace the graphical evolution of the elements.

Following criteria of technological familiarity and for its adequacy for web distribution, we opted to implement the game in Flash, employing an isometric background perspective and vector graphics.



Fig 4. Final game design characters

In regards to sound, we risked interpreting and recording our very own soundtrack. One of our team members (Tiago Alves) had musical skills, which gave us confidence to adapt the themes that were selected for the game. So, it was possible to synchronize with precision the dynamics of gameplay with all sound elements. The music compositions' low fidelity 8 bit aesthetic was once again, a reference to 80's videogame tropes.

One of the aspects that was more seriously reflected and discussed during development, and the one which took more time before a decision was made, was how to incorporate formal game elements ('ludus') (Caillois 2001) that characterize videogames, namely: the objective, the nature of the challenge and conflict, winning and losing conditions, etc. At design time it was important for us that these features were part of the object we were designing (further development of this topic is in the reflection section). In order to enhance the conflict between these two dimensions, the group determined that the winning condition would be to get to the end of the game (after the six sightings) with at least one sheep. Despite this requirement, the player is afforded the flexibility in choosing whether to care for the flock or pray. We chose not to explicitly communicate to the player what to do, to allow for greater interpretative flexibility of the object.

To create a privileged context for publicizing the game, the group aligned the release and media communications with key dates of the phenomenon, namely, dates of the apparitions – the thirteenth of each month from May to October. Hence, on the 13<sup>th</sup> of May we launched a teaser to announce it; on the 13<sup>th</sup> of June, we launched the game and in the same day of July we updated it with a method for posting scores on Facebook, so as to provide a social dimension to the

experience. Score tallies consisted of a communication of the number of kept sheep and the total time spent praying.



Fig 5. A Fátima videogame screenshot

In the following section we analyze player participation in the game in response to the design solution that we described in this section.

#### 4 Characterizing Players' Participation

After presenting the game's aim, as well as examining its main features, in this section we analyze participation in this videogame (Pereira & Roque 2013b). Bearing in mind the nature of the videogame Fátima, we have defined the goals of our analysis to be the characterization along the following perspectives – “Sensemaking” and “Challenge” - as these were considered the most pronounced forms of participation in this particular case. In order to characterize the participation along the perspectives outlined, we have defined guiding questions such as: Do the players try to look out for the sheep? Do the players try to pray? Do the players pray in a persistent way? Do the players try to keep all of the sheep? How many games are won, lost or incomplete? How can we characterize the games against the results (sheep vs. praying time)? What is the duration of the games which are lost?

### 4.1 Collected data

In order to characterize participation on the videogame Fátima we have logged the player's most significant actions. The data presented in this section refers to game playing instances that took place between May 2010 and May 2011. During this period, 23933 games were logged for analysis. Next we describe the main findings according to the metrics previously defined. Out of the 23933 games played, 9316 were incomplete, 13964 were lost and 653 were won.

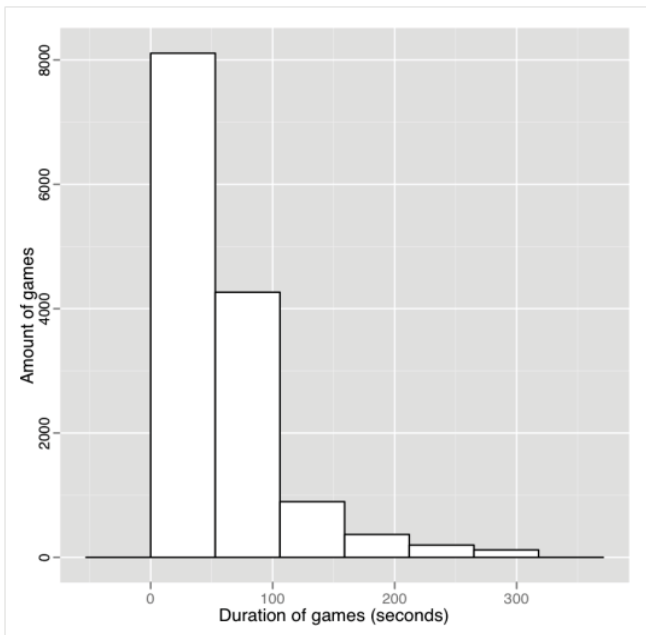


Figure 6. Duration of lost games

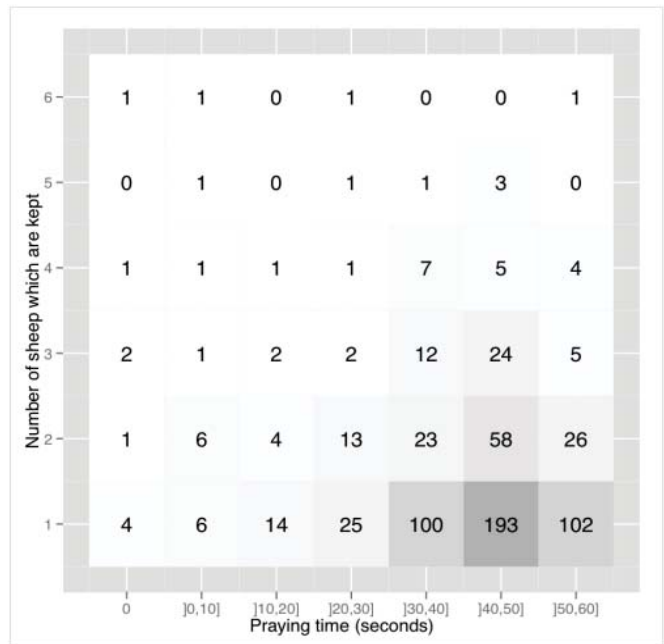


Figure 7. Number of games according to result (amount of sheep which are kept vs. praying time)

Figure 6 illustrates the number of lost games according to the game's duration. We can see that most of the lost games are over in the first two minutes. Figure 8 illustrates games won according to the outcome. There was 1 instance where no praying was done and the six sheep were kept, while in 102 other games praying was done for more than 50 seconds and only one sheep was kept. We can see here that for the majority of games that were won one sheep was kept and praying time was maximized.

Figures 8 and 9 show the players' involvement in the praying action. In figure 8 is shown the distribution of the number of games according praying time. We can see that for the majority of the games there is an attempt to maximize praying time: in nearly 87% of them the praying time is over 30 seconds (out of 60 available).

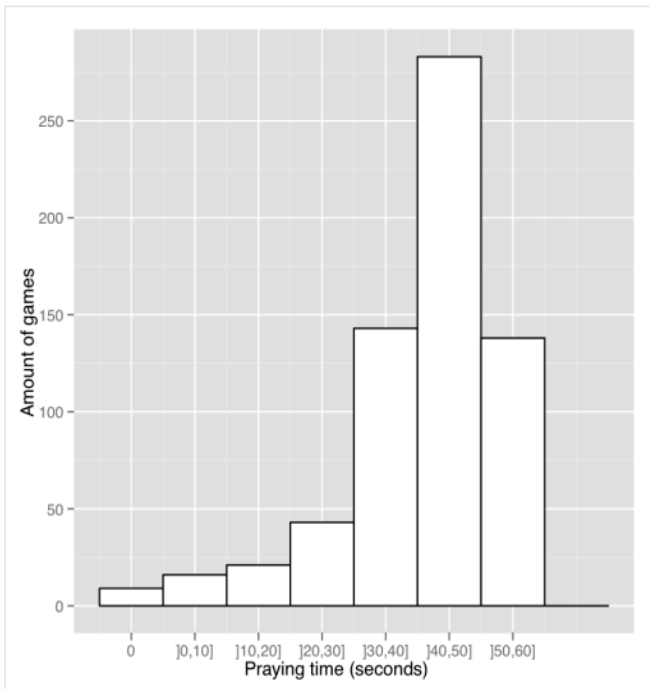


Figure 8. Praying time in successful games

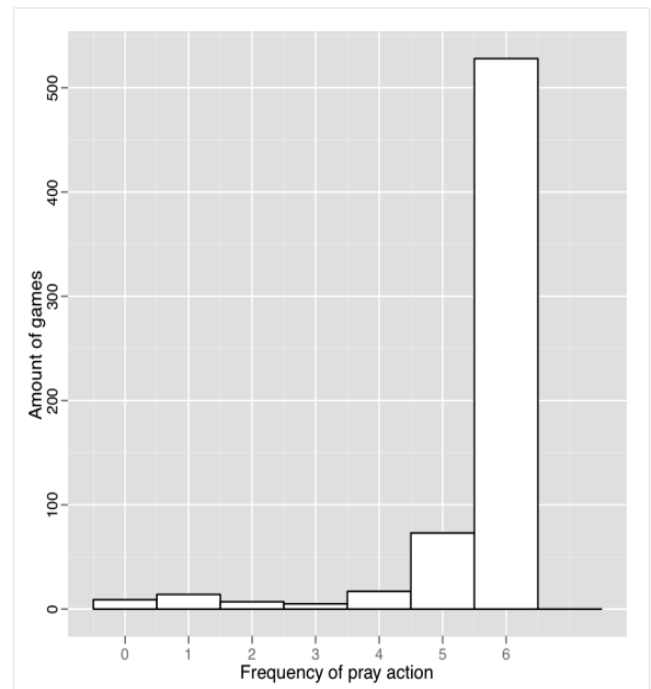


Figure 9. Amount of times that praying was performed in successful game sessions

Figure 9 measures the persistence of the praying action which is shown by the number of times that the players perform that act; players can choose to pray a total of 6 times per match (once for each sighting). In the vast majority of games players (nearly 81%) chose to pray whenever that was possible (6 times).

#### 4.2 Data Analysis

Drawing on the results described above we would like to highlight two aspects from the point of view of participation, which concern the kind of results obtained (sheep vs. praying) and the challenge suggested by the game.

If we look at the number of games won vis-à-vis the total number of games, we can see that only approximately 3% of the games end with a "victory". This finding, along with the duration of the games, in minutes, illustrates the difficulty of staying in the game. Even though the game was designed to generate a sharp conflict with the ultimate goal of keeping all the sheep within the playing field, findings suggest that this particular feature may need to be reexamined. With regards

to the results of the games themselves (in terms of number of sheep which are looked after and praying times), taken as metrics of the “Sensemaking” dimension of participation, we find that there is a clear fall in the number of sheep which are kept. Indeed, results show that in most cases only one sheep is kept while praying time is longer. This trend is visible in the data related to praying time and persistence in praying. Therefore, considering that the game was originally designed with a view to enhancing the players’ dilemma between two courses of action (praying or shepherding), it is questionable whether the design solution developed is indeed satisfactory, insofar as it mostly induces behavior associated with only one of these courses, whereas the ideal solution would be to have a more diverse distribution of results across the two action programs. Having thus analyzed the response to the challenge dimension, we are now in an informed position that allows us to consider in greater detail the extent to which the game design solution was found to successfully meet its intended game experience ideal. In the particular case of Fátima we may now rethink the game design along the following directions: How can we lessen the challenge component in order to increase the number of games played till the end? (Challenge); How can we adjust the game’s elements in order to facilitate a greater variety of gameplay approaches? (Sensemaking).

## 5 Reflection

Possibly is it too obvious, but a first aspect we think still worth reflecting about, is that we were able to make the videogame we envisioned. Maybe the process itself has been the most significant reward of this project, what we learn and the sense of community and sharing around a common will. Bringing together a team was essential not only for the sharing of expertise and effort but also for the sake of compromise that enabled the project to be finished ahead of time. The sense of accomplishment is reinforced by the fact that it was the first experiment of game design that this team participated in.

If on one hand the fact this group was able to realize the design intent contributes to a sense of achievement, on the other hand we got the feeling that we spend too much attention in the creation of videogame itself. That is, all the energy of the project focused on the implementation of the videogame was accompanied by a planned strategy to promote and disseminate. Because of the effort involved in the project has been considerably higher and also for recognized naivety, the project ended when the videogame's implementation finished. Taking into account our intention to promote reflection would have been interesting to get to know in loco reactions the game in some specific contexts, especially where there was some kind of religious sensibility, in order to promote discussion. However our solution was the simple dissemination through the social network



Facebook, and to interpret reactions from written comments. In the comments there was a player who manifested itself displeased with the game considering it an insult. The comment was as follows:

Player: I personally do not like the idea. A religion should be seen as something serious. I think the videogame ridicules the Fátima Apparitions. So, why the game's creator does not make another videogame but this time with Muhammad. I suspect that I already know the answer...

Game Designers: Thanks for the comment. To what extent do you think the videogame ridicules the Fátima Apparitions?

Player: As the use of terminology related to religious belief, such as pilgrimage, praying, appearance without justification because it is just a game. 1 - a pilgrimage (from Latin *per agros*, ie, through the fields) it is a journey undertaken by a devotee of a particular religion to a place considered sacred by the same religion. 2 - According to Catholic belief, to pray, or simply "talking with God", is a gift of the grace of "God who comes to meet man" and allows the establishment of a "personal and living relationship of the children of God with their Father who is infinitely good, with his Son Jesus Christ, and with the Holy Spirit who dwells in their hearts". But for to distort the Fatima Apparitions we already have a lot of traders around the sanctuary trying to make money at the expense of religion. Thank you for your attention.

Without wanting to overstate a single comment, we think this expression contributes to illustrate that, regardless of the design solution found, our initial intention is not devoid of meaning, in the sense that the use of a particular medium to represent a religious phenomenon is judged as an insult.

A third aspect, perhaps the most important one in terms of legacy, is a reflection on how the preconception of the videogame medium influenced the resulting object. At the time of the design phase we felt it to be important to include ludic elements, to consider the videogame as a game, setting objective and quantifiable results, restricted time to play, great emphasis on the challenge, and so on. Today, we believe those decisions may have been artificial (facing our intention for the gameplay experience) and corresponding to a certain kind of preconceived ideal of what a videogame should be. There is an ample space of expression in the videogame medium beyond the dimensions of challenge and use of ludic elements. Inscriptions such as the praying time progress bar, while not directly related to the evaluated victory condition, seemed to have had much more strength than we anticipated. Today, on hindsight, perhaps we would try to design a videogame less structured, mediating a participation program more open and possibly more ambiguous (Sutton-Smith 2001), with a greater interpretive flexibility. As an example, maybe the notion of victory itself could have been avoided and left for the player to interpret in face of the simulated results

being represented, with a possibly more philosophically and less functional ending and player relation to the gameplay.

## 6 CONCLUSION

In this paper we reported on the game design and evaluation process of a religiously inspired videogame: *Fátima* – a videogame that places the sightings of Our Lady of Fátima (Portugal, 1917) in a playful context. Through the rationalization of player's participation in different perspectives, it was possible to analyze this game design case, from the initially established gameplay experience intention, through the artifact's constitutive analysis, all the way to the analysis of players' behaviors mediated by this game. In this way, it was possible to evaluate the game design having in mind the intended game experience, objectively pointing which were the artifact characteristics and participation metrics at issue in this design case.

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### Acknowledgements

To Joana Sobral, Mafalda Maia, Mafalda Nobre, Pedro Santa and Tiago Alves who make Fátima possible. To Rui Craveirinha for all the support. This work was supported by the Fundação para a Ciência e Tecnologia (Foundation of Sciences and Technology) (SFRH/BD/45114/2008) and the CISUC ICIS project CENTRO-07-0224-FEDER-002003.

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