

Fairy Tales as a Card Game: Engaging Digital Audiences in Value-Centred Discourses using Storytelling

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Casual games are an established way to engage online audiences in topics that otherwise might be less accessible. This makes them an ideal tool for collective reflections around cultural heritage. The VAST project [1] studies the transformation of values over space and time. Prominent values from different places and significant periods in European history were identified and adopted by experts [2] to be used in textual and image analyses. The project framework expands on the core values of the European Union and shares attributes from the Schwartz theory of values [3]. On this, VAST goes one step further and identifies the *dualities of values* that are prevalent in many fairy tales and are particularly approachable by means of games. These are pairs of values that are mutually opposed, such as “deceptiveness vs. honesty” or “trust vs. distrust”. Generally, the alternatives in a duality do not necessarily imply a positive vs. negative interpretation, namely none of the options is unequivocally preferable, such as “tradition vs. innovation”, “individualism vs. collectivism”, “lawfulness vs. autonomy” [4]. Fairy tales provide a context in which the reader can experience the challenge of a choice between a duality of values, where the preference can be influenced by the specific situation proposed in the story. Online games allow doing this without exposing one’s identity or suffering actual consequences. Within the VAST project, a dataset of fairy tales from different European countries - a type of intangible folklore heritage - has been selected and annotated to explicitly tag the occurrences of values in the considered sources [5]. The multiplicity of variants, typical of fairy tales, is a good match for the variation required to create an interactive game.

In this paper, we propose a solution to re-engage young audiences with fairy tales and values behind them - universally or individually perceived. To this end, we challenge users to role-play in fairy tales, by asking them to reconceive how fairy tales are narrated and which values guide their characters. In VAST, we achieve this by combining two interleaved approaches: i) the collaborative writing of stories through an online platform [6], and ii) the interactive narrative of the created stories through a card game [7]. As a case-study, we consider the fairy tale of Little Red Riding Hood, since it is a classic story that raises a number of ethical issues. It is also a well-known tale that has been widely used for experiments with interactive storytelling [8]. We evaluate our proposed approach on the considered case-study by involving a pre-teenage audience of the Fairy Tale Museum in Cyprus, which is a partner of the VAST project consortium.

Our approach to collaborative story writing allows users to propose new story developments, and thus new personal interpretations through a scene-centred narrative mechanism. It allows users to intervene and create new branches of the story at a desired point with the necessary context and guiding structure. The context is expressed as the combination of a global overview in the form of a summary of past scenes, as well as a local detail showing the contents of the current scene up to the branching point. Users are being guided through a form-filling interface where they are asked to specify the following:

1. *who* acts in that moment,
2. *how* they do it (action or utterance),
3. *what* they do, and
4. *why* they do it, in the form of an inherent value, if any.

A screenshot example of our collaborative story writing platform is shown in Figure 1. The left-hand side contains the context in the form of a summary of previous scenes and the exchange of the current scene up to the moment being edited. By clicking on an *arrow* button (↩), the user moves to a different point of the story where they want to start writing. The right-hand side represents the guided form-filling interface. The *Hint* button allows users to receive suggestions by exploring the alternative contents generated by other writers in the same point of the story, if any.

StoryWriter

How the story evolved so far

What happened previously in this story

Once upon a time there was a girl called Red Cap because of her red hood. ↩

Her mother sent her across the forest to take some sweets to her grandmother's house. ↩

In the forest she met the wolf and unknowingly told him where her grandmother lives and what is she bringing. ↩

The wolf lured Red Cap off the road to pick some flowers. ↩

Whereas he rushed directly to grandmother's house, tricked her into letting him in, ate her and layed in her bed pretending to be grandmother. ↩

This scene so far

Red Cap was surprised to find the cottage-door standing open, and when she went into the room, she had a strange feeling ↩

Red Cap: *Oh dear! how uneasy I feel today, and at other times I like being with grandmother so much.* ↩

Red Cap: *Good morning* ↩

She received no answer ↩

Red Cap went to the bed and drew back the curtains. ↩

There lay her grandmother with her cap pulled far over her face, and looking very strange. ↩

Red Cap: *Oh! grandmother, what big ears you have!* ...

How would you continue the story?

1. Who
Choose who you want to act next
Wolf

2. How
Choose how he/she does it
 Act Say

3. What
Write it as part of the story
All the better to eat you with!

4. Why
Write what value guides this, if any
honesty

Move on
Done Hint

Figure 1: A screenshot example from the collaborative story writing platform of VAST. Here, the user proposes an alternative development of Little Red Riding Hood, where the wolf, in a moment of honesty, discloses himself at the first question of Little Red Riding Hood.

The created story branches are discussed and challenged by players within our storytelling game, putting them in the shoes of the protagonist and asking them to make the corresponding choices. The story is narrated through a sequence of scenes

(i.e., cards) that the player can swipe to browse the story akin to the physical pages of a book. In a card, a player choice could be included to introduce a choice between possible continuations. A popup appears in the card with two option buttons to choose from. The choice can be associated with a duality of values. In Figure 2, an example of both a narrated scene (on the left) and a prompt for a player choice (on the right) is shown.



Figure 2: Two screenshots from the storytelling game. On the left, we show a card with a narrative portion of the story. On the right, we show the pop-up choice to be made by the players.

Both the story writing platform and the storytelling game rely on a common data structure that we call *narrative block*. As shown in Figure 3, a narrative block is an story event described by a combination of the following:

1. a non-player character (or the narrator),
2. the character's utterance or action defining the event,
3. the two possible options of a choice.

A choice option is defined by the following:

1. The text, namely the utterances or actions of a tale character, that describes the option,
2. the value (if any) associated with the option,
3. the narrative block that follows if the option is chosen.

The narrative blocks offer a balance between granting an easy authoring mechanism and supporting interactive story creation. The use of a binary choice mechanism in the story provides two main benefits. First, it limits the potential complexity that typically characterises branching stories [8]. Second, it perfectly matches the dualities of values that we aim to capture.

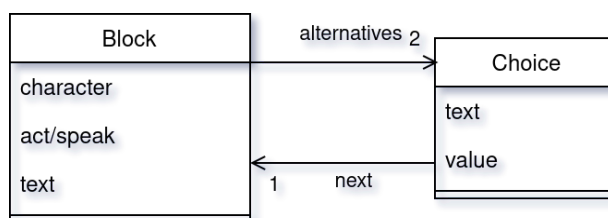


Figure 3: An UML class diagram of a narrative block and corresponding choices.

The combination of collaborative story writing and storytelling game aims at eliciting, producing, and collecting interpretations of a fairy tale proposed by the involved participants. The notion of narrative block favours the emergence of different and possibly conflicting viewpoints. The possibility to play with stories created by multiple users challenges players to reflect on the perspective of others. The proposed approach has three important strengths: i) it engages an online audience with folklore, ii) it explicitly puts values in the forefront of a dialogue between different and personal points of view regarding how a narrative could unfold, and iii) it guides users to generate and share interactive stories built around literary heritage.

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References

1. Castano, S., Ferrara, A., Giannini, G., Montanelli, S., Periti, F.: A Computational History Approach to Interpretation and Analysis of Moral European Values: the VAST Research Project. In: *HistoInformatics 2021*. pp. 1–9 (2021). <http://ceur-ws.org/Vol-2981/paper7.pdf>
2. Giouvanopoulou, K., Ziouvelou, X., Petasis, G., Karkaletsis, V.: Exploring Values and Value Transformation: A multi-perspective approach, *Open Journal of Social Sciences*, upcoming publication. (2023). upcoming publication
3. Schwartz, S.H., Ciecuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., Ramos, A., Verkasalo, M., Lönnqvist, J.-E., Demirutku, K., Dirilen-Gumus, O., Konty, M.: Refining the theory of basic individual values, *Journal of Personality and Social Psychology*, 103(4), 663–688 (2012). <https://doi.org/10.1037/a0029393>
4. Hardy, J.: *Values in Social Policy: Nine Contradictions*. Routledge, London (2022).
5. Petasis, G., Ruskov, M., Gradou, A., Kokol, M.: The VAST Collaborative Multimodal Annotation Platform: Annotating Values. In: *Information Systems and Technologies WorldCIST*. (2023). upcoming publication
6. Feldman, M.Q., McInnis, B.J.: How We Write with Crowds. *ACM HCI*. 4, 1–31 (2021). <https://doi.org/10.1145/3432928>
7. Naul, E., Liu, M.: Why Story Matters: A Review of Narrative in Serious Games. *JECR*. 58, 687–707 (2020). <https://doi.org/10.1177/0735633119859904>
8. Tosca, S.P.: Fairy tale trans-migrations. *Intersemiose*. 4, (2013). <http://www.neliufpe.com.br/wp-content/uploads/2014/02/11.pdf>