Prototyping Animation System that Combines a Kabuki Work and its Background Story: *Kyōganoko Musume Dōjōji* and the Legend of Dōjōji

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Abstract

Kyōganoko Musume Dōjōji, a famous *kabuki* dance work, is an adaptation of the legend of Dōjōji. A series of studies on *Kyōganoko Musume Dōjōji* included many themes, such as the analysis and simulation of the animation system of the stage performance structure, the survey and analysis of the relationship between *Kyōganoko Musume Dōjōji* and the legend of Dōjōji, and the design and experimental system development reflected in the above relationships. Based on these studies, we present an animation-based mechanism that flexibly associates the narrative flow of the stage performance structure with the story of the legend of Dōjōji.

Keywords: Animation System, *Kabuki* Dance, *Kyōganoko Musume Dōjōji*, Story Generation, The Legend of Dōjōji.

1. Introduction

Kyōganoko Musume Dōjōji is a *kabuki* dance with the legend of Dōjōji as its background. The legend of Dōjōji is a classic Japanese story about a male monk who lies to a woman, who ultimately burns him to death.

We used Watanabe's analysis of *Kyōganoko Musume Dōjōji* [1] as the basis for our study of *Kyōganoko Musume Dōjōji* and the legend of Dōjōji. First, by focusing on *Kyōganoko Musume Dōjōji,* we summarized basic knowledge (history and story content) of *Kyōganoko Musume Dōjōji*. In addition, we analyzed the stage performance structure of *Kyōganoko Musume Dōjōji* and the legend of Dōjōji by looking at actual video footage [2]. Moreover, based on the analysis table of the stage performance structure of *Kyōganoko Musume Dōjōji*, we created a two-dimensional (2D) animation system [3, 4].

On the other hand, as a presentation focusing on the legend of Dōjōji, we analyzed scenes from *Konjaku Monogatari* [5]. We classified each scene of *Kyōganoko*

Musume Dōjōji and the legend of Dōjōji into positive and negative and made associations. Furthermore, based on the results of the association, a three-dimensional (3D) animation was created and added to a previously performed 2D animation system [6, 7].

The goal of this study is to create a 3D animation that represents the legend of Dōjōji and implement an animation system that links the two, as proposed in the above study [3, 4, 6, 7].

2. Background: Combining *Kyōganoko Musume Dōjōji* and the Legend of Dōjōji

2.1 A method for combining the two works

Although the stories told in *Kyōganoko Musume Dōjōji* and the legend of Dōjōji are different, several scenes can be associated with both stories. For example, in the final scene of *Kyōganoko Musume Dōjōji*, Hanako climbs a bell and transforms into a snake. This is related to the scene from the legend of Dōjōji where Kiyohime burns Anchin to death. Therefore, we first correlated the scene in *Kyōganoko Musume Dōjōji* with the scene in the legend of Dōjōji [5].

We have previously analyzed the stage performance structure of *Kyōganoko Musume Dōjōji* [2]. In this study, we focused on three parts, namely 心(*kokoro*, heart), 歌詞(*kashi*, lyrics), and 振り (*furi*, performance), and found that *Kokoro* was a positive scene associated with "daughter," while Kashi contained negative words such as "resentment." Therefore, we classified each scene from *Kyōganoko Musume Dōjōji* and the legend of Dōjōji as either negative or positive. We then re-associated the negative and positive scenes based on these categorizations, as explained in the previous paragraph [7]. Based on the evaluation results, we propose a combination of *Kyōganoko Musume Dōjōji* and the legend of Dōjōji.

2.2 Making animations for the two works

While prototyping the 2D animation, we created 2D animations for all 11 scenes of *Kyōganoko Musume Dōjōji* [4]. Fig. 1 shows an example of a 2D animation. While prototyping the 3D animation, we created animations for 6 of the 33 events in the legend of Dōjōji [5]. Fig. 2 shows an example of 3D animation.

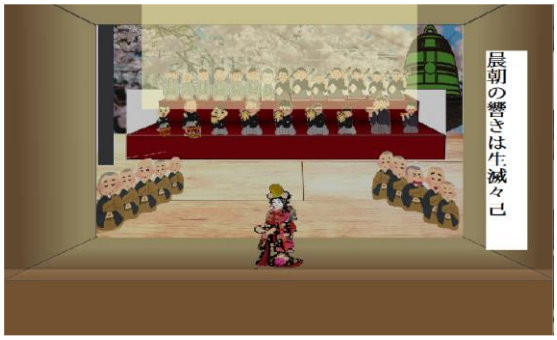

Fig. 1. An example of a 2D animation.

Fig. 2. An example of a 3D animation.

3. Implementing a Combined Animation System

In this study, we first added a 3D animation to the legend of Dōjōji. We created 3D animations of 27 events.

Next, we developed a system that combined 2D and 3D animations. We used *Kyōganoko Musume Dōjōji* as the main animation. As a result, the 2D animation of *Kyōganoko Musume Dōjōji* was replayed in chronological order, and the animation of the legend of Dōjōji was played in fragments.

The system algorithm is as follows: One time unit in a 2D animation was treated as one event. This procedure was repeated until all events were represented.

1. Play one 2D animation unit.
2. Refer to the evaluation result of the 2D animation unit.
3. Refer to the list of 3D animations corresponding to the evaluation result.
4. Play earlier 3D animations that have not yet been used in chronological order.

4. Conclusion

This paper proposed a system for combining animations of *Kyōganoko Musume Dōjōji* and the legend of Dōjōji, and examines the method for combining them. The system inserts a 3D animation of the legend of Dōjōji into a 2D animation of *Kyōganoko Musume Dōjōji*, thus providing the user with a story about the legend of Dōjōji, which is the background for *Kyōganoko Musume Dōjōji*. As a possible extension of this system, parameter-based selection of the explanatory content could be applied [8].

In the future, we plan to evaluate the system's generation results and investigate a more suitable coupling method.

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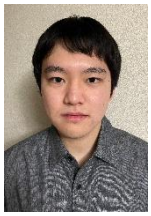

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