

LabanOHtation: Laban meets Noh

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(a)

(b)

(c)

Figure 1: LabanOHtation. (a) Editing window. (b), (c) 3D CG animation of Noh play generated from the score in (a).

1 Introduction

Labanotation [Hutchinson, 2005] is a graphical notation scheme for describing human body movement that has been widely accepted for the purpose of recording human movements in the fields of choreography and dance education, mainly in Western dance communities. Labanotation is rich in symbols, and by using the full set of symbols almost all of our body movements can be described.

We have been working on a system named LabanEditor [Choensawat et al. 2010], which is an interactive system for inputting/editing Labanotation scores and displaying 3D CG character animation associated with the scores. LabanDancer [Wilke et al. 2005] is also a system for generating animation from Labanotation. However, this is principally for Western dances, and it takes no particular account of stylized dance motions of other cultures.

Recently, we added a unique feature built in LabanEditor for handling highly stylized classical Japanese performances, ‘Noh’.

2 Labanotation for Noh Plays

When describing and representing artistic, traditional dance, it is important to have capabilities for handling its unique and characteristic body movements. The question is: how can we realize a method of describing peculiar features and nuances of artistic, traditional dance movements while suppressing the complexity in the notation score?

Noh is the most famous and characteristic Japanese classical performing art that takes the form of a musical drama. Noh body movement is peculiarly stylized and is not like ordinary human movement. From this characteristic, most people understand that it would be difficult to handle this kind of stylized traditional movement with Labanotation. Even though it is possible, a resulting notation would become very complicated.

However, in fact, Noh shares a characteristic similar to Western ballet which is composed of unique movement units, or ‘pas’. We investigated a method of composing Noh Plays using a combination of movement units of Noh, known as Kata, each of which are described with Labanotation. In this case, the Labanotation will be interpreted and represented following the above mentioned Noh movement standard.

3 LabanOHtation

We developed an interactive user interface for composing Noh plays, named “LabanOHtation”, by aligning predefined Kata in a time line. The Labanotation score and its motion of Kata were carefully described in consultation with a Noh player. After selecting Kata, a user can interactively edit a sequence of the selected Kata to an appropriate position on a timeline. Then the system automatically converts the successive Kata into the Labanotation score as shown in Figure 1(a).

In the reproduction of Noh motion, we present a dance-style interpretation module embedded in the Noh player model. The embedded module enables a Noh player model to interpret the pattern of Labanotation score and select an appropriate dance movement to the pattern by using the learned knowledge of the particular dance.

Our dance knowledge model is a two-layered associative memory where the first layer is for matching between Labanotation symbols and their associative poses, and the second is for assigning a sequence of the poses with a motion. Figure 1(b) and (c) show snapshots of animation generated from the score in (a).

The evaluation of our system was undertaken by three Noh professionals from Kanze Noh School. The subjects could easily compose a Noh play from the database of Kata. As a result of the evaluation, we are confident that the system has a possibility to be used for enlightenment and succession of Noh.

Acknowledgments

We would like to thank Mr. Toyohiko Sugiura for his generous cooperation and valuable advice on Noh plays.

References

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