Confucius Computer: Transforming the Future through Ancient Philosophy

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Keywords: Culture technology, Confucianism, illogical computing, inter-generational cultural communication

1 Introduction

Confucius Computer is a new form of illogical computing based on the Eastern paradigms of balance and harmony, which are radically different from the ancient Greek logic normally experienced in computing. It aims to facilitate inter-generational cultural communication by enabling young and old to interact and explore ancient Asian cultural heritage. The system uses new media to revive and model these historical philosophies and teachings, presenting them in new contexts, such as online social chat, music and food. This enables people to experience and explore ancient culture using the literacy of digital interactivity.

The system core is a virtual Confucius which can appear as a friend in online social groups such as Facebook. Based on our artistic interpretation of the model of Eastern mind and teaching, the system enables users to have meaningful social network communication with virtual Confucius. But not only chat, our system allows many every day activities to be formed using history with the future. Confucius Computer offers a new artistic playground for interactive music-painting creation based on our Confucius music filter and the ancient model of Cycles of Balance. Confucius Computer also allows users to explore the traditional Chinese medicine concept of Yin-Yang through recipe mixing.

Confucianism is an Eastern ethical and philosophical system that has had great impact, especially in Asian countries, for more than 2500 years, with more and more interest being generated in western society. However Confucian philosophies are extremely complex, and thus may not be easily accessible to people especially given the cultural and language barrier. Also, traditional passive media provides only a linear understanding of his profound teachings which restricts the learning process. In addition, young people are more inclined to use modern networked and social digital media. Hence our vision is to enable users to experience this rich ancient culture using computing technology in an interactive and dynamic way. Confucius computer provides a personalized experience, in which users can explore and understand Confucianism and Eastern culture.

2 System Description

The core of the system is a virtual Confucius thought engine that models Confucius knowledge from the Analects and his teaching method Yin Cai Shi Jiao (teaching student according to his/her aptitude) [Hao 2007]. Based on the question asked, Virtual Confucius identifies the Yu (subdomain of knowledge) in the Analects. The system then further queries the user to determine his Hui (aptitude) on that topic. According to Yu and Hui, Virtual Confucius

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replies to the user. Users from our modern society could significantly benefit from this interactive and personalized advice from ancient virtual Confucius, which is not possible in passive media, such as the printed text.

The core virtual model of Confucius also allows customized modules or even widgets. For example, Confucius Computer introduces algorithms to filter and transform any type of music into "positive" music that could promote personal character development [Zeng 2004]. The system filters the timbre, rhythms and scale of the music and outputs the "positive" music. The output music is in the Chinese pentatonic scale which corresponds to the cosmological theory of the five elements [Huang 1963]. At the same time, based on the ancient cycles of balance [Feng and Bodde 1952] and the five elements, the music is then visualized in the form of a dynamic Chinese painting. The system also allows bidirectional music-painting interaction that enables users to manipulate the Chinese painting to generate music output.

Another example is the Confucian cooking module. Confucius emphasized that being physically healthy is an act of filial piety. According to traditional chinese medicine, the human body is a miniature universe [Rong et al. 2007]. To maintain a healthy body is to maintain a balance of Yin-Yang. One way to achieve this is by choosing the correct food which is divided into hot, cold and neutral. Factors that influence the choice include the current body state and the external environment (e.g. season). Using deep modeling of such philosophy, the system allows users to gain insights into the complex concept of Yin-Yang in a unique context of food through recipe mixing game.

3 Conclusion

Confucius Computer is a new form of culture technology which models Eastern teachings and philosophies. It aims to mediate the transmission of culture through the use of new media that enable intergenerational users to experience and explore ancient culture using the literacy of digital interactivity.

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