

Possibility of analysis of "Big Data" of Kabuki play in 19th century using the mathematical model of hit phenomena

Yasuko KAWAHATA^{1,*}, Etsuo GENDA¹, and Akira ISHII²

¹Department of Contents and Creative Design, Graduate School of Design, Kyushu University
6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581, Japan

purplemukadesan@gmail.com

²Department of Applied Mathematics and Physics Tottori University, Koyama, Tottori 680-8554, Japan

ishii.akira.t@gmail.com



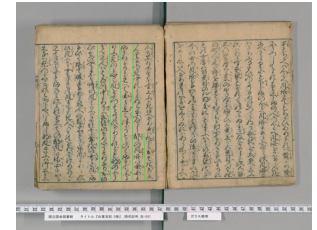
1. Mathematical model of Hit phenomenon in the Edo Period

We went to the English translation further the modern translation of the word green line of ancient documents in the figure.

Process of a modern translation of this ancient document is part of an important method of this study.

The following text is an English translation of the statement process. In the capital, all take their fashion cues from kabuki-particularly those of high rank, but even the lower orders look to these to pattern their clothing, to the point even of learning how to tie their obi belts.

"From Onnachō Hōki ("A Treasury for Women"), by Sunbokushi Kusada (aka Jōhaku Namura), 1692 from National Diet Library.



The mathematical model accepts the number of performances as input, and predicts the extent of public interest. We consider that the model should be applicable to historical as well as current trends. To test this idea, we investigated the culture and fashion in the Edo period, which flourished approximately 200 years ago. We focused on the presumed cultural center of Edo, the Kabuki. Kabuki was a popular Edo-period entertainment from the 17th to the 19th centuries. Unlike modern culture, Kabuki in the Edo period was a traditional performing art form. The number of topics in SNS calculated by the proposed mathematical model is based on modern hit phenomena. The media available to the modern public can access media did not exist in the Edo era.

2. METHODS-Hit phenomena in Edo-

In this theory, we present the equation to calculate the intention which is the intentions for people in the society for a certain entailment in Edo. In the case of this paper, the intention to each actor of Edo Kabuki. Based on the observation of the hit phenomena in Japanese market, we present a theory to explain and predict hit phenomena. First, instead of the number of people $N(t)$, we introduce here the integrated intention of individual customer in Edo, $J_i(t)$ defined as follows,

$$\frac{dJ_i(t)}{dt} = -aJ_i(t) + \sum d_{ij}J_j(t) + \sum \sum h_{ijk}d_{jk}I_j(t)I_k(t) + f_i(t) \quad (1)$$

Kabuki are the very important factor to increase the intention of each person for enjoying entertainment in Edo. Kabuki are done at 3 Hall in 1849-1855.

3. CONCLUSION

We have been able to use exactly the same mathematical model to analyze and predict hit phenomena in the past and present as well as the reputation of the artists. While problems remain with our method in the sense that it is difficult to say that our sample numbers are complete, we invite the cooperation of volunteers and readers interested in our study's attempt, in the hopes that this will lead to the discovery of a new historical understanding, and that the application of this technique elsewhere in the world might lead to the appearance of new discoveries and fruitful suggestions. We expect that in future, the potential of past media for the study of archeology will be unlocked, leading to a new point of departure for research in the field of archeological research.

