Two Elements and Two Techniques for the Narrative Generation of Kabuki
Survey, Analysis, and Synthesis for Geino Information System

Takashi Ogata*1
Jumpei Ono*1,2

*1 Iwate Prefectural University
*2 Vocational School of Digital Arts Sendai

Abstract: The author has surveyed and analyzed the elements and techniques in kabuki from the viewpoint of narrative generation, in particular in the framework of a Geino Information System (GIS) with an Integrated Narrative Generation System (INGS). The objective of this paper is to select two kabuki elements, person and story, and two kabuki techniques, naimaze and tsukushi or zukushi, to consider their combinatorial, or multiple, usage. As a result, the author presents an example that contains the automatically generated and edited descriptions of an actor, the synopses of two works, and a scenario edited using the techniques of naimaze and tsukushi. This example corresponds to a story in a certain point of time in the circular process of GIS with INGS.

1. Toward Introducing Kabuki Knowledge into GIS with INGS

Regarding this paper’s overall objective, the author proposes the kabuki study as narrative generation toward making narrative techniques in kabuki (Ogata, 2016b, 2018a, 2018b, 2019). In particular, the author surveys and analyzes kabuki elements (person and story) and the techniques (tsukushi or zukushi and naimaze) to consider their combinatorial, or multiple, usage. The latter techniques are understood as a group of universal narrative techniques that can be commonly applied to the various elements.

1.1 A Macro Framework of GIS with INGS

INGS is a single narrative generation system that corresponds to the first mechanism in the modeling of the author’s comprehensive narrative generation research. For the second mechanism, it is necessary to concentrate on the meta-level mechanism that controls the use of one or more INGS(s), namely, GIS. This is the meaning of the term, “GIS with INGS.” The kabuki survey and analysis result will be able to contribute to any part of INGS and GIS.

Figure 1 tentatively plots the knowledge elements of kabuki related to the extension of GIS with INGS. A variety of elements concerns in the generation of a kabuki play on the stage, in a theatre that has the seating and the audiences.

2. Two Elements and Two Techniques

This section introduces two types of kabuki elements, person and story, and two types of techniques, naimaze and tsukushi.

2.1 Person

In kabuki, there are various kinds of “persons,” such as “actors (or performers),” “dramatic characters” and “real persons.” These temporally and spatially form and possess multiple existences and relationships.

1. People as Actors
2. People as Persons
3. People as Characters

2.2 Story

The author considers story (scenario) in kabuki. First, the multiplicity that is realized in various levels and combinations in the narratives of kabuki, as a subject shown in Figure 2, overview, INGS plays narrative generation as a single subject. In contrast, GIS produces sequential narratives on a broad level that includes each narrative work and narratives of geinōjin (entertainment performers) as ordinary persons, actors, and characters.

Contact: T. Ogata, Sugo Takizawa-shi Iwate 152-52 Japan, Tel.019-694-2500, t-ogata@iwate-pu.ac.jp
has stated, produces a difficulty in perceiving kabuki. Inumaru (2005) demonstrated the multiplicity of kabuki’s stories. This book is a unique effort to restore a book on kabuki at Kawarasaki-za (in Edo) in Tenpō 11 (1840), from a total title, Kibakazari Chishingura (1840). This title refers to an edited collection in which several existing plays are combined. As a sequence of plays in Kibakazari Chishingura, Sayogoromo Oshidori no Tsurugibya by Namiki Sūsuke (1695-1751), this makes up the first part, and Tōkaidō Yotsuya Kaidan and Kamikakete Sango Taisetsu by Tsuruya Namboku IV follow. This chapter shows the following multiple characteristics of works.

2.3 Naimaze
The author presents an idea for implementing naimaze in INGS and GIS (Ogata, 2018d). First, the author describes the method to position naimaze in the multiple narrative structures model of kabuki. Naimaze is made to correspond to the positioning of the meta-level concept for fifteen topics of the multiple narrative structures. Naimaze is regarded as a kind of narrative technique that utilizes several elements in the topics in the meta-level and traverse. For example, although applying a naimaze technique to a story or plot is the most general usage, naimaze is also related to the element of a “character” as a “person.” In particular, though it is possible for naimaze to mix “stories” or “plots” of two or more narratives, the use of the naimaze of “stories” or “plots” is related to the naimaze of “characters” of different works. Similarly, introducing “characters” from different existing works into a new work enables the associative relationship of the new work to past works.

2.4 Tsukushi or Zukushi
To consider the introduction into narrative generation, the author focuses on techniques of tsukushi (Ogata, 2016a). The author comprehends tsukushi from the perspective of techniques through which they respectively relate, meaning that objects are inserted or sprinkled into a narrative work or a part. To define tsukushi for generation techniques in a narrative generation system, in particular INGS, it is necessary to prepare the following three elements: (1) In the objects of tsukushi, physical objects, characters, places, times, abstract objects, and all noun concepts can be the objects. Words themselves, like adjectives, can be also the objects. However, the objects are basically noun concepts. (2) In the basic methods of tsukushi, methods for connecting objects to each other are included and principally divided into methods by semantic relations and non-semantic relations. The former, for instance, includes the geographical relationships of places and the conceptual relationships of object. The latter contains the relationships by dajares (puns) and the sound in language. (3) In the positioning of tsukushi in a narrative, an object in (1) is inserted into a narrative. The types are divided into the collective insertion into a micro and narrow range and are sprayed in a broad range. The former is a case that the tsukushi of objects is collectively inserted into a narrative place, and the latter is a case where the objects cover a relatively broad range or around the whole in a narrative.

3. A Method of Structuring and Editing Narrative Texts
The author explains the technique for acquiring character property information of kabuki actors. The author formalizes through a property acquisition system developed by Ono and Ogata (2017) geinōjin information of kabuki actors that were analyzed and structuralized based on the above method for the useful form in computer systems. The properties mean a collection of the description of characteristics of each kabuki actor. One of the examples can be acquired by formally describing a Wikipedia item the following algorithm. Each unit of structured and formalized properties can be placed on a part in GIS.

(1) The system separates the input text into one or more sentences based on full stops. (2) The system further separates the separated input text by parts that match the following patterns (Patterns: “de,” (’,’,” ), “daga,” (’,’,” ), “dari,” (’(’,”’)), “tan,” (’(’,”’)), “ga,” (’(’,”’)), “to,” (’(’,”’)). (3) The system searches target sentences for a predicate matching the following patterns, and it judges that the text following the particle to be an attribute and the part before the particle to be the slot name (Patterns: “ha” (’(’,”’)), “loha” (’(’,”’)), “madeha” (’(’,”’)), “niha” (’(’,”’)), “noiteha” (’(’,”’)), “monoha” (’(’,”’)), “ga” (’(’,”’)), “mo” (’(’,”’)). (4) The system searches the attribute text for a predicate, from the end of the text to the beginning. (5) A predicate exists: Make the remaining part the processing object. (5-2) No predicate exists: If there are not untreated sentences, this process completes, else returns (3).

4. A Sequential Generation Example
The author shows a narrative generation process based on the connection of several generations using the elements of person, story, and the techniques of naimaze, and tsukushi.

4.1 Analysis and Generation of Person’s Information
The author considers how acquired, described, and structured property information of kabuki actors are connected to GIS and INGS. Figure 2 included the conceptual figure of GIS itself. The geinōjin information and life information of kabuki actors are stored in the geinō resource and life resource. At the same time, Figure 2 indicated that GIS with INGS, generates and produces from a narrative to the sequence of narratives and receives and consumes them. Moreover, this figure also showed the circulation of these processes.

In this section, the author divided kabuki actors’ text descriptions in Japanese Wikipedia into geinō resources and life resources and determined respective hierarchical structural forms. The author formalized the text data into property information that can be utilized in the author’s narrative generation system, namely GIS with INGS. The author showed Ichikawa Ebizō XI’s property information acquired from Japanese Wikipedia based on Ogata (2018a).

Next, the author presents a simple method for treating the element of “persons” in kabuki by computer program. This program is designed for use in INGS and GIS. First, the author determines the knowledge description structures of kabuki actors (geinōjin) through the survey and analysis of several actors. As an example, the author focused on Ichikawa Ebizō XI and analyzed the hierarchical structure of his Japanese Wikipedia and the items were re-categorized. In particular, these items were divided into two types of information, “geinō information” and “life information.” Further, this hierarchical structure had subcategories under the geinō information and life information. In the geinō information, the author meant the information including geinō activities themselves and the relating information. Life information contained the private lives and families of actors. For the categorization, information regarding performances and family could be directly categorized in the geinō information. On the other hand, for elements that overlap in geinō information and life information, new groups or categories were created.

4.2 Selecting and Editing Stories
The author selected two stories of kabuki works, Sukeroku and Narukami, that Ichikawa Ebizō XI has frequently played.
Figure 3 and 4 introduces these scenarios’ synopses. Figure 5 and 6 are the structured descriptions using the above program.

Furthermore, in this example, as a narrative work in the context of GIS, the author supposes to make a kind of construction of the advertisement stories. This part synthesizes the synopses of Sukeroku and Narukami into a new scenario using naimaze techniques as shown in Figure 6. The presentation on the stage by Ebizō of newly constructed kabuki work is planned in the virtual world in GIS. Figure 7 preliminarily shows the basic construction of the advertising stories.

4.3 Using Naimaze

This part synthesizes the synopses of Sukeroku and Narukami into a new scenario using naimaze techniques as shown in Figure 7. Using the figure, the author can construct the scenario applied the following naimaze and tsukushi techniques.
4.4 Using Tsukushi

Furthermore, the synthesized story of Sukeroku and Narikami is extended by the use of tsukushi technique. In this example, on the story generated by the naimaze technique, the tsukushi of the Yamanote line (a railway loop line in Tokyo). The spaces in all of events contained in the story is exchanged to the stations in the Yamanote line.

4.5 A Final Example and the Positioning in GIS with INGS

Finally, according to the story construction in Figure 7, final story structures are generated, including the explanation of Ichikawa Ebizo XI, the explanation of two kabuki works, Sukeroku and Narikami, the works’ original synopses, and synthesized and expanded kabuki synopses applying naimaze and tsukushi techniques. A generation example is shown in Figure 9.

5. Conclusion

As a result, the author presented an example that contained the techniques of naimaze and tsukushi. This example corresponded to a story in a certain point of time in the circular process of GIS with INGS. In the future directions, the author will continue to survey and analyze kabuki elements and techniques and experiment circulatate narrative generation through GIS. Moreover, although INGS was not directly used in this attempt, the author will connect kabuki’s techniques with the mechanisms in INGS.

Acknowledgements:

This paper’s research was supported by JSPS KAKENHI Grant Number18K18509 (“Narrative Generation of Kabuki”).

References


Figure 9: An example of advertising story in GIS
