

F-formation and social context: How spatial orientation of participants' bodies is organized in the vast field

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Abstract

In this paper, we illustrate how participants in conversations conducted in the vast field spatially orient their bodies to each other depending on the environments and the contexts they are in. In particular, we focus on the way in which body arrangements in *F-formations* are influenced by social contexts, such as social relationships among participants and their roles in the activity. A detailed analysis of the video data from our fieldwork at Nozawa-Onsen Dosojin festival shows that participants develop various body arrangements such as the circular, the side-by-side, and the 'horseshoe' formations, with or without outsiders. We discuss dynamic social contexts, i.e., *membership categories* relevant to the ongoing activity, play an important role in organizing these spatial-orientational arrangements.

Keywords: Spatial orientation, F-formation, body arrangement, membership category, fieldwork

1. Introduction

When people engage together in conversation with each other, they often enter into a distinctive spatial-orientational arrangement. Kendon (1990) proposed the notion of *F-formation*, in which participants actively cooperate to sustain a shared inner space, called *O-space*, where the main activity takes place. In the case of talk while standing among three or more participants, the conversational group is organized typically as an F-formation in circular arrangement.

The notion of F-formation has been extended in subsequent studies. McNeill (2006) distinguished *social* and *instrumental* F-formations; the former is the Kendon's original version, while the latter is the space in which two or more people gaze at, point to, or operate on a commonly focused object. Kendon (2010) illustrated various kinds of body arrangements in F-formations including circular, side-by-side, and 'horseshoe' arrangements, with or without commonly focused objects. F-formation, and its tightly related notions, have also been investigated in various situations such as poster presentations (Bono et al., 2004), archaeological field (Goodwin, 2003), garden lessons (Mondada, 2012), guided tours (De Stefani and Mondada, 2014), and communication at a science museum (Makino et al., 2015).

In the fields of the previous studies, the space for the formation is relatively small.¹ In the field of the present study, on the other hand, the space is vast. We have been conducting, for six years, fieldwork at Nozawa-Onsen village, located in the northern part of Nagano Prefecture in Japan, in which we video-record and analyze a huge number of people working together for the preparation of the Dosojin festival, one of the biggest fire festivals in Japan (Enomoto and Den, 2015). The festival site is extensive, about 40 meters square, and people often talk referring to a distant object that is tens of meters away. In such a

situation, conversational participants create various kinds of spatial-orientational arrangements.

In this paper, we illustrate how participants in conversations conducted in the vast field spatially orient their bodies to each other depending on the environments and the contexts they are in. In particular, we focus on the way in which body arrangements in F-formations are influenced by social contexts, such as social relationships among participants and their roles in the ongoing activity.

2. Data

2.1. Overview

The materials are video recordings of the preparatory works for the Nozawa-Onsen Dosojin festival. The Nozawa-Onsen Dosojin festival is one of the three greatest fire festivals in Japan, and is designated as a significant intangible folk cultural asset. Major preparatory works for the festival begin in October, when the trees to be used for building a huge wooden structure, or shrine pavilions, are cut down in the mountain. Two of the five sacred trees, which have been left halfway up the mountain, are brought down through the village on January 13 prior to being made into the shrine. By the afternoon of January 15, the shrine is constructed without using heavy machinery. The festival takes place in the evening of January 15 every year, where a "fire-setting battle" between the guards and the torch bearing villagers is being performed for a couple of hours and ends up with setting fire to the shrine.²

Two or more (up to 8) researchers made video-recording of various activities concerning the preparatory works for the festival with roving cameras. The data for the present study is a video clip recorded in the morning of January 12, 2017, lasting about 30 minutes. In that morning, as many as 40 people were working together at the festival site, divided into several groups according to the tasks. We focus on conversations conducted by the most central group, which occurred ubiquitously in the vast field.

¹These fields, e.g., garden, museum, etc., could be vast, but the space for a formation at a particular moment in the activity is small, involving commonly focused objects nearby participants.

²See more details of the Dosojin festival at, e.g., <https://nozawa-onsen.com/nozawa-fire-festival/>.

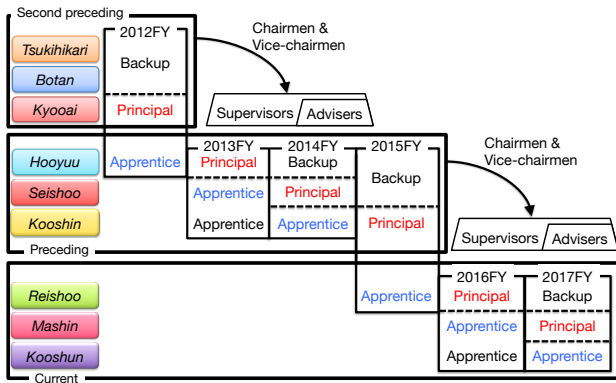


Figure 1: *San'yako* (Three-nights scheme)

2.2. Participants

The festival and its preparation are managed by a group of men, called *San'yako* (literally, 'three-nights scheme'), consisting of about 100 people at three consecutive ages (Figure 1). Each sub-group in *San'yako*, consisting of people at the same age, has a unique team name, such as *Hooyuu* and *Reishoo* (see the leftmost column in Figure 1). In *San'yako*, the 42 year-old men, at a climacteric age, serve as principal members, the younger men as apprentice members, and the elder men, if any, as backup members. In particular, the 41 year-old apprentices are working together with the principal members all the time in order to learn the knowledge and the skills that will be required when they become the principal members in the following year. The chairman of the principal members commands the whole group and has the strongest authority.

On a three-year cycle, the members of *San'yako* are replaced by people of the next generation. The three chairmen and the three vice-chairmen in the preceding *San'yako* form *Hozonkai* (literally, 'preservation association') and supervise the *San'yako* of the next generation. The eldest chairman in the supervisors becomes the shrine master, who supervises the development of the festival site and the construction of the shrine pavilions, which will be burnt in the end of the festival. In the 2016 FY's (from April 2016 to March 2017) festival, the chairman of the *Hooyuu* team took control as the shrine master for the first time (see Figure 1). He learned the knowledge and the skills required for a shrine master last year from the preceding shrine master, who is the eldest chairman in the second preceding *San'yako* (the chairman of the *Tsukihikari* team). The main participants of the study are the following four persons: i) the current shrine master (CSM; from *Hooyuu*), ii) the preceding shrine master (PSM; from *Tsukihikari*), iii) the current chairman (CC; from *Reishoo*), and iv) the next chairman (NC; from *Mashin*).

3. Analysis

On the festival day, the festival site is blanketed by snow. In fiscal 2016, however, there was shortage of snow. The *San'yako* members brought snow from various parts of the village into the festival site, and bulldozed the site. CC was commanding the whole group at the site, and NC, as an apprentice, was always acting with CC. CSM came here

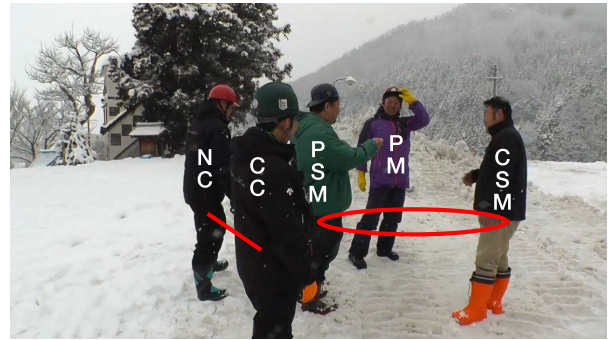


Figure 2: F-formation with three participants (PSM, CSM, and PM) in circular arrangement and two outsiders standing side by side (CC and NC)

to give instruction to CC concerning the development of the site. Because this was the first time for CSM to act as a supervisor, PSM also came here to give advice to CSM. PSM commented on the level of the snow surface and where to build the shrine pavilions. In this section, we demonstrate four distinctive spatial-orientational arrangements of participants' bodies while conducting conversations in this vast field.

3.1. Case 1: Circular arrangement with outsiders

The four participants, CSM, PSM, CC, and NC, enter into the festival site, and walk forward into the back of the site. PSM finds a member of the preceding *San'yako* (PM in Figure 2), who is there for manipulating a loading shovel, and talks to him, getting into a chat. These two men and CSM, another member of the preceding *San'yako*, get into an F-formation in circular arrangement as in Figure 2. Interestingly, the other two participants, CC and NC, stand outside the circle, in the R-space of the F-formation. Kendon (2010) argues that such outsiders usually exhibit an orientation either to entry into or to passing the F-formation. In this excerpt, however, CC and NC stay there to sustain this twofold arrangement.

A possible factor behind this spatial-orientational arrangement seems to reside in the social relationship among these people. Both of CSM and PM belonged to the preceding *San'yako*, and PSM supervised them as the preceding shrine master. CC and NC, on the other hand, do not have a direct relation with PSM or PM. In other words, there are two distinguishable sub-groups, or *membership categories* (Sacks, 1972), as to whether or not they have direct relation to the preceding *San'yako*.³ This social context is manifested as the twofold spatial-orientational arrangement that is sustained through the conversation.

3.2. Case 2: Side-by-side arrangement in two rows

PSM talks to CSM about the level of the snow surface, referring to the view in front. They are in side-by-side

³In fact, CC, a member of the *Reishoo* team, acted with the preceding *San'yako* last year as an apprentice, but this relationship seems not in effect here. This relationship may become relevant only through his direct superiors, i.e., the *Kooshin* members.



Figure 3: Side-by-side arrangement in two rows, each consisting of two participants (PSM and CSM in the front row, and CC and NC in the back row)

arrangement, watching the front view. Interestingly, again, CC and NC stay at the back of them, watching the same view. The four participants, thus, form a side-by-side arrangement in two rows, as shown in Figure 3.

A similar social factor as in Case 1 operates here, but in this case, the relevant category that distinguishes two sub-groups may not be the preceding *San'yako* but the shrine master. PSM, the preceding shrine master, is giving advice to CSM, the current shrine master. They are engaged in an activity of handing skills of a shrine master on the next generation. Although the land development of the festival site is also concerned with the task of the chairmen, in this membership categorization, CC and NC belong to a different sub-group from PSM and CSM; hence, two-row side-by-side arrangement emerges.⁴

3.3. Case 3: 'Horseshoe' arrangement with no outsider

As illustrated by Kendon (2010), people sometimes produce a kind of compromise between the side-by-side and the circular form, i.e., 'horseshoe' arrangement. In Figure 4, the four participants are in this formation. The 'horseshoe' arrangement enables participants to easily switch from a business talk to a more casual talk, and vice versa. Right before this excerpt, PSM was sitting down on the ground and showing the desired snow level to the other three participants, with his extended left arm. He stands up and starts joking to CC, now entering into the 'horseshoe' arrangement shown in Figure 4. The four participants sustain the formation during a chat.

Note that there is no outsider, or 'double standard,' in this formation. Unlike Case 2, the activity here is not necessarily considered as an activity of handling skills of a shrine master from PSM to CSM. Rather, PSM's depiction, with his arm, of the snow level is addressed to all of the other three participants. In this sense, there is no distinguishable sub-group. The equality of status among

⁴This account is further evidenced by an observation that when CSM gives CC a brief instruction about the level of the snow surface, he tentatively stands back, leaning a little closer to CC, but keeps his body oriented to the front. In doing so, CSM treats the interaction with CC as a *side involvement*, which is distinguishable from the interaction with PSM, the *main involvement* (Goffman, 1963).



Figure 4: F-formation with four participants (PSM, CSM, CC, and NC) in 'horseshoe' arrangement, in which no outsider is present

the four participants becomes further obvious when the activity shifts from a business talk to a casual talk. Unlike Case 1, where PSM's initiation of a chat with a part of the participants is driven by his encounter with PM, in Case 3, there is no event that can separate the participants into different categories. Rather, the chat is initiated by PSM's joke directly addressed to CC, thereby PSM deliberately invites CC to the same group as he belongs to.

This example clearly shows that spatial-orientational arrangement of participants' bodies is determined not merely by *static* social factors, such as hierarchical relationship based on age or official position, but by *dynamic* social contexts, i.e., the membership categories considered, by the participants, as relevant to the ongoing activity. PSM/CSM and CC/NC are regarded as belonging to different groups in Cases 1 and 2, where contrast between two categories, i.e., member vs. non-member of the previous *San'yako* in Case 1 and person fulfilling vs. not fulfilling a role as a shrine master in Case 2, is implicated by the activity they engage in. By contrast, they are all members of the same, single group in Case 3; co-worker or chat partner is only relevant category in this situation, and no alternative is relevant.

3.4. Case 4: Side-by-side arrangement with one headliner

Further evidence for insufficiency of static social factors is spatial-orientational arrangement shown in Figure 5, in which three participants, PSM, CC, and NC, are standing side-by-side at the back and one headliner, CSM, at the front. PSM is the eldest in this group of people, and is in a position of giving advice to CSM. Thus, it is somewhat odd, at least in terms of hierarchical relationship based on age or official position, that CSM alone is standing ahead of the other three, in particular PSM.

Arrangements with one participant in a distinctive position are widely observed in activities such as lectures, classroom interactions, performances, and so on (Kendon, 2010). Giving an explanation to other participants is another example (Makino et al., 2015).⁵ In the current case, however, CSM is not engaged in such an activity. He is giving CC and NC

⁵Prior to this excerpt, PSM gave an explanation of why the edges of the festival site should be raised above the level of the central part, facing to the other three participants, who were standing side-by-side in a row.



Figure 5: Side-by-side arrangement with three participants (PSM, CC, and NC) in the back row and one headliner (CSM) in front

instruction about how to complete the land development of the festival site, referring to the view in front of them.

The difference of this activity from lecture-like activities is also visible in CSM's body orientation; CSM's body is primarily facing to the same direction as the other three are facing to, which is never observed in lecture-like activities. CSM occasionally turns his head towards CC and NC when he talks to them, but his body stays facing to the front (Schegloff, 1998), suggesting that his main involvement is kept in an activity involving some object or view in front of him, not in a talk with men at the back. In this respect, it is similar to Case 2, shown in Figure 3. There is, however, a significant difference between Cases 2 and 4. In Case 2, the main activity is CSM's learning skills of a shrine master from PSM, while in Case 4, CSM is not engaged in a learning activity but in an instructing activity. Thus, his social role as the *current* shrine master, who supervises *San'yako*, not as an apprentice shrine master, is most relevant here. This membership categorization leads to the spatial-orientational arrangement with one headliner standing alone in front.

4. Discussion

We illustrated how participants in conversations conducted in the vast field spatially orient their bodies to each other. In particular, we focused on the way in which body arrangements in F-formations are influenced by dynamic social contexts, i.e., membership categories relevant to the ongoing activity. The significance of the present study can be summarized in the following three points.

First, in contrast to relatively small spaces for formations investigated in previous studies, the present study examined a vast field of about 40 meters square, and illustrated how participants in this vast field enter into various spatial-orientational arrangements. The participants often talk referring to a distant object that is tens of meters away, getting into suitable spatial-orientational arrangements such as the side-by-side and the 'horseshoe' arrangements. Importantly, the same group of people reconfigure the F-formation depending on the environments and the contexts they are in.

Second, we demonstrated the way in which body arrangements in F-formations are influenced not only by physical environments but also by social contexts. In particular,

we showed that spatial-orientational arrangement of participants' bodies is determined not merely by *static* social factors, such as hierarchical relationship based on age or official position, but by *dynamic* social contexts. Employing the CA's notion of membership categories, which refer to social categories considered, by the participants, as relevant to the ongoing activity, we described how twofold, two-row, and headlined body arrangements emerge from the relevant categories in a particular context.

Third, we suggested possible bidirectional relationship between F-formation and social context. As described above, body arrangement in an F-formation can be determined by a social context. However, it is also possible that the spatial-orientational arrangement elicits the relevant membership category, which, in turn, imposes some constraints on who can do what in the ongoing activity. For instance, in our Case 4, where CSM was standing alone in front of the other three participants including PSM, PSM refrained from giving advice to CSM but rather gave direct instruction to CC and NC, as if he helped CSM act as a supervisor. The modest behavior of PSM, which is rarely observed elsewhere in the video data being analyzed, might be a result of this distinctive spatial-orientational arrangement, which could impose some constraints on how he behaves. One of the remaining issues to be addressed would be micro-analysis of how body arrangements of participants are constituted, maintained, and transformed. De Stefani and Mondada (2014) provided a detailed analysis of how participants' bodies are reoriented in mobile situations. In particular, they demonstrated multimodal practices through which various kinds of participants (the "guide" and the "guided" of a tour) initiate a reorientation of the group. In our field as well, various kinds of participants can initiate a reconfiguration of the formation, and the way in which the reconfiguration is initiated may affect how the formation is sustained through the activity. Such dynamic aspects of spatial orientation of participants' bodies should be addressed in future research.

In summary, F-formation is tightly related to social context. Investigation into real-life interaction shed new light on our bodily behavior in everyday situations. We have just made a small step in this new direction. Further research should target broader situations and more participants with various social backgrounds.

5. Acknowledgments

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