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A comparative study between Japanese and Thai rocket festivals: Yoshida *Ryusei* festival and Ban Pa-Aw *Bang-fai* rocket festival

Chomnard Setisarn

Abstract

Rocket festivals are found in many countries in Asia, including Thailand and Japan. This study examines the similarities and differences between the Yoshida Ryusei festival in Japan and Pa-Aw Bang-fai rocket festival in Thailand. The theoretical framework of this study is drawn from Tsuneo Sogawa’s "Culture Complex of Sport" which focuses on three aspects, namely socio-cultural, technological-cultural and spiritual-cultural. Rocket festivals from the two countries are similar in terms of the socio-cultural element because the two festivals are related to folk beliefs and have religious sites as their centers. However, the Japanese festival focuses on safety whilst the Thai festival emphasizes fun and gambling. The precise differences between the two festivals are related to the technological-cultural and spiritual-cultural elements. The difference in technological-cultural element lies in the use of materials. Japanese rockets are made from natural materials whilst Thai rockets use synthetic materials such as PVC. As for the spiritual-cultural difference, the Japanese festival allows farmers to show their gratitude to the gods for fertility whilst the Thai festival aims to invoke rain.

Introduction

The rocket or *bun bang-fai* festival is widespread among provinces in the northeastern part of Thailand. This custom is also found in other countries in Asia such as Yunnan District in China, Laos, and Japan. Rockets found in these countries share some attributes in common. The bodies that contain the gunpowder are made of bamboo, wood,
or metals. The tails are made of bamboo poles, the lengths of which are appropriate to the bodies. All the countries that have rocket festivals are agricultural countries that grow rice.

According to the “East Asian evergreen forest culture” theory, Yunnan shares several cultural aspects with Japan, hence there is the tendency for rocket ceremonies held in these areas to share some attributes in common. The countries in the Mekong River Basin, such as Thailand and Laos, are linked by geography and ethnicity. There are cultural transmissions among these countries. The interesting question is why Japan and the Mekong River Basin countries, which are more than 4,500 kilometers apart, separated by an ocean, should have similar rocket festivals. Unfortunately, there is not sufficient information for a diachronic study identifying the origin, spread, and evolution of rockets in Asia. This study compares the present-day similarities and differences between rocket festivals in Thailand and Japan to understand the meaning behind the festival.

**Concepts and theories**

In Thailand, there have been several studies on rocket festivals. Suriya Samutkupt and Patthana Kitiasa (1990) concluded that there are three ways to study the rocket festivals of northeastern Thailand in the past as follows: first, as a fertility festival, emphasizing the main major objective of rain-making; second, as a social mechanism, leading to harmony in the society, and as a community leisure activity before the rice cultivation season begins; and third, as folklore, focusing on the legends, stories, and tales that provide the socio-cultural background.

In addition, Suriya and Patthana (1990) analyzed the important symbols in rocket festivals within Victor Turner’s framework in order to understand northeastern Thailand’s society and culture through this festival. They discovered that, in the sensory pole, the rocket festival is a fertility rite that “licenses” the members of the community to be relieved from rigid social rules and norms; while in the ideological pole, the festival reflects social norms under which males adopt leadership roles while females play back-up roles as the owners of land and heritage.

Sukanya Patrachai (1996) agreed that the objective of the festival
is rainmaking or fertility, but added a gender element. In most rocket ceremonies, males take the dominant roles as participants and audience. However, there are special rocket festivals involving portents where a female takes the leading role. For example, a female shaman is a medium possessed by spirits who tell those present why the seasonal rain is absent. A female shaman may also be the leader of a ritual to ask the goodness of the earth to reduce the rain when there is too much. Sukanya Pattrachai’s analysis clarifies why males dominate the rocket festival as ritual leaders and attendants, while females are prohibited from attending the festival.

In Japan, there have been fewer studies on rocket festivals. Shigeaki Suzuki (2009) concluded that the rockets found at festivals in various cities in Japan had each been invented and developed separately, and each had its own form and purpose. However, all are somehow related to the military use of rockets for communication and battle. Rockets also have cultural significance as an element of the fire festival, based on the legend of Prince Yamatotakeru who threw a stick of lit firewood up to the sky to tell his fortune, and on the fire worship festival held by shugendo shamans (also called yamabushi).

Masaharu Iijima and Yumi Yamada (2008) classified Japanese rockets into three types, namely, vertical, horizontal and twirling. The purposes of rocket festivals vary by season. A rocket festival held in the summer aims to chase away pests, heat, and plagues. One held in the autumn aims to show gratitude to the gods for fertility and increasing crops. One held at the period between the summer and the autumn aims to pray for fertility.

To date there has been no cross-cultural comparison between Thai and Japanese rocket festivals. This study compares the Yoshida Ryusei festival of Yoshida city, Saitama prefecture, Japan with the Bang-fai rocket festival of Pa-Aw village, Pa-Aw district, Ubon Ratchathani province. The analysis uses the “Culture Complex of Sport” approach by Tsuneo Sogawa (1985, 1991). Sogawa proposed that sports or competitions are shaped by three aspects of a culture, namely a socio-cultural element, technological-cultural element, and spiritual-cultural element.

The socio-cultural element includes the regulations, rules, manners, and managerial systems that control the relationships among people involved in sports or recreations. The technological-cultural element
refers to the man-made, artificial equipment used in a sport such as footballs, rackets, ski boards, swimming outfits, sports fields and stadiums, as well as instruments or appliances not originally made for sports but adapted as sports appliances such as bows, lances and canoes. The spiritual-cultural element refers to the values and beliefs underlying the sport.

The “Culture Complex of Sport” approach is used here to set the rocket festival within a cultural frame, to draw out the differences between festivals in different societies, and to compare the festivals as forms of recreation and competition in the present day.

**Yoshida Ryusei festival**

The rocket from Yoshida city is called *ryusei* because the long-tailed rocket flying upwards and causing the loud noise of explosion looks like a dragon (*ryu*) flying up to heaven. Among all the rocket festivals in Japan, that of Yoshida is the grandest and most famous. Yoshida city, which lies in a valley in the west of Saitama prefecture, has 1,907 households and 5,309 populations (as of 1 October 2012). In the past, most inhabitants worked in agriculture such as rice cultivation, wheat cultivation, vegetable cultivation, silkworm farming, cattle ranching, and forestry.

**The festival today**

Currently, the annual Yoshida Ryusei festival is held on the second Sunday of October as part of the autumn ceremony of Muku shrine. The information presented here is derived from participatory observation at the ceremony from 11 to 15 October 2013, from interviews with some people involved, and from information provided by the Ryusei museum (*Ryusei Kaikan*) in Yoshida city.

The production of a rocket begins in the middle of August and takes around one month. Due to rigid restrictions on the use of gunpowder, all the production teams must make their rocket in one designated area. The teams gather there each day. The finished gunpowder-packed rocket bodies have to be kept in this building. The rocket will be assembled one day before the day of the festival. The craftsmen attach a green bamboo tail and other accessories to the gunpowder tube. The rockets that pass a security check are then placed on the launching pad.
and covered with a sheet, waiting to be lit on the following day.

The festival is held in a space at the front of the Muku shrine near the city bypass. The launching pad is located on Ashida hill (Ashidayama) opposite the shrine. The 20 meter-tall pad is constructed during the preparation of the festival. On the festival day, people other than those involved in launching the rockets are not allowed in the area around the pad, from the road to the hill, because of the dangers from gunpowder and falling rockets.

The festival begins early in the morning of the second Sunday of October. The representatives of the rocket makers pay homage to the Muku shrine, pleading that their rockets will be successfully fired, able to fly high, and beautifully launch all the accessories as planned. Afterwards, the Shinto priest at the shrine initiates a fire lighting festival (hiuchi rite) to provide the sacred fire which will be used for lighting the rockets. This fire is transferred from the shrine to the firing pad. Before each rocket is fired, a kojo (prelude) is pronounced from the stage behind the audience stadium. This kojo starts with “tozai tozai” (a phrase to attract the audience’s attention), followed by the name of the rocket, the names of sponsors, the name of the production team, the devices used, the team’s prayer for the fertility of crops, which is the main purpose of the festival, and the specific wishes of each team such as wishes for world peace, the recovery of tsunami victims, the prosperity of businesses, and a peaceful destination for the souls of parents who have passed away.

At noon, the autumn Shinto ceremony of the Muku shrine is held. An altar is set up for placing offerings of liquor, water, mochi (ground steam-boiled sticky rice, shaped into round balls), fish, vegetables, fruits, red rice, and other products that symbolize the fertility of the crops harvested in that year, which is the main significance of the autumn ceremony.

At the Yoshida Ryusei festival there is no competition over how high the rockets fly. Rather, the emphasis is on entertainment. The unique attribute of the Yoshida Ryusei is the release of shoi-mono or showase-mono (accessories) or devices such as paper parasols, fireworks, parachutes (which slow down the descent of the rocket for the sake of beauty), colored smoke, and advertising banners.

Another unique attribute of the Yoshida Ryusei festival is competition among the kochi (villages) in Yoshida city and neighboring areas.
Most of the rocket production teams or ryuha are based on a village, only a few come from other organizations, companies, shops, or private groups. Since the number of rockets is limited to thirty, the number of teams is limited as well. There are 27 teams that are officially recognized. Most of these groups were established after World War II.

**Yoshida Ryusei Preservation Society**

*Yoshida Ryusei Hozonkai* was established in 1995, with the objectives of holding the annual Yoshida Ryusei festival, preventing all accidents that might be caused from rockets, improving the levels of safety and efficiency of rockets, preparing the areas in which the festival is held, and taking responsibility for promoting and developing tourism related to the festival. Nowadays, *Yoshida Ryusei Hozonkai* has 32 permanent committees and around 700 members, who live in and outside Yoshida city. The chairman of the society has four assistants, namely, two vice chairpersons, one representative of Muku shrine and one auditor. One of the two vice chairpersons is responsible for the administration of the association, and the other for technical matters,
management of the festival, training for rocket production groups, and providing equipment and places to produce rockets. This latter vice chair person also has the responsibility for determining whether rockets meet the safety standard (*Yoshida Ryusei Hozonkai*: http://www.ryusei.biz).

**Safety measures**

At Japanese rocket festivals, there is great awareness of the importance of safety for the audience and environment. The *Yoshida Ryusei Hozonkai* has set detailed safety regulations including fourteen rules on safety in production, four rules on rocket storage, transfer and assembly, eight rules on rocket and firework firing, and eleven rules on safety in rocket and firework firing (*Yoshidacho Ryusei Hozonkai*, 1993: 70-72)

**Links to Thailand**

Yoshida city and Yasothon province, the major site of the Thai *bang-fai* rocket festival, made an agreement on 8 May 1993 for cultural exchange as twin cities. Each year, a rocket from Yoshida is sent to join the *bang-fai* in Yasothon province, and a representative from Yasothon visits Yoshida during the Yoshida Ryusei.

According to the chairman of *Yoshida Ryusei Hozonkai*, in 2010 a rocket team from Thailand asked the *Yoshida Ryusei Hozonkai* to teach teams in Yasothon how to produce the traditional Japanese rocket. The society sent the head of the *Aika Unryu* team to Thailand in response to this request. The team provided training on safety, especially methods to attach parachutes to the rockets so they make a slow and smooth landing. However, Thai rocket producers did not adopt these techniques. The Japanese teams did not adopt the techniques used by Thai producers due to the significant differences in production techniques and concepts. Thai rockets are made to compete on the height they attain, so a great amount of gunpowder is used, which Japanese producers deem to be dangerous, and against the safety regulations.

**Pa-Aw Bang-fai rocket festival**

Pa-Aw village in Pa-Aw sub-district, Mueang district, Ubon Ratchathani province, has 1,355 households and 5,268 population (as
of 2009). It lies on a plateau with plentiful rainfall. The inhabitants work on rice cultivation, fruit orchards, rubber plantation, and there are groups engaged in brass working, silk weaving, preparing flowers for offerings, jasmine rice production, and food processing.

The villagers believe that an ancestor, Thao Saen Nam (Lord Saen Nam), established their community. They have built a Chao Puu (guardian and owner) shrine at the entrance of their village and hold the annual rocket festival to worship Chao Puu and call for rain.

**Bang-fai rocket festival today**

The festival is held over two days on the first weekend of June, organized by the Pa-Aw Sub-district Local Administrative Organization, the village committee, and Burapha Pa-Aw Nue temple. Fieldwork took place on 9-10 June 2012. On the first day, the rockets are carried in procession to the Chao Puu shrine in the morning, and in the afternoon, there is a procession with serng dances of the northeastern region. Watchers cheerfully join in the dancing, drink spirits until they get drunk, and play with bug-ban, a roughly carved wooden puppet depicting sexual intercourse. At night, there is entertainment including mor-lum, a northeastern musical style.

The rockets, numbering around 30 to 35, are fired on the second day. The size of a rocket depends on the diameter of the PVC pipe used for the body, usually 5 or 6 inches, but a few larger rockets are 8 inches. Rockets are entered into the competition by individuals, organizations, villages, or rocket production teams, each paying a 500 baht entry fee. There are two permanent firing pads, located at the center of a rice field, each used for every other rocket throughout the festival.

The village has to contact the local airport to inform them of the schedule of the firing. The sub-district head engages an outsider to act as both MC and as judge, recording the time each rocket is in flight, using binoculars. The fee of the judge is around 3,500 – 7,000 baht a day. As the competition hinges on the time in flight, an outsider is employed to avoid accusations of bias. Flight times range from 100 seconds for an average rocket, to over 300 seconds.

The abbot of Burapha Pa-Aw Nue temple reported that the villagers believe the festival must be held every year since, without it, they will not be able to live peacefully due to drought and discontent. In addition, people in other communities observe whether Pa-Aw villagers
Figure 2. Bang Pa-Aw rocket on launch pad

hold the festival, and delay the start of their rice cultivation accordingly. Besides the rocket festival, the village also has another rainmaking rite, performed slightly earlier. In this mortar-pulling festival, a rope is wrapped around a large mortar, and a male team and a female team take hold of each end of the rope and each tries to drag the mortar. If the female team wins, rain is predicted. At the Burapha Pa-Aw Nue temple, there are other rainmaking festivals including “cloud prayers” (สวดถ้ำภาคเมฆ), “snake head fish prayers” (สวดถ้ำปลาหัวงู), “toad prayers” (ทุ่งผีเสื้อ), and a seven-pay-seven-night praying around a pool.

The rockets are presented to Chao Puu to induce rains. The teams pray to Chao Puu that their rockets will fly in the right direction without causing any accident or falling on anyone’s house. People also pray to Chao Puu for personal wishes, such as a state official hoping for promotion, and promise something in return, usually a rocket. Thus many rockets are fired as offerings to Chao Puu in gratitude.

**Bang-fai rocket production and beliefs**

Phrakhru Thammasunthonwinit (also known as Luang Phor Yarm
or Luang Puu Yarm), the former abbot of Burapha Pa-Aw Nue temple (1951-1999), was known for his expertise in rocket production. He strictly followed methods he had learnt from masters in Udon Thani and Nong Bua Lamphu provinces.

More than half of the rockets are made by thirteen rocket production teams. Several of the craftsmen are disciples of Luang Puu Yarm. They make rockets not only for their local competition but also for other villages, including some in Yasothon province. Production techniques have changed over time. The lao or body was earlier made from bamboo, but later changed to metal pipe, and then to PVC pipe around ten years ago. In the past, gunpowder was pressed into the body by human force but now equipment such as jacks and compressors are used, reducing the time required from one month to two to three days. One craftsman stated in interview that he built his own hydraulic compressor. Bamboo bodies have perhaps fallen out of use because they might break using these new techniques.

**Analysis through the “Culture Complex of Sport” perspective**

Under the socio-cultural element in Tsuneo Sogawa’s “Culture Complex of Sport” approach, the key similarity between these two cases is that the organizers are modern organizations. The Yoshida Ryusei festival is staged by the Yoshida Ryusei Preservation Society, whilst Pa-Aw Bang-fai rocket festival is staged by the sub-district, village, and temple organizations. However, these modern organizations are successors to more traditional forms which still have a role. The Yoshida Ryusei was once organized by adherents of the Muku shrine, and today the chairman of the Yoshida Ryusei Preservation Society must coordinate with the adherents of the shrine. The festival is held as a part of the shrine's autumn ceremony, and the program includes worship at the shrine and the transfer of sacred fire from the shrine to the launching pad. While the festival is being held, the shrine holds a Shinto ceremony. Similarly, the Pa-Aw rocket festival remains closely linked to Burapha Pa-Aw Nue temple as the procession and entertainments are held in the temple compound.

The rocket makers of Yoshida Ryusei are people living in Yoshida city or the communities around Muku shrine. This festival brings people in the society together with the shrine as a focus. Likewise,
many rocket producers of Pa-Aw village are disciples of Luang Puu Yarm, the former abbot of the temple which is the spiritual focus of the community. In addition, it is believed that the village founder resides in the Chao Puu shrine.

The two cases differ in the aspect of competition. In the past, there was a height competition among rockets at the Yoshida Ryusei but this was discontinued on grounds of safety, and the focus is now on the entertainment value of the rockets with no obvious sense of competition. In contrast, the Ban Pa-Aw Bang-fai festival is a competition over height and length of time in flight. Possibly this competition originated because the higher and longer a rocket flies, the better chance it has of attracting the attention of Phaya Thaen in the high heaven and thus resulting in good rains. But any such belief has been forgotten, and the competition exists purely for competition, entertainment, and gambling.

With respect to the technological-cultural element, a rocket is the product of local wisdom passed on from generation to generation through craftsmen and teams. Yoshida Ryusei production teams have secret formulas for the amount and composition of gunpowder. Although safety regulations have required some modifications, the production still uses traditional materials, such as pine and bamboo for the rocket bodies, and traditional methods, such as human labor to compress the gunpowder. By contrast, production of Ban Pa-Aw rockets has replaced traditional natural materials such as bamboo with synthetic ones such as metal and PVC, and replaced human labor with compression devices, though other aspects remain traditional knowledge passed on from generation to generation. The difference in the technological cultural element between Japanese and Thai rockets might be related to the socio-cultural element. At the Thai festival, competition is such a dominant element that an independent judge is now hired to adjudicate, whereas at the Japanese event the focus is now on the beauty of the rockets and the entertainment provided by devices to release colored smoke and other tricks. It seems that the socio-cultural element has influenced the conservation or adaptation of the technological-cultural element.

The spiritual-cultural element concerns social norms or values. The Yoshida Ryusei festival is held in autumn to express gratitude to the gods for fertility after the rice harvest is complete. The Pa-Aw rocket
festival is held prior to the start of the cultivations season, and its main purpose is to call for rain. It is held alongside other rainmaking rites including cloud prayers, snakehead fish prayers, and toad prayers, which are chanting events by Buddhist monks. This festival revolves around traditional beliefs about ghosts, spirits, sex, and fertility. Villagers do not venerate Phaya Thaen as much as Chao Puu, the ancestor of their village. The rockets are fired as offerings to Chao Puu to bring good rains, ensuring the community will be peaceful.

At the community level, the Japanese and the Thai festival are similar in that they are bound up with fertility in rice culture. At the individual level, however, they are different. At the Yoshida Ruysei, owners of the rockets add their personal wishes into their preambles pronounced prior to the launch; if their rockets fly high and the planned devices work, the gods will hear their wishes and fulfill them. However at Pa-Aw village, the rockets are used as presents to Chao Puu in order to express their gratitude to him when they get what they have asked for. Therefore, in the construction of the spiritual-cultural element, the “personal” festival should be clearly distinguished from the one celebrated by the community.

**Conclusion**

This article employs Tsuneo Sogawa’s “Culture Complex of Sport” to compare rocket festivals in Japan and Thailand. Though the Yoshida Ruysei and Pa-Aw Bang-fai rocket festivals have been adapted to modern society with innovations in organization, judging, and safety regulation, both remain at base traditional fertility festivals of a rice culture society. They share many similarities as a result of this common background, but also show differences stemming from the different values of the respective countries. The recent development of the Japanese festival reflects concerns over safety and security in lives and assets, and the conservation of the environment, while the Thai festival emphasizes fun, serious competition, and gambling. As a result, the attempt to exchange rocket techniques between the two countries has not come to anything, and will not lead to any cultural merger or the establishment of a new style of rocket festival.
Notes

1 This paper is a part of the research project, “A Comparative Study of Competitive Traditions as Augury in Thai and Japanese Societies” under the Thailand Research Fund Senior Research Scholar Program Series entitled, “Creative Folklore: Dynamics and Application of Folklore in Contemporary Thai Society.

2 The alternative title of this theory is “Lucidophyllus forest culture” or “Shoyojurin forest” theory in Japanese (Shoyojurin means Lucidophyllus). This theory explaining Japanese agricultural culture was first proposed by a botanist Sasuke Nakao in 1966. Later scholars such as Komei Sasaki and Jumpei Kamiyama modified this theory until it became widely recognized as explaining the fundamental culture before rice cultivation was introduced in Japan. This culture covered the middle zone of the Himalayas, the northern mountains in Southeast Asia, the highlands in Yunnan and Guichow, the mountains in the southern part of the Yang Xi River basin, and the western area of Japan. These areas share some aspects in common, including geography conducive to evergreen forests and some cultural aspects.

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