Sustainability Study for Preservation and Utilization of Intangible Cultural Heritage through Co-evolution

Yong Wang

Department of Performance Art Management, Sangmyung University, Seoul, South Korea.

Abstract

This study examined the process of co-evolution (self-organization) using qualitative research methods for the winners of the Antong Brass Bridge Walk of Intangible Cultural Properties and the local people who participated in the performance. Local people learned to play and performed through participation in intangible cultural properties, self-realization through a sense of self-respect and self-satisfaction fulfillment, and joy in daily life, and sought publicity with the audience. This iteration process broadens the understanding and participation of local people and communities, and the intangible statement. There was a consensus on the conservation and utilization of fires. It is significant in that intergroup traditions are able to resolve various conflict situations that arise during the enjoyment process, and that the enjoyers and traditions are able to spread the achievements and experiences of participation in intangible cultural properties, paying attention to the process of growing into voluntary communities, and studying the sustainability of intangible cultural heritage. Subsequent research is expected to lead to empirical research, including the role of intermediaries in enabling intangible cultural heritage communities to grow and the number of spectators.

Keywords

Local people, co-evolution, intangible cultural heritage, intangible cultural property, sustainability, performing arts, locals, awareness

1. Introduction

Intangible cultural heritage is the essence of national culture and a valuable asset that must be passed on to the next generation as an asset to humanity (Eugene Suk, 2016). For the preservation and utilization of this intangible cultural heritage, the continued interest and participation of the local people is of paramount importance. Today, sustainable development is a paradigm that is supported around the world, and interest in it continues. Recent foreign research has focused on the transformation of institutions and the recognition of "sustainability" with spontaneous power rather than "archetypal maintenance" in the tradition and preservation of intangible cultural assets that are commons (Kim Myung-Ha, 2017). In the sustainable preservation and utilization of intangible cultural properties, many researchers suggest that the role of autonomous organizations is important (Zhang, 2012; Throsby, 2001; Bertacchini et al., 2012). It also argues that the role of autonomous organizations or local communities cannot be replaced by the outside world, and empowers them to maintain a system of resource management (Kim Myung-Ha,
2009). The study of intangible cultural properties helps to build a cultural constitution to define who we are (Zhang, 2012). However, in the area of intangible cultural property policy, there is no research on institutional and environmental factors for the sustainability of conservation. The focus tends to be on institutional improvement and support for the legal aspects of intangible cultural property in the loan sector, with basic statistics such as satisfaction surveys on policies and projects related to intangible cultural goods being the main focus (Kim Myung-Ha, 2017). When the holders and organizations of intangible cultural assets disappear, the preservation and tradition of them is very difficult. Today, on a technical level, collections and materials are digitized and put together so that they can not only be managed but also easily searched. In other words, due to technological developments, efforts are being made to record them through videos and recordings. In addition, a system of continuous tradition and enjoyment must be established, otherwise intangible technology and art will become cultural assets that remain only in the archival materials of the past. Intangible cultural properties can be said to be important intangible resources that reflect their cultural identity through continuous preservation and have a cultural impact on the family and the present. However, intangible cultural property needs sustainable preservation, but due to the nature of public goods, it is difficult to manage and preserve it. Sustainable conservation seeks to find its own identity and various consultancies and programs are being run to achieve this, and the cultural value of intangible cultural properties is expected to become very important internationally. Future research on the preservation of intangible cultural properties will require an analysis that focuses on the behavior of the holders and the actors involved.

This study examines the process of co-evolution (self-organization) for local people who participate in the treading of the Andong Brass Bridge, an intangible cultural property, and intends to conduct an in-depth interview. Analyze these iterative processes to determine the intangible.

We want to explore sustainability for the preservation and utilization of cultural heritage.

2. Theoretical background

2.1 Co-evolution

The dictionary meaning of co-evolution is that it is the work of multiple papers, which evolve by influencing each other (Junjae Meng, 2009). It can be characterized by mutual evolution and the transformation of one species creates the environment for the survival of another species, and it is this continuous process. Co-evolution can be said to be a mode of self-organization within a species. In other words, the order that the components of the subsystem create through co-evolution can be seen as the process of self-organization of the supersystem (Meng Joon-jae, 2009). The cyclical characteristic of the influence of one element in a system on another element becomes a cyclical ring and returns to oneself, after all, is self-causality (Ahn Jong-Moon, 2005). The commutative change in which there is interaction between species is called co-evolution, but I think that there is a limit to its scope that only such a counter-response is called co-evolution. This is because the structure of any species can appear within itself without pressure or physical stimulation from the outside. This is in interaction with a given change in the environment in which a species is given, and these structural changes are the same as the organism maintaining its autonomy and self-organizing through metabolism (Meng Joon-Jae, 2009).

2.2 Sustainability

In the second half of the 20th century, awareness of 'sustainability' and 'sustainable development' began to emerge. The term sustainable development was used in the 1987 World Commission on Environment and Development (WCED) Brunn Strand Report on Our Common Future. Sustainable development is defined as development that responds to the needs of the present generation of human beings without compromising the needs of future generations of humans (WCED, 1987). The emphasis on cultural arts in sustainable development was at the 1998 UNESCO Conference in Stockholm, where he linked cultural arts and sustainable development. As the discussion of culture and arts and sustainability took shape in the 2000s, culture became a reality in our society.

It recognized the need to add a fourth axis of culture because it provides a value system and contributes to creativity, diversity, well-being and innovation (Joon-ah Choi, 2021). Dessein et al. (2015) look at the three roles of culture in sustainable development, as shown in Figure 1 below. First, culture in sustainable development contributes to sustainable development as an independent domain, and secondly, culture for sustainable development serves to connect and mediate socio-economic-environmental domains and to coordinate the tensions and grinds between regions. Third, as a sustainable development, culture serves to provide a new cognitive paradigm for sus-
tainable development, and in Figure 1, the dark circle of color represents the realm of culture.

![Figure 1. The Role of Culture in Sustainable Development (Source: Dessein et al., 2015).](image)

As the discussion of culture and arts and sustainability takes shape, the concept of sustainable development will be emphasized on culture following the economic and social environment. Emphasizing the 'publicity' of culture and art, Sacha Kagan argued that, based on the concept of self-organization, art based on ecological aesthetics can act as a stimulus to human consciousness to cultivate a sustainable sense (Kagan, 2013). John Dewey draws attention to the public value that art contributes to the formation and realization of democratic communities by linking human everyday and aesthetic experiences (Hyun Joo Yoo, 2013).

The intangible cultural heritage of Andong Brass Bridge is not an ecological art, but it seeks the publicity of the performance to the local people who participate in the process of co-evolution (self-organization) as an art community. The Andong Brass Bridge is a participatory cultural art, and these activities are a community of social solidarity and communication, in which the process of co-evolution and the character of the public nature emerge.

3. Research content and methods

This study examined the process of resonance (self-organization) for local people participating in the Andong Nod Bridge treadmill, which has been designated as an intangible cultural property of Gyeongbuk Province. The Andong Brass Bridge Tread was designated as an intangible cultural property of Gyeongbuk in 1984 and is being passed on. Anton brass treading is a group play and consists of an art holder, a transfer educator, a graduate, a transferee, and a general member. The general members are generally local residents of Andong. Those who are interested in stepping on the Andong Brass Bridge while working for a certain period of time as a regular member will be selected as transfer scholars and will act as transfer scholars. The Andong Brass Bridge Tread is performed in various venues with at least 1 regular performance and more than 10 permanent performances each year. The regular performances will be attended by more than 80 local people, and the permanent performances will be attended by about 40 local people. The Andong Brass Bridge is also a community created in the process of co-evolution (self-organization).

3.1 Framework of Analysis

In order to build a sustainable intangible cultural heritage, the cultivation of living arts intermediaries is essential. France recognized the need for cultural intermediaries to realize policies that valued the enjoyment of culture and the production of participatory cultures, and the concept of cultural intermediary emerged in the 1980s. What is more important in the medium of culture is the relationship between the objects than the objects. In addition, it is acceptance rather than dissemination. Michel Callon's concept of translation was seen as an intermediary and gave it the role of a cultural mediator in the 4 stages of translation. Translation is used in the context of actor-network theory (ANT). Actor-network theory says that all non-human beings, such as graphs, schematics, standards, germs, and tweets, i.e., non-humans, are "actors" equal to humans, and that networks created by which humans are allied with each other give individual actors the ability to act as non-petty agents. The act of building a network of connections here is 'translation' (Latour, 2018).

3.2 5 Stages of Co-evolution

In step 4 of Michel Callon's translation, we can infer step 5 of the co-evolution of the intangible cultural heritage artisan fuselage as shown in Figure 2 below. Step 1 should be to be in contact with the art that you are interested in or like. Step 2 should be to be in contact with the art you are interested in or may like. Step 2 should be to
give a synchronisation of the performance that you can participate in directly, not simply learn. Step 3 should be connected to the act of performing exercises and the like, so that you can connect to feel a sense of belonging and improve your skills in the community. Step 4 should lead to artistic birth that achieves the goal of the performance. Finally, Step 5 is divided into a joint and a deviant after the achievement of the goal. The self leads to motivation again, which leads to an iterative process and creates a process of co-evolution (self-organization). However, if it is only linked from contact to motivation, there is no particular deviation in the middle process. And when you improve your sexuality and skills through performance practice in connecting, you will see a sense of self-esteem and a sense of accomplishment self-actualization in artistic production. This is the driving force behind the iterative process.

### Table 1. 4 Steps to Michel Callon’s Translation

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Raise an issue</td>
</tr>
<tr>
<td>Step 2</td>
<td>Grab attention</td>
</tr>
<tr>
<td>Step 3</td>
<td>Register now</td>
</tr>
<tr>
<td>Step 4</td>
<td>Mobilizing</td>
</tr>
</tbody>
</table>

**Translation=Mediator Process**

- Step 1: Accepting motivation as a process that participants must go through
- Step 2: Preventing churn, shaping the relationship between participating actors
- Step 3: The stage at which the union between actors takes place
- Step 4: A coalition of actor groups becomes a network

![Figure 2. Coevolution (Self-organization) Step 5.](image)

### 3.3 Data collection analysis

This study was set up for the winners of the Intangible Cultural Property Andong Brass Bridge and the local people who participated in the performance. Qualitative research methods were used for local people participating in intangible cultural properties. First, we used literature analysis and case analysis of various data. The literature analysis examined the overall theory using single editions, periodicals, papers, government-published materials and reports related to intangible cultural properties. The 1st and 2nd interviews in September 2021 were conducted in October. The subjects of the study are local people living in Andong, all of whom are women. In addition, the total age range is between 45 and 65 years old.

It was targeted at 10 people. The interview time was also about 30 minutes in the 1st and 15 minutes in the 2nd, and the narrative analysis was carried out based on the content analysis. The interviewed materials were transcribed, coded by topic, sorted, and given a codename. The value of the study participants was broken down through a categorization process of arranging the coded data to give it meaning and consolidating it into the same semantic category. The purpose of the interviewees was explained and the research ethics procedures were followed.

### Table 2. Topic of Interview with Study Participants

<table>
<thead>
<tr>
<th>Topic of Discussion</th>
<th>Interview 1</th>
<th>Interview 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intangible Cultural Properties</td>
<td>What inspired me to participate</td>
<td>Preparation for the show and what it will look like</td>
</tr>
<tr>
<td>Performances (Permanent and Regular Participation)</td>
<td>How the show affects me</td>
<td>Tourists (Andong, other areas)</td>
</tr>
<tr>
<td>Intangible Cultural Property Revitalization Project</td>
<td>Me (after the preparation process and the performance)</td>
<td>Internal Relationships, Artistic Skills</td>
</tr>
<tr>
<td>Anton brass treading</td>
<td>Activity as a Member</td>
<td></td>
</tr>
<tr>
<td>My Life and Performances</td>
<td>What is a performance in my life?</td>
<td></td>
</tr>
</tbody>
</table>

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4. Research Results

4.1 Intangible Cultural Heritage Community Co-evolution Step 5 Sustainability

In the case of the Antong Nod Bridge treadmill of intangible cultural properties, it was found that sustainability for the preservation and utilization of intangible cultural heritage has a step-by-step role for sustainability in the 5th stage of the co-evolution of the Artistic Community. In this process, the motivation of performance, the self-actualization that stems from the artistry, and the publicity of the community are important factors in sustainability.

The occasion for me to participate in the Intangible Cultural Property Andong Nod Bridge Tread in the 1st stage access was that I wanted to participate with my friends because conditions permitted me to see the performance that I saw as an event when I was in school.

The Andong Brass Bridge Tread was demonstrated at Gyeong'an Girls' High School. It's an intangible cultural property and I wanted to participate once, but I didn't have the time to work and then I got involved because I was so old (Kim ○○, 62 years old).

Just because Andong Brass Bridge Tread is a permanent performance, I wonder if I will see a regular show once a year, but since there are about 10 regular performances in the city, a friend from the neighborhood told me that we should give it a try, and it was nice to see that everyone had the opportunity to participate in the hallway (Park ○○, 59 years old).

I originally liked our play. Through the Anton Brass Bridge Activation Project, members participated because they needed it. I love knowing our culture and being able to participate in the show. Practice is tough, and when the princess walks on her back, her back hurts, but it's still fun. I want to continue to participate in the future (Lee ○○, 54 years old).

In Step 2 Motivation, the study participants who came into contact with the Andong Brass Bridge Tread were motivated to perform and to perform while practicing. Participation in the performance plays an important role in the sustainability of the community, and the goal of performing makes the members feel a sense of self-actualization, including a sense of pleasure, fulfillment and self-satisfaction. Most of the people who participate in the Antong Brass Bridge are in their 50s or older. There are also many people in their 60s and older.

There's also a lot of wrinkles on your face. Wearing a hanbok, performing, wearing a dalby on my head, and having fun myself. There is also a heart that serves others, and the idea of continuing our culture is a lot of healing.

Even though I'm older, what can I do? There are three of our grandchildren sitting there. I practice, laugh and have fun with my colleagues (Yang ○○, 63 years old).

Step 3 Connecting is a preparatory process for the performance, where you practice the performance, connect towards the goal, and live in the community. Performance at your best is based on a sense of self-satisfaction and accomplishment without making mistakes by improving your skills in steps 4 and 5. Connecting and connecting with colleagues is the starting point of a relationship between others and a sense of belonging.

When the first show is approaching, if you start practicing at 7 p.m. on Wednesday, Thursday, and Friday, it's like you're doing more than 2 hours. It's hard, you have to keep running, you have to step up, you keep on stepping and you keep learning things you don't know even if the movements are wrong. It's a group show, and if I make a mistake, the whole thing is a mistake, so I think it's especially important to know Agam, with a colleague next to me (Park ○○, 59 years old).

Step 4 Connecting with the motivation of performance in artistic production, artistic production and emotion play an important role in the sustainability of the intangible cultural heritage community. At this time, in artistic production, feelings of self-satisfaction, enjoyment of life, and a sense of accomplishment influence, and satisfactory performances lead to self-actualization through a sense of accomplishment for the dancers.

I worked hard as a member of the Andong Brass Bridge. This time, I took the test on the recommendation of a transfer scholar. I was afraid that I would become a transfer scholar because of my participation in the show, but it was an honor to be a Comrade Brass Bridge Trainee (Huang ○○, 49 years old).

Step 5 After performing in Joining or Leaving the show, there is a joiner and a leaver. Personal Affairs without a clause or special circumstances, deviants do not occur. In performance, complacency leads to a constant chorus.

My friends ask me why I do a hard and difficult show, but when I do a permanent show, tourists from other parts of the world applaud me and I feel a sense of accomplishment myself. In particular, I think it is most exciting when the intangible cultural property performance will be held on a permanent basis and many people will respond (Bae
Based on the 4th stage of Kalong’s translation (mediation) and the 5th stage of the co-evolution of the intangible cultural heritage community, the relationship between sustainability leading to voluntary participation was derived through the interview of Andong Nod Bridge Treadmill as shown in Table 3 below.

<table>
<thead>
<tr>
<th>Translation (Mediated)</th>
<th>Intangible Cultural Heritage Community Co-evolution (Self-Organization)</th>
<th>Intangible Cultural Heritage Community Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 Raise an Issue</td>
<td>Step 1 Access</td>
<td>Sustainability Prerequisites</td>
</tr>
<tr>
<td>Step 2 Attract attention</td>
<td>Step 2 Motivate</td>
<td>Sustainability Startup</td>
</tr>
<tr>
<td>Step 3 Register</td>
<td>Step 4 Artistic Production</td>
<td>An important element of sustainability</td>
</tr>
<tr>
<td></td>
<td>Step 3 Connect</td>
<td>Performance satisfaction connects with joiners</td>
</tr>
<tr>
<td></td>
<td>Step 5 Join or leave</td>
<td>Step 3 to Step 5 is the element of sustainability, and Step 4 is important</td>
</tr>
<tr>
<td>Step 4 Mobilization</td>
<td>Co-evolution of repetitive processes from 2 to 5 (self-organization)</td>
<td></td>
</tr>
</tbody>
</table>

### 4.2 Intangible Cultural Heritage Community Sustainability 3 Elements

Based on the 4th stage of the Kalong, we looked at the 5th stage of the co-evolution of the intangible cultural heritage community as an interview with the Andong Nod Bridge. Research participants who have been exposed to the Andong brass bridge tread through the repetitive co-evolution (self-organization) of the 5 stages of the Intangible Cultural Heritage Community through performance. It can be seen that through the process of co-evolution, the motivation of performance, the self-realization through the articulation of the arts, and the publicity of the performance are the 3 factors that make the Andong Brass Bridge tread continue as an intangible cultural heritage community. Participation in the performance, which takes the intangible cultural heritage of Andong Nod Bridge members a step further in the learning stage, creates a sense of self-satisfaction and accomplishment through motivation, which is the driving force behind repeated co-evolution. Motivation is the first time in sustainability that self-satisfaction through performance plays a big role.

When you participate in the performance, you will refine the details such as the round demi, the real-world machine, and the thread-solving that you will know by theory.

I think you can do that. The more I perform, the more satisfied I am (Lee ○○, 51 years old).

Artistic competence in the performance of intangible cultural heritage is what the research participants feel self-actualizing through a sense of self-satisfaction and accomplishment. When prioritizing internal relationships within a community, even small cracks in internal relationships can harm the community. However, when artistry is prioritized, the artistry of the community is also an important factor in the sustainability of the community, since individual efforts and community practice are represented by performance.

At first, it seemed easy. However, from the very beginning, the stepping of Korean dance is used. Didim Hanahana I am important, the unity of the whole membership is also important, and I think it is good to be hungry, practiced, and participated in performances, such as the appearance of snail cold and the appearance of the squat brass legs (Kim ○○, 46 years old).

Permanent performances are held about 10 times a year, there is about one regular performance, and there are also performances of the Princess Noh Kuk Selection Contest and the Folk Contest. Rather than the appearance of the intangible cultural heritage of the annual show, visitors and local residents can easily see the performances of the intangible cultural heritage, and performances with public character are the basis for more voluntary participation for the participating locals.

I think tourists like it too. It’s not easy to see performances of intangible cultural properties. I love being able to perform in Andong on a permanent basis and show our culture in a place where there are a lot of tourists. I think it’s so much fun talking (Kang ○○, 52 years old).

As shown in Table 4 below, indicators of the 2-5 steps of the Intangible Cultural Heritage Community Sustainability Element 2-5 co-evolution iteration process show that motivation, artistry, and publicity are the 3 factors that make it sustainable as an intangible cultural heritage community.
Table 4. Sustainability 3 Factors Consequential Indicators

<table>
<thead>
<tr>
<th>area</th>
<th>Indicators</th>
<th>Sub-indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 Contact</td>
<td>Expectations, Attention, Change</td>
<td>Enjoyment, self-respect, stimulation of life</td>
</tr>
<tr>
<td>Step 2 Motivation</td>
<td>Short-term goals, performances</td>
<td>Enjoyment, self-respect, self-satisfaction</td>
</tr>
<tr>
<td>Level 3 Artistry</td>
<td>Contact, performance practice</td>
<td>Pleasure, stimulation, relationships, and a sense of belonging</td>
</tr>
<tr>
<td>Level 4 Public Affairs</td>
<td>Achieving Goals, Performing</td>
<td>Sense of accomplishment, self-satisfaction, enjoyment, self-respect</td>
</tr>
<tr>
<td>Step 5 Sustainability</td>
<td>Performance, after the achievement of the goal</td>
<td>A sense of accomplishment, enjoyment, self-satisfaction, and belonging.</td>
</tr>
</tbody>
</table>

5. Discussion and conclusion

This study examined the process of co-evolution (self-organization) using qualitative research methods for the winners of the Antong Brass Bridge of Intangible Cultural Properties and the local people who participated in the performance. Local people learned to play and performed through participation in intangible cultural properties, self-realization through a sense of self-respect and self-satisfaction fulfillment, and joy in daily life, and sought publicity with the audience. This iterative process was analyzed to study the sustainability of the voluntary participation of local people for the preservation and utilization of intangible cultural heritage. Based on the 4 steps of Michel Callon’s translation, this study inferred from the 5 steps of the Andong brass treading co-evolution (self-organization) and interviewed on the basis of this to examine the sustainability of the intangible cultural property of the Andong brass treadmill.

In the case of the Andong Brass Bridge, sustainability for the preservation and utilization of intangible cultural heritage is manifested in the process of repetition of the co-evolution 5-stage system. Phase 1 contact was a prerequisite for sustainability, and the reason for participating in the Antong Nod Bridge Tread showed that past intangible cultural heritage contacts remain nostalgic and that there is an importance of learning and participation opportunities. Step 2 Motivation is the starting point of sustainability and is one of the 3 elements of sustainability. Step 3 Connecting the performance practice process that emphasized artistry was an important factor, and the value of human relationships was also valued. Level 4 Artistic Production Successful performances are the most important pillars of sustainability, including the complacency, sense of accomplishment, self-respect and enjoyment of life of the participants in the Antong Brass Bridge. In joining or leaving after meeting the Level 5 goal, we found that a sense of belonging plays a huge role in sustainability. If the voluntary participation of the local people is done well, the Andong Brass Tread, which requires a large number of people for the performance, is a bond between the communities that respects the cultural assets of the region, provides opportunities for individual participants in the region to participate, and enriches cultural life. This leads to the preservation and utilization of actual intangible cultural heritage.

This study was conducted in a limited case for stepping on the Andong Brass Bridge, an intangible cultural heritage. As an example, sustainability research for the preservation and utilization of intangible cultural heritage has broadened the understanding and participation of local people and communities, and has been able to form a consensus on the preservation and necessity of intangible cultural properties. It is significant in that intergroup traditions are able to resolve various conflict situations that arise in the process of enjoyment, and that the enjoyers and traditions are able to spread the achievements and experiences of re-participation in intangible culture, noting the process of growing into voluntary communities and studying the sustainability of intangible cultural heritage. Subsequent research is expected to lead to empirical research, including the role of intermediaries and audiences in enabling the intangible cultural oil mountain community to grow.

References


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