A Pattern Language for Composing Film Music：
Extracted from the Work of a Japanese Film Music Composer

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In this paper, we propose a pattern language for composing film music. In Japan, some Japanese composers explain that film music is created not only from the artistry of music itself but also from various internal conflicts, such as director's intention, relation to the movie, and the demand from the audience. In this sense, it can be said that composition of film music is one of the "design" defined by Christopher Alexander. Therefore, to support the process of designing a piece of film music, we made "A Pattern Language for Composing Film Music". Generally, film music composition has three phases; phase 1. designing the whole music in the movie, phase 2. concrete design of the music and each scene, and phase 3. composing each music. A Pattern Language for Composing Film Music is created based on these phases. In this paper, we introduce six patterns which mainly aim to focus on phase 1. With using these patterns, it will become easier for composers to share their own experience, learn from each other and educate their project members. Moreover, we found that not only in the domain of film, but also in various types of video productions, these patterns could also be applied to make the quality of entire work much better.

1. INTRODUCTION

Film music is a specific type of music that is played throughout a movie. In other words, it is written to accompany the action of the movie, not for its own sake. Therefore, when creating film music, composers must concern themselves with "inner conflict" – such as artistry, the relation between music and movie, or the director's intention. In fact, Takashi Watanabe, one of the famous Japanese film music composers said:

> "Without being noticed by the audience, we need to induce the audience's emotion in the way the director intended. That's what film music exists for. [1]"

Moreover, Joe Hisaishi, a Japanese composer famous for Studio Ghibli's works like "Spirited Away" (2001) and "My Neighbor Totoro" (1988), stated:

> "We must keep in mind to attract as many people as possible, but that's not all. Vacillating between creativity and demand, I always think of how I can make each piece of music as creative as possible." (Hisaishi, 2006, p.17, translated by authors)

"In short, you must compare and check the whole movie when composing music. Also, it is essential to think about what kind of music is better for broadening and deepening the picture. Just watching one scene and compose music that is only suitable for this scene is not a good idea." (Hisaishi, 2006, p.87, translated by authors)

In this context, how a piece of film music is composed can be recognized as a "design", which, according to

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[1] This statement can be shown on the internet; "The creativity and music", 2018, Keio University. (Exploring Creative Society class), (http://gc.sfc.keio.ac.jp/cgi/class/class_top.cgi?2018_38368), Iba, T. and Watanabe, T.

Christopher Alexander, is the solution to a complicated internal conflict (Alexander, 1979). Alexander also said that the "Quality Without A Name" (QWAN) cannot be brought about in a design artificially or through force. Rather, it is brought about naturally through the process of creation itself. Alexander said in his book "The Timeless Way of Building",

> "It is a process through which the order of a building or a town grows out directly from the inner nature of the people, and the animals, and plants, and matter which are in it. It is a process which allows the life inside the person, or a family, or a town, to flourish, openly, in freedom, so vividly that it gives birth, of its own accord, to the natural order which is needed to sustain this life." (Alexander, 1979, P.7)

Alexander created pattern languages to help people design using this process. He believed that we can make buildings with QWAN by going into an egoless state and using patterns.

> "But once a person can relax, and let the forces in the situation act through him as if he were a medium, then he sees that the language, with very little help, is able to do almost all the work, and that the building shapes itself." (Alexander, 1979, P.539)

Based on this idea of Alexander's, we assume that there are patterns for designing good film music. In fact, Takashi Watanabe's composition team values an egoless feeling when creating their music. By putting great care into this feeling and not putting their selves or egos into their work, they are able to let it be generated freely. Watanabe struggles to share this feeling with his apprentices[1].

Therefore, in this study, we created a pattern language for writing film music to find and verbalize the patterns that appear repeatedly in Takashi Watanabe's experience. The patterns would be a tool to share his expert knowledge and help inexperienced people compose good film music.

In this paper, we will introduce a pattern language for composing film music. We first provide an overview of the patterns, then introduce the first part of the pattern language. We will also explain how the patterns were mined. Finally, we will discuss how the patterns will be applied as well as how we will continue to work on them.

2. CREATION PROCESS OF A PATTERN LANGUAGE FOR COMPOSING FILM MUSIC

In this section, we will explain the process of making a pattern language for composing film music. A Pattern Language for Composing Film Music was created using our standard process of creating a pattern language (Fig. 3) (Iba & Isaku, 2016).
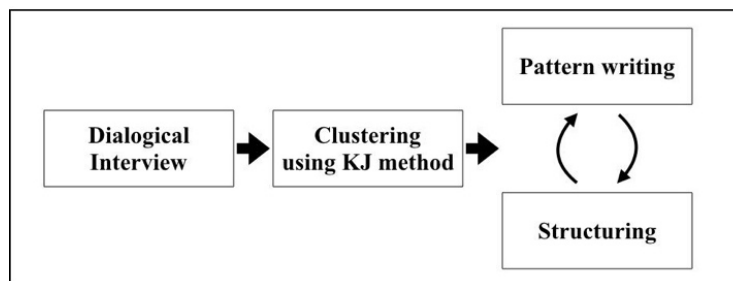

fig. 3. The diagram of creating process

A Pattern Language for Composing Film Music is created based on the Watanabe's work and his interview. First of all, we conducted dialogical interview with watching films he created. When we interviewed, we watched three movies of which he composed the music; "Fune wo amu (The Great Passage)" (2013)[2], "Yu wo wakasu hodono atsui ai (Her Love Boils Bathwater)" (2016)[3], "Teiichi no kuni (TEIICHI -Battle of Supreme High)" (2017)[4]. During the interview, we mainly heard about the points to be careful when composing and the intention of composing, and wrote them down on sticky notes (Fig. 4).

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[2] Watanabe, T. (music director), 2013, "Fune wo amu (The Great Passage)", directed by Ishii, Y., Little more Co., Ltd. and Film-makers Inc.

[3] Watanabe, T. (music director), 2016, "Yu wo wakasu hodono atsui ai (Her Love Boils Bathwater)", directed by Nakano, N., Pipeline Co., Ltd.

[4] Watanabe, T. (music director), 2017, "Teiichi no kuni (TEIICHI -Battle of Supreme High)", directed by Nagai, A., AOI Pro. Inc.

Fig. 4.   Dialogical interview

After the interview, we clustered the episodes in the interview using the KJ method (Kawakita, 1967, Iba, et al., 2017) (Fig. 5). KJ method is a method developed by Jiro Kawakita, a cultural anthropologist in Japan, which is a method for summarizing the results of discussion or fieldwork discovery in a bottom-up manner. We used this method to write out the ideas on a small piece of paper and put together similar ones. When we put it together, we put together things that have similar actions and its reasons. The reason is that even if the action is similar, there is sometimes a case where the problem caused by the context or the result (Consequence) provided by the action may be different. After conducting this process, 24 patterns in three categories were found.

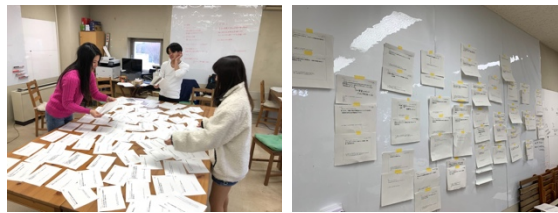Fig. 5. Clustering using KJ method process

After clustering, we started to write patterns. First, we wrote in the format of Context, Problem and Solution in order to define what we want to tell in each pattern. While writing the pattern, we also rearranged the order of the patterns to make it easy for the user to use. Then, we revised the patterns repeatedly (Fig. 6).

Fig. 6. Pattern Writing Process

3. A PATTERN LANGUAGE FOR COMPOSING FILM MUSIC

In this section, we first explain the general process of composing film music. Then, we will introduce the overview of a pattern language for composing film music, and show some patterns.

3.1 General Process of Composing Film Music

In general, there are three phases when creating film music (Fig.1). During phase 1, composers need to seize the wholeness of the movie and come up with a rough idea of the piece based on the scenario and the on-going shoot. Composers sometimes create the theme music before the shoot has finished. When the shoot is complete, composers watch the video of the film with the director and figure out where to insert music. Subsequently, they think about the relationship between scenes and music. They decide on the number of pieces of music and how long each of them should be played (phase 2). During phase 3, composers begin the actual composition. In Watanabe's team, they divide the entire work into different scenes, and each member works on the part assigned to them. A movie usually consists of 20 to 30 pieces. According to Watanabe, their team has only 40 to 50 days to create the whole music.

General Process of Composing Film Music

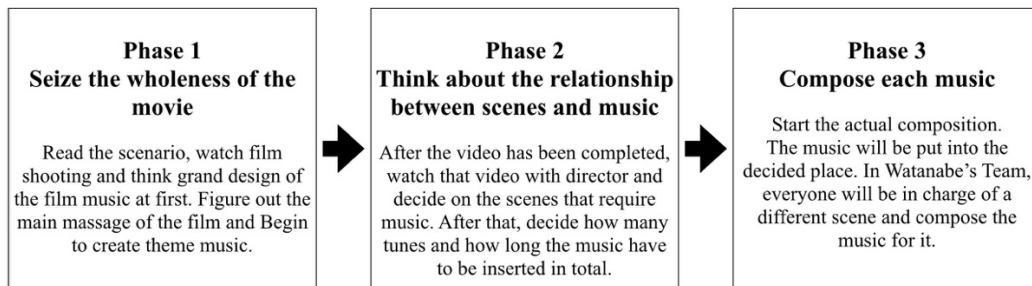| Phase 1 Seize the wholeness of the movie	Phase 2 Think about the relationship between scenes and music	Phase 3 Compose each music
Read the scenario, watch film shooting and think grand design of the film music at first. Figure out the main massage of the film and Begin to create theme music.	After the video has been completed, watch that video with director and decide on the scenes that require music. After that, decide how many tunes and how long the music have to be inserted in total.	Start the actual composition. The music will be put into the decided place. In Watanabe's Team, everyone will be in charge of a different scene and compose the music for it.

Fig. 1. Three phases of composing film music

3.2 The overview of a Pattern Language for Composing Film Music

A Pattern Language for Composing Film Music is structured in three parts based on these three phases of the composition process (Fig. 2).

In this paper, we introduce the patterns which focuses on the phase 1 patterns. It helps composers to come up with rough design of film music. The patterns that support Phase 2 and Phase 3 are currently being created.

General Process of Composing Film Music

Phase 1 Seize the wholeness of the movie	Phase 2 Think about the relationship between scenes and music	Phase 3 Compose each music
Read the scenario, watch film shooting and think grand design of the film music at first. Figure out the main massage of the film and Begin to create theme music.	After the video has been completed, watch that video with director and decide on the scenes that require music. After that, decide how many tunes and how long the music have to be inserted in total.	Start the actual composition. The music will be put into the decided place. In Watanabe's Team, everyone will be in charge of a different scene and compose the music for it.

A Pattern Language for Composing Film Music

Phase 1 Patterns	Phase 2 Patterns	Phase 3 Patterns
6 Patterns	9 Patterns	9 Patterns

1. Reflect the Message / 2. Wholeness as a Film / 3. Entrance of the World

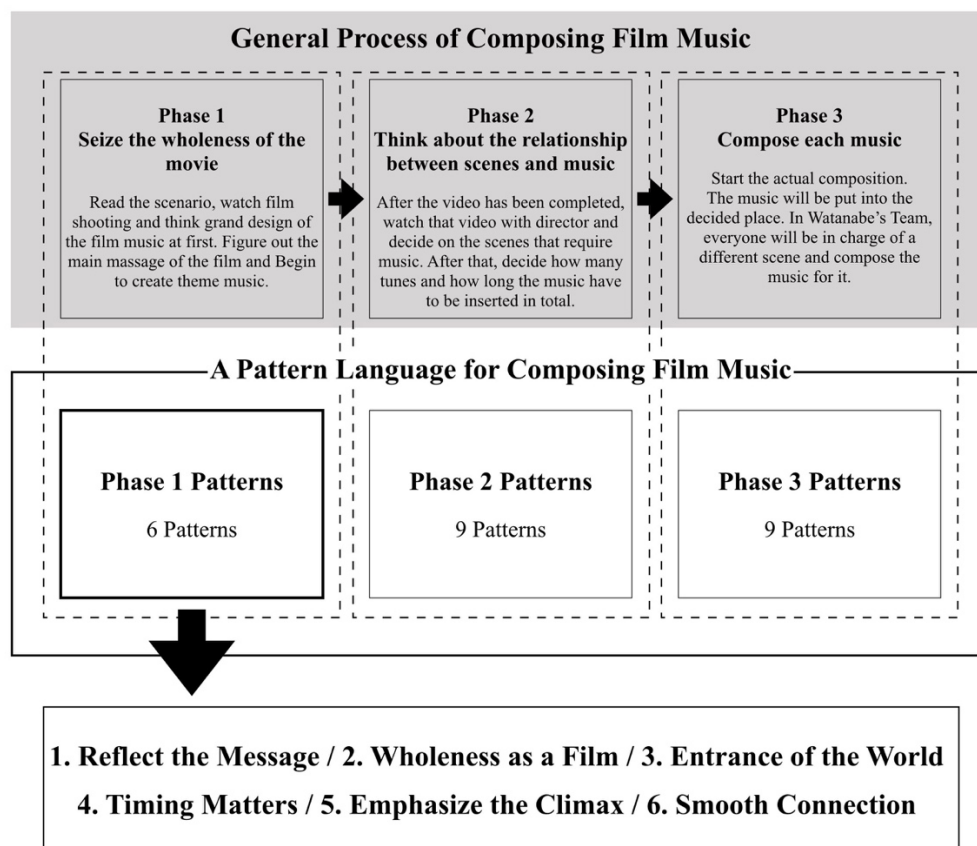**4. Timing Matters / 5. Emphasize the Climax / 6. Smooth Connection**

Fig. 2. The overview of a Pattern Language for Composing Film Music

In the patterns, we used some terminology. The following table is the glossary of them.

Table1. The glossary of terms

Term	Meaning
Film	an art work which combines video and audio effects to tell a story
Video	a series of moving images recorded
Scene	a part of a play in which the action stays in the same time and place[5]
Motif	an idea that is used many times in a piece of writing or music[5]
Line	the words that an actor speaks when performing in a film[5]

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[5] Cambridge Dictionary (https://dictionary.cambridge.org/us/), browse date: 09/09/2019.

3.3   Phase 1 Patterns

In this section, we will show six patterns in phase 1.

3.3.1   Reflect the Message

Reflect the Message

You are going to compose film music.

▼In this context

Even if you can compose nice pieces of music, the music you compose will not be suitable for a film if it does not fit the scenes and enhance the quality of the film as a whole.

・Composers desire to produce music of high quality, however, neither video nor music should stand out in a film.

・If the impression given by the music is too strong, the main message in the video is likely to become weakened.

・On the other hand, without music it is very difficult for the audience to feel the characters' complex feelings and understand the flow of the story.

▼Therefore

Reflect the message conveyed by the film, so that the audience can explore and enjoy the depth of the film. It's also crucial to leave room for different interpretations.

For example, you can try to figure out and express a character's feelings and thoughts, the director's intentions, and things which are not obviously apparent in the video. It depends on the scene what you want to express in the music. Therefore, you should keep thinking about the role the music should play in each part of the film.

▼Consequently

Music will deepen the audience's understanding of a film, helping them grasp the hidden meaning of each scene and the characters' deeper feelings. When the video and music fit together, it will give the film depth.

3.3.2   Wholeness as a Film

Wholeness as a Film

A film needs different pieces of music to accompany different scenes.

▼ In this context

If there is no sense of consistence within the music played, the wholeness of the film will also be lost.

・ Each scene has its own role, and each piece of the music needs to correspond to it.

・However, if you create a piece only focusing on how it fits to one specific part of the film, it can make the scene stand out too much and lose the balance of the film as a whole.

▼ Therefore

Compose every piece of motif of the music based on the overall theme of the film.
While watching films, try to figure out the main characters' intrinsic character, the main message and the motif of the film. Then, imagine how they could be expressed with a melody and the best matching musical instruments. Then, you can arrange this melody and insert it to the film, depending on the scene given.

▼ Consequently

Not only does the music match to the scenes but also the whole music is brought together, bringing a sense of unity to the film.

3.3.3   Entrance of the World

Entrance of the World

You are going to compose a piece for the very beginning of the film.

<center>▼ In this context</center>

The audience is likely to end up getting bored through the film if they cannot feel comfortable with the scenario and settings that the film starts out with.
・First impressions of a film significantly affect the audience's motivation to continue watching the film.
・In the very beginning phase of the film, it is not easy for the audience to understand the world presented.

<center>▼ Therefore</center>

Let the first piece of music express everything what the world in the film will be like.
The beginning music should be composed based on the image of the film as a whole, rather than just the first scene. Design the interval and motif of the music to be in tune with the image of the whole film.

<center>▼ Consequently</center>

The audience will find it easier to enter the world of the film. It will allow the audience to enjoy the film, without being bothered by a little misinterpretation.

3.3.4   Realize Emotion

Timing Matters

You are trying to express changes in human emotions with music.

▼In this context

Even if the music expresses the character's feeling pretty well, if the music is inserted elaborate, the message of the scene may be misunderstood by the audience.
・music affects how audience understood message.
・The timing of inserting music significantly influences the impression brought to the audience.
・If there are more than two characters in one scene, it would be difficult to identify whose feelings the music expresses.
・Especially when the music starts or ends, the change in music is likely to draw the audience's attention.
・But, it does not necessarily mean that the audience receives the message of the scene in the intended way.

▼Therefore

Figure out the best timing to insert the music, by modifying the starting and ending points a little by little, and make it able to express the message of the scene in the most effective way.
Look back at the film and decide when music should start to fit into the movement of audience's emotion. For example, insert music at the same time with whenever an important character appears. When you want the audience to pay attention to important lines of a character, cut out the music at the same moment with a line.

▼Consequently

It is possible to insert music at the required, so real the real intention of the film can be conveyed to audience.

3.3.5   Emphasize the Climax

Emphasize the Climax

There is a scene in which all the messages of the film are condensed.

▼In this context

If you insert music the same way at the key scenes of the film as you do with other scenes, the main message of the film may be blurred.
The importance of the scene may be missed by the audience and not be remembered as the most memorable part of the film. The impact of the film would therefore be weakened.
・A film has various scenes to put emphasis on.
・Composers want to enrich every single scene with the music.
・ The main message of the film may not be caught by the audience if there are several scenes which are visually and acoustically highlighted.

▼Therefore

On the key scenes of the film, make the music more elaborate than for the rest of the scenes.
Maximize the quality of the music as much as possible by highlighting its melody and enriching the flow of sounds, so the scene can obviously stand as a climax. Also there is another way to emphasize its climax scene by without putting any sounds.

▼Consequently

The theme of the film will be properly understood by the audience. Different feelings and thoughts came out within previous scenes will be integrated into the climax and lead the audience into a great emotional experience. A film with a strong message will become a masterpiece that the audience will remember.

Smooth Connection

A story goes on as time passes by.

▼ In this context

The rapid transitions between scenes make it hard for the audience to follow a film.
・Time passes differently in a film and in reality.
・Each scene needs to be cut down to a fragment of the actual time that passes, because the length of a film is limited.
・A film contains many changes in time and place, such as flash-back and flash-forward.

▼ Therefore

Use music to indicate situation changes. A transition between scenes, where a change in place and time occurs, needs to be smoothly done and clearly understood by the audience. What is expected from film music is not symbolize each scene, but also to bridge different scenes smoothly and effectively.

▼ Consequently

The audience will be able to understand the progressive changes in situation, without being interrupted by the narration and caption. Film music can make the transition between scenes very smoothly.

4. CONCLUSION AND FUTURE WORK

In this paper, we considered composing film music as "design process", based on Christopher Alexander's idea, and introduced some patterns from "A Pattern Language for Composing Film Music". They were extracted from Takashi Watanabe's practices, intending to help non-skilled composers to create film music on their own. These patterns describe what roles should be played by music in a film and how music and movie should be related to each other, to enhance the entire quality of the work.

This study revealed that the knowledge of artists can be put into words, and can be shared to non-experts people as well. We found that the pattern language methodology is an effective way of providing composers significant perspectives for enabling the music induce and enhance the essence of story and actions. Therefore, not only in the domain of film, but also in various types of video productions, such as YouTube and home videos, these patterns could also be applied to make the quality of entire work much better.

As mentioned already, these patterns were extracted from one experienced composer, Takashi Watanabe. Thus, our future work will be to elaborate on this pattern language further, extracting more patterns from other skilled composers.

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