

Optimizing the integration of folk imagery design and perceptual elements and images in music with the example of music “Dancing Tainan String Quartet”

Chun-Ting Hsu [†]

Wen-Hung Chao ^{*}

Department of Digital Media Design

Asia University

Taichung City

Taiwan (R.O.C.)

Abstract

The music “Dancing Tainan String Quartet” is a part of the large-scale cross-domain exhibition and design, “the Imagery of Nanying”, created by the author and commissioned by Tainan Art Festival in 2015. It describes that the ancient city of Taiwan remained long-standing after severe tests of time combining with western and popular culture, and how they have mutual influence. Therefore, it is worth discussing how the music and images interact with each other. We also look forward to further understanding the effects of these elements in different fields on human emotion through this study, so that design and cultural or creative industry can be further developed.

Subject Classification: 97M80.

Keywords: *Musigraphic images, Humanistic spirit, image, Creative industry, Computer animation, Emotional design.*

1. Introduction

Cultural and creative industry is a kind of pursuit and desire for leisure life, original culture and creative life in most advanced countries after the excessive development of industry [1]. And after the overindustrialization of land and life, a new understanding and reflection on land and self-culture have been raised [2]. “The exclusive website of cultural and creative industry” from Taiwan Council for Cultural

[†] E-mail: servicesole@gmail.com

^{*} E-mail: zeros@asia.edu.tw (Corresponding Author)

Development, [3] defined “cultural and creative industry” as “an industry that is derived from creative or cultural accumulation, and has the potential to create wealth and employment opportunities, as well as promotes the overall living environment through the formation and use of intellectual property” [4].

Whereas the cultural and creative industry consists of various levels and abundant cultural connotations, it is usually a cross-domain composition of different forms of art. In this study, the author attempts to explore the relationship between two important areas, music and images. With the example of “Dancing Tainan String Quartet”, a commission work of cross-domain exhibition and design created by the author, the study reveals the relationship between music and images. Also, further exploration of emotional elements by adding how the theme of folk songs touched the listener is added to the study [5].

2. Literature review

This study attempts to discuss the relationship between music and images, two important elements in cross-domain exhibition and design. Besides, Evaluation Grid Method and Quantitative Theory Type I are applied to analyze the orchestral music “Dancing Tainan String Quartet”, a commission created by the author for the cross-domain exhibition and design, “the Imagery of Nanying”. It describes that the ancient city of Taiwan remained long-standing after severe tests of time, combing and exchanging with western and popular culture just like dancing. Therefore, the main focus of the author’s evaluation and analysis will be the exchange between Chinese and Western music, the interaction between ancient and modern dance, and whether the music produces visual images and moving elements in the human brain?

The author will use “Evaluation Grid Method” in the design to evaluate and analyze the relationship and moving elements between the music and the image, and Quantitative Theory Type I will be used to explore the differences between these elements. The “Evaluation Grid Method” is improved by [6], a Japanese scholar who studied “Repertory Grid Method” (RGM) proposed by [7]. It can be conducive to in-depth understanding into the psychological cognition of subjects to certain object [8]. Besides, Quantitative Theory Type I is applied in multiple regression analysis when a variable is virtual, which can be used in computing of regression formula in order to predict the variability of materials and events [9].

3. Research process and method

This study attempts to discuss the relationship between music and images, two important elements in cross-domain exhibition and design. Besides, [10] said evaluation Grid Method and Quantitative Theory Type I are applied to analyze the orchestral music “Dancing Tainan String Quartet”, a commission created by the author for the cross-domain exhibition and design, “the Imagery of Nanying”. It describes that the ancient city of Taiwan remained long-standing after severe tests of time, combing and exchanging with western and popular culture just like dancing. Therefore, [11] mentioned the main focus of the author’s evaluation and analysis will be the exchange between Chinese and Western music, the interaction between ancient and modern dance, and whether the music produces visual images and moving elements in the human brain?

The author chooses to study “the Imagery of Nanying” out of “Musigraphic Images” to study with the expectation of exploring the relationship between music and images, as well as the moving elements and the degree.

3.1 Selection of research topic

The Imagery of Nanying” is the work whose part of music incorporates traditional folklore elements most from “Musigraphic Images” [12]. One of the music, “Dancing Tainan String Quartet”, added elements of traditional folk songs exactly to the preceding and ending passages. Therefore, in this study, the author hopes to be able to analyze and evaluate the music “Dancing Tainan String Quartet” by comparing the same structure before and after adding folk elements to make the listeners have different degrees of emotion, as well as whether the listeners’ sense of being moved by the two pieces of music could initiate visual images [13].

3.2 Progress of Evaluation Grid Method

This study uses “Evaluation Grid Method” to analyze. In order to analyze the relationship between music and the listener as well as between mind and moving elements objectively, a large number of objective interviews should be conducted. But how to conduct one-on-one interviews in large quantities objectively is a question that needs to be considered. So, the author selected three experts in the field of music, including a radio host of classical music and a concert master. And after

individual interviews, the upper, median and lower evaluations of the two different passages of music are listed [14]. The upper level represents the evaluation of the spiritual level, the medium level stands for the evaluation of the general feeling, and the lower level represents the evaluation or image of the superficial and associative sensation. And the evaluations of four experts is made into an "Evaluation Grid Map", after cross-over analysis by listing the elements of feelings such as passionate, bright, etc. and moving elements after listening to the two passages of music, as well as the imagery or picture that is felt or associated with them, like a running horse, the spray rolling up like a thousand piles of snow, etc. Then questionnaires are made according to these elements, involving a large number of subjects to participate in the test. The data are collected and analyzed by quantitative theory type I.

3.3 Result of Evaluation Grid Method

In order to get further understanding about the feelings of the audiences after listening to "Dancing Tainan String Quartet", and the feelings when the traditional folk imagery is designed and added in this music, the "Evaluation Grid Method" mentioned above is used to analyze [15]. The result demonstrates the similarities and differences in the impression on the mind between the two passages of music [16]. Both the two passages can make people have the feelings of light, bright, positive and happy. But as in the second passage of music, the author adds imagery melody of folk culture into it, the listeners' sensations are converted from the original feelings of flowing and stacking into declaring and solemn. Also, the degrees of happy and warm have been greatly increased [17]. The results are shown in Figure 1.

3.3.1 Analysis and comparison of moving degrees and visual images between before and after adding folk imagery into the music

Dancing Tainan String Quartet " is divided into the first passage and the second passage. The author tries to design the melody of the traditional folk ballad, the song of Spring Plow, which is rich in folk imagery, in the same structure of the two passages of music, as well as to record and analyze the words that listeners used to describe their degrees of being moved after listening [18]. The result is that the five words subjects chose to describe the first passage of music are brisk, flowing, stacking, positive, and confident, as well as various associative images [19]. While the second passage of music gives listeners the feelings of vivid, solemn, declaring,

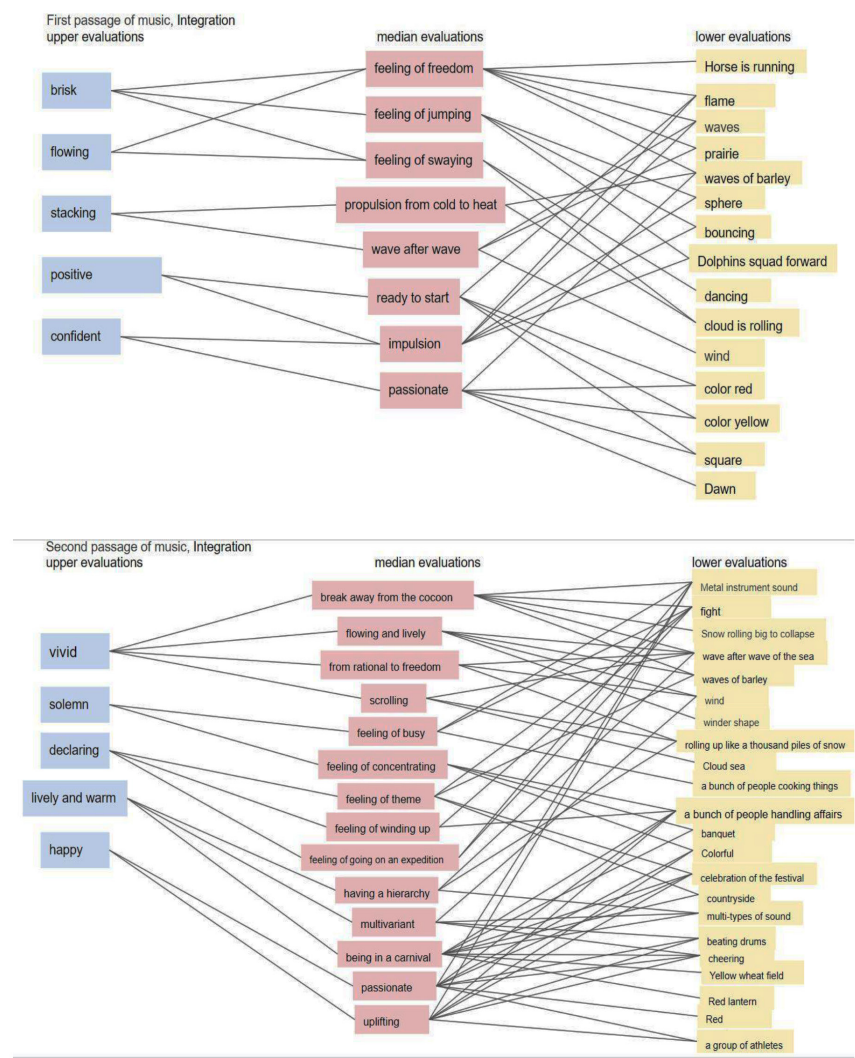


Figure 1
“Evaluation Grid Map” of comparison between two passages of music.

lively and warm, and happy, and also combined with various associative images. Questionnaires has been made according to this result, and 50 valid questionnaires are collected to be analyzed by quantitative theory type I. The relationship between associative visual images and words used to describe moving is shown in Table 1.

Table 1
Analysis and comparison of moving degrees and visual images between before and after adding folk imagery into the music.

Sensual vocabulary	No folk imagery	After joining the folk imagery	Comparing results																																																																																																								
Brisk Vs Vivid	<table><tr><th colspan="4">Brisk: First passage of music</th></tr><tr><th>Item</th><th>Category</th><th>Category points</th><th>Partial correlation coefficient</th></tr><tr><td>Feeling of freedom</td><td>1</td><td>0.0005689244314666</td><td>0.172622311724105</td></tr><tr><td></td><td>2</td><td>0.217588824516231</td><td></td></tr><tr><td></td><td>3</td><td>-0.250565684878293</td><td></td></tr><tr><td></td><td>4</td><td>-0.045542116385258</td><td></td></tr><tr><td>Feeling of jumping</td><td>1</td><td>-0.4510010147766</td><td>0.18457791180704</td></tr><tr><td></td><td>2</td><td>0.0026206336850428</td><td></td></tr><tr><td></td><td>3</td><td>0.0056613513610244</td><td></td></tr><tr><td>Feeling of soaring</td><td>1</td><td>-0.184865234656724</td><td>0.252046652762719</td></tr><tr><td></td><td>2</td><td>0.184865234656724</td><td></td></tr></table>	Brisk: First passage of music				Item	Category	Category points	Partial correlation coefficient	Feeling of freedom	1	0.0005689244314666	0.172622311724105		2	0.217588824516231			3	-0.250565684878293			4	-0.045542116385258		Feeling of jumping	1	-0.4510010147766	0.18457791180704		2	0.0026206336850428			3	0.0056613513610244		Feeling of soaring	1	-0.184865234656724	0.252046652762719		2	0.184865234656724		<table><tr><th colspan="4">Vivid: Second passage of music</th></tr><tr><th>Item</th><th>Category</th><th>Category points</th><th>Partial correlation coefficient</th></tr><tr><td>Break away from the cocoon</td><td>1</td><td>-0.2697056460007</td><td>0.44624694126575</td></tr><tr><td></td><td>2</td><td>0.184214321721402</td><td></td></tr><tr><td></td><td>3</td><td>0.0323846655964</td><td></td></tr><tr><td></td><td>4</td><td>-0.913362126190745</td><td></td></tr><tr><td>Flowing and lively</td><td>1</td><td>-0.219784465131625</td><td>0.271317789134639</td></tr><tr><td></td><td>2</td><td>0.2200759188252043</td><td></td></tr><tr><td></td><td>3</td><td>-0.136470547285358</td><td></td></tr><tr><td></td><td>4</td><td>-0.0231154673465101</td><td></td></tr><tr><td>From enslaved to freedom</td><td>1</td><td>0.0717378236746437</td><td>0.116482363342579</td></tr><tr><td></td><td>2</td><td>-0.0126460665276568</td><td></td></tr><tr><td>Scrolling</td><td>1</td><td>-0.15510735011358</td><td>0.37029274734208</td></tr><tr><td></td><td>2</td><td>0.220865031003347</td><td></td></tr><tr><td></td><td>3</td><td>0.022576584812968</td><td></td></tr></table>	Vivid: Second passage of music				Item	Category	Category points	Partial correlation coefficient	Break away from the cocoon	1	-0.2697056460007	0.44624694126575		2	0.184214321721402			3	0.0323846655964			4	-0.913362126190745		Flowing and lively	1	-0.219784465131625	0.271317789134639		2	0.2200759188252043			3	-0.136470547285358			4	-0.0231154673465101		From enslaved to freedom	1	0.0717378236746437	0.116482363342579		2	-0.0126460665276568		Scrolling	1	-0.15510735011358	0.37029274734208		2	0.220865031003347			3	0.022576584812968		The first passage of music sounded only brisk, but it felt more lively after joining the folk imagery.
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Positive vs Lively and warm	Positive: First passage of music				Lively and warm: Second passage of music				The first passage sounded only positive, but it felt warmer and warmer after joining the folk imagery.				
		Item	Category	Category points	Partial correlation coefficient		Item	Category		Category points	Partial correlation coefficient		
	Ready to start	X1	1	0.00481946351793704	0.472602441632115	Flame	Having a harmony	X1		1	0.053658151140892	Multi-tiers of mountains	
						Color red							Waves of the sea
		2	0.338173710302046		Color yellow			2		0.10952679625754		Rolling up like a mountain	
		3	-0.7156589053309		Square			3		-0.457297603315418		Rolling up like a mountain	
	Impulsion	X2	1	0.137229581687003	0.27725586466468	Wave	Being in a carnival	X3		1	-0.1125200737167	0.324867462304449	Courtyard
						Dolphins squad forward							Spring
		2	-0.31306046419003		Bouncing			2		-0.403456520177895		Baroque	
		3	-0.114729971306727					3		0.240213333669603		A bunch of people handling affairs	
										Celebration of the festival			
										Green countryside			
										Yellow wheat field			

Confident Vs Happy	Confident: First passage of music				Happy: Second passage of music				The first passage sounded confidence, but it sounds happier after joining the folk imagery.				
		Item	Category	Category points	Partial correlation coefficient		Item	Category		Category points	Partial correlation coefficient		
	Passionate	X1	1	0.037806916428568	0.17120693497652	Flame	Passionate	X1		1	0.0552696216448818	0.0845494122451616	Celebration of the festival
						Waves of barley							Courful
		2	-0.236607142857143		Color red			2		-0.877684396402274		Red envelope	
		3	0.156203125000001		Color yellow			3		-0.04020657053188		A bunch of people handling affairs	
	Impulsion	X2	1	0.157366071428571	0.30359571416955	Flame	Lighting	X2		1	0.11866660733061	0.2282157036879	A bunch of people handling affairs
						Dolphins squad forward							A group of athletes
		2	-0.3871875					2		0.08002665795319		Beating drums	
								3		-0.356894254426039		Metal instrument sound	
										Cheering			

Source: IASDR Conference.

3.3.2 The design of questionnaire for “Musigraphic Images”

In the procedure of design, after the subjects click to listen to the music, they can have access to a questionnaire which is divided into two parts. The first part includes the information of sex, age, address, the words used to describe the first passage of music, associative images and moving reasons. The second part contains the moving words of the second passage music, associating images and moving reasons. Each part gets five words of sensation from the “Evaluation Grid Map” concluded by interviewing experts. The words obtained from the first passage of music are brisk, flowing, stacking, positive, and confident. The words got from the second passage of music are vivid, declaring, solemn, happy and warm, and happy. Each word corresponds to the reason why the interviewee has this perceptual word. For example, people hear this passage of music could feel that the rhythm is brisk, because of the feeling of freedom, jumping and swaying. And in the questionnaire, the corresponding feelings of each words are divided into five scales of 1, 2, 3, 4, 5. The higher the score is, the more subjects agree with the word. Conversely, the lower the score is, the less people agree with it, as shown in Figure 2.

The first passage of the music"Ancient City String Quartet"

First passage of
ancient city symphonic dance

What do you think is the obviousness of the "Brisk" in "Feeling of freedom" *
when listening to this passage of music (please follow the five-segment
scale, obviously is 5, not obviously is 1)---" Feeling of freedom"

12345

not obviouslyobviously

Figure 2
Design and formation of words of sensation.

3.3.3 Results of questionnaire analysis

50 valid questionnaires are collected to understand the feelings of the subjects after listening to “ Dancing Tainan String Quartet ”, the reasons for being moved, associative images and the influence by adding traditional folk imagery elements into the music. The result analyzed by quantitative theory type I shows that there is a significant correlation between mental feeling, image association and folk imagery. First of all, the result of being brisk in the first passage of music is shown in Table 2.

Table 2

The result of the word “brisk”, used to describe the feeling of being moved by the first passage of music, through the method of quantitative theory type I.

*****Standardized score*****						
Brisk, First passage of music						
		Item	Category	Category points	Partial correlation coefficient	
Feeling of freedom		X1	1	0.0609589244314996	0.172822311724105	Horse is running
			2	0.217588824516231		Flame
			3	-0.258956894878293		Waves
			4	-0.045542116385258		Prairie
Feeling of jumping		X2	1	-0.4510010147766	0.184577911897934	Sphere
			2	0.0628298536859428		Bouncing
			3	0.00566305313610244		Dolphins squad forward
Feeling of swaying		X3	1	-0.184089234056724	0.252046652762719	Dancing
			2	0.184089234056724		Cloud is rolling
		Constant term		3.8		
		multiple correlation coefficient = 0.347610088247477				
		coefficient of determination (square of the multiple correlate) = 0.120832773451419				

According to Table 2, the reason why the first passage of music sounds “brisk” is that it makes people have a “feeling of swaying”, and its partial correlation coefficient is 0.25204665, which is higher than “feeling of freedom” and “feeling of jumping”. And among those feelings presented

in the questionnaire, there are feelings and images that have “swaying reasons”, because the music sounds like a flame, and the associative visual images in mind is also a flame. The point of the item of “feeling of freedom” is 0.21758882. Secondly, owing to that the music sounds like a cloud is rolling, the point in the “feeling of swaying” category is 0.18408923. Finally, the music makes people think of a feeling and a picture of bouncing, so in the “feel of jumping” category, the point is 0.06282985. Table 3 describes the result of the word “flowing”, used to describe the feeling of being moved, by the method of quantitative theory type I.

Table 3

The result of the word “flowing”, used to describe the feeling of being moved by the first passage of music, through the method of quantitative theory type I.

*****Standardized score*****						
Flowing, First passage of music						
		Item	Category	Category points	Partial correlation coefficient	
Feeling of freedom	X1	1		-0.147324802982798	0.169860643439649	Horse is running
		2		-0.0104625785008796		Waves
		3		0.0731226167273955		Prairie
		4		0.26963138717058		Waves of barley
Feeling of swaying	X2	1		0.156471485467333	0.188999661124544	Dancing
		2		-0.144435217354461		Cloud is rolling
		Constant term		3.56		
		multiple correlation coefficient = 0.24365270734204				
		coefficient of determination (square of the multiple correlate) = 5.93666417951055E-02				

Table 3 illustrates that the reason the first passage of music sounds “flowing” is that it also has a “feeling of swaying” and its partial correlation coefficient is 0.18899966 which is higher than “feeling of freedom”. And among those feelings presented in the questionnaire, there are feelings and images that have “swaying reasons”. It is because the music sounds like the wave of barley, and the associative visual images in mind is also waves of barley. The point of this item of “feeling of freedom” is 0.26963139. Secondly, owing to that the music sounds like dancing, the point in the

“feeling of swaying” category is 0.15647149. The result of the moving word “stacking”, analyzed by quantitative theory type I is listed in Table 4.

Table 4

The result of the word “stacking”, used to describe the feeling of being moved by the first passage of music, through the method of quantitative theory type I.

*****Standardized score*****						
Stacking, First passage of music						
		Item	Category	Category points	Partial correlation coefficient	
Propulsion from cold to heat		X1	1	-0.0300311138767877	0.050808276289837	Waves of barley
			2	0.048998133167391		Cloud is rolling
Wave after wave		X2	1	-0.0732236939579821	0.0824958124762836	Waves
			2	0.0557062850031118		Prairie
			3	0.0445941861498808		wind
		Constant term		3.82		
		multiple correlation coefficient = 8.59741637454588E-02				
		coefficient of determination (square of the multiple correlate) = 7.39155683173096E-03				

From what could be seen from Table 4, the first passage of music sounds “stacking” is for that it also has a feeling of “wave after wave” and its partial correlation coefficient is 0.8249581, which is higher than “propulsion from cold to heat”. And among all those feelings presented in the questionnaire, there are feelings and images that have “stacking reasons” for when people listening to the music, the associative visual image come to their mind is a prairie. The point in the feeling of “wave after wave” is 0.05570629. In addition, owing to that the music sounds like that the dark clouds are rolling, the point in the “propulsion from cold to heat” category is 0.04899813. Table 5 shows the result of the moving word “positive”, analyzed by quantitative theory type I.

Table 5

The result of the word “positive”, used to describe the feeling of being moved by the first passage of music, through the method of quantitative theory type I.

*****Standardized score*****					
Positive, First passage of music					
	Item	Category	Category points	Partial correlation coefficient	
Ready to start	X1	1	0.00491946351793704	0.472602441626215	Flame
		2	0.336737103620245		Color red
		3	-0.7158385053309		Color yellow
		4	0.273050485419093		Square
Impulsion	X2	1	0.137229581687003	0.277255856486458	Wave
		2	-0.313050485419093		Dolphins squad forward
		3	-0.114729971305727		Bouncing
		Constant term	4.04		
		multiple correlation coefficient = 0.517075868915384			
		coefficient of determination (square of the multiple correlate) = 0.2673674542146			

According to Table 5, the first passage of music makes listeners have the “feeling of positive” is because it has a feeling of “ready to start”, and its partial correlation coefficient is 0.47260244, which is higher than the feeling of “impulsion”. And there are feelings and images that have the reason of “positive” among those feelings presented in the questionnaire. It is because after listening to the music, the associative visual image come in mind is the color red. The point of “ready to start” is 0.3367371. Then it is the point of “impulsion”, 0.13722958, for it sounds like the feeling and image of the huge waves. The result of the moving word “confident”, analyzed by quantitative theory type I is listed in table 6.

Table 6

The result of the word “confident”, used to describe the feeling of being moved by the first passage of music, through the method of quantitative theory type I

*****Standardized score*****					
Confident, First passage of music					
	Item	Category	Category points	Partial correlation coefficient	
Passionate	X1	1	0.0378069196428568	0.171206084697652	Dawn
		2	-0.236607142857143		Waves of barley
		3	0.158203125000001		Color red
		4	-0.263950892857142		Color yellow
Impulsion	X2	1	0.157366071428571	0.303395171416685	Flame
		2	-0.3671875		Dolphins squad forward
	Constant term		4		
	multiple correlation coefficient = 0.36512170602697				
	coefficient of determination (square of the multiple correlat) = 0.133313860212052				

From Table 6, the first passage of music makes listeners have the “feeling of confidence” is because it has a feeling of “impulsion”, and its partial correlation coefficient is 0.30339517, which is higher than the feeling of “passionate”. And the feelings and images that have the reason of “confident” is for the music sounds like having an associative visual image of the color red. The point of “passionate” is 0.15820313. Then it is the point of “impulsion”, which is 0.15736607, just because it sounds like the feeling and image of a flame. The results of the second passage of music are shown in Table 7.

The structure of the second passage is almost the same as the first passage, which is the tango form of western music. However, the author puts the design of the song of Spring Plow, which represents the traditional folk imagery, into the second part of the music. It is a traditional folk ballad in Taiwan which is said that in ancient times people working in agriculture sang this song while ploughing the fields. The melody was full of local characteristics of Taiwan. However, few young people today have heard about this melody. Therefore, the author believes that it can be used to test the feelings of people who are not very familiar with such folk elements

and how they feel or be moved by listening to the music with folk characteristics. Table 7 shows the feeling of the second passage of music described as “vivid”, which is analyzed by the means of quantitative theory type I.

Table 7

The result of the word “vivid”, used to describe the feeling of being moved by the second passage of music by quantitative theory type I.

****Standardized score****						
Vivid, Second passage of music						
		Item	Category	Category points	Partial correlation coefficient	
Break away from the cocoon		X1	1	-0.26970954460007	0.44824604126575	Metal instrument sound
			2	0.184214321721402		Fight
			3	0.032289496856964		Snow rolling big to collapse
			4	-0.913392126190745		Wave after wave of the sea
			5	0.1550170885901		Waves of barley
Flowing and lively		X2	1	-0.219764405131625	0.271317789134839	Waves of barley
			2	0.220675618825043		Wave after wave of the sea
			3	-0.136470547285358		Wind
			4	-0.0231154912495101		Winder shape
From rational to freedom		X3	1	0.0717378036748437	0.116486285342679	Rolling up like a thousand piles of snow
			2	-0.0126490665276598		Wave after wave of the sea
			3	-0.155107935011358		Wind
Scrolling		X4	1	-0.400753848805425	0.370292747345208	Rolling up like a thousand piles of snow
			2	0.220985031063347		Cloud sea
			3	0.025576094812968		Wave after wave of the sea

Contd...

	Constant term	3.8		
	multiple correlation coefficient = 0.523783128710025			
	coefficient of determination (square of the multiple correlate) = 0.274348765921263			

Table 7 demonstrates that the second passage of music sounds “vivid”, because it has a feeling of “break away from the cocoon” and its partial correlation coefficient is 0.44824604, which is higher than the feeling of “scrolling”, “flowing and lively” and “from rational to freedom”. While among all those feelings presented in the questionnaire, the reason people have the feeling and image of “vivid” is that when people listening to the music, the associative visual image come to their mind is a sea of clouds. The point in the “feeling of scrolling” is 0.22098503. Then owing to the music sounds like wave after wave of the sea, the point in the “flowing and lively” category is 0.22067562. Finally, the music sounds like the feeling and image of “rolling up like a thousand piles of snow”, and in the category of “from rational to freedom”, the point is 0.0717378. Table 8 shows the result of the moving word “solemn” in the second passage of music, which is analyzed by quantitative theory type I.

Table 8

The result of the word “solemn”, used to describe the feeling of being moved by the second passage of music by quantitative theory type I

*****Standardized score*****						
Solemn, Second passage of music						
		Item	Category	Category points	Partial correlation coefficient	
Feeling of busy	X1		1	-0.215500745379829	0.341322999210022	A bunch of people cooking
			2	0.158640490294288		Fight
			3	-0.50548899283016		Metal instrument sound
Feeling of concentrating	X2		1	-0.635537501676124	0.326617598824603	A bunch of people

Contd...

		2	0.134735646508548		A bunch of people handling affairs
		3	0.0361877568405375		Banquet
		4	-0.317114394112687		Colorful
		Constant term	4.08		
		multiple correlation coefficient = 0.535790089175909			
		coefficient of determination (square of the multiple correlate) = 0.287071019659129			

According to Table 8, the reason why the second passage of music sounds “solemn” is that it makes people have a “feeling of busy”, and its partial correlation coefficient is 0.341323, which is higher than “feeling of concentrating”. And among those feelings presented in the questionnaire, there are feelings and images that have “solemn reasons”, because the music and the associative visual image in mind is like a fight. The point of the item of “feeling of busy” is 0.15864049. Secondly, because the music sounds like a bunch of people handling affairs. The point in the “feeling of concentrating” category is 0.13473565. Table 9 describes the result of the word “declaring”, used to describe the feeling of being moved in the second passage of music, by the method of quantitative theory type I.

Table 9

The result of the word “declaring”, used to describe the feeling of being moved by the second passage of music by quantitative theory type I

*****Standardized score*****						
Declaring, Second passage of music						
	Item	Category	Category points	Partial correlation coefficient		
Feeling of theme	X1	1	-0.3174053182917	0.584936577192596	Waves of barley	
		2	0.203142626913778		Fight	
		3	-1.40745366639807		celebration of the festival	
		4	-1.94995970991136		Countryside	
Feeling of winding up	X2	1	-0.4510010147766	0.0298669268915095	Fight	

Contd...

			2	0.0628298536859428		A bunch of people handling affairs
Feeling of going on an expedition	X3	1	-0.184089234056724	0.0432452196322869		Fight
		2	0.184089234056724			Metal instrument sound
		Constant term		3.98		
		multiple correlation coefficient = 0.652760750672359				
		coefficient of determination (square of the multiple correlat) = 0.426096597618342				

From Table 9, the second passage of music makes its listeners have the “feeling of declaring” is because it has a “feeling of theme”, and its partial correlation coefficient is 0.58493658, which is higher than the “feeling of going on an expedition” and “feeling of winding up”. There are feelings and images that have the reason of “solemn” among those feelings presented in the questionnaire. It is because after listening to the music, the associative visual image come in mind is the feeling of fighting. All three categories have the highest points. The result of the moving word “lively and warm”, analyzed by quantitative theory type I is listed in Table 10.

Table 10

The result of the word “lively and warm”, used to describe the feeling of being moved by the second passage of music by quantitative theory type I.

*****Standardized score*****						
Lively and warm, Second passage of music						
		Item	Category	Category points	Partial correlation coefficient	
Having a hierarchy		X1	1	0.0536561511420692	0.221979189256341	Multi-types of sound
			2	0.109523079835754		Wave after wave of the sea

Contd...

			3	-0.457297908315418		Rolling up like a thousand piles of snow
Multivariant	X2	1		0.0831379734600567	0.0453925775781945	Wind
		2		-0.0151922015429807		Beating drums
		3		-0.0235496347348676		Cheering
Being in a carnival	X3	1		-0.11215200737187	0.324867492304449	Countryside
		2		-0.463435620170805		Banquet
		3		0.240213333986903		A bunch of people handling affairs
		4		-0.0249642804214941		Celebration of the festival
		5		-1.47266105329582		Green countryside
		6		0.0473971913898031		Yellow wheat field
		Constant term		3.28		
		multiple correlation coefficient = 0.376199504126968				
		coefficient of determination (square of the multiple correlat) = 0.141526066905377				

Table 10 describes that the second passage of music sounds “lively and warm”, because it has a feeling of “being in a carnival” and its partial correlation coefficient is 0.32486749, which is higher than the feeling of “having a hierarchy”, and “multivariant”. And among all those feelings presented in the questionnaire, the reason people have the feeling and image of “lively and warm” is that when people listening to the music, the associative visual image come to their mind is a bunch of people handling affairs. The point in the “being in a carnival” is 0.24021333. Secondly, because the music sounds like wave after wave of the sea, the point in the “having a hierarchy” category is 0.10952308. Lastly, the music sounds like the feeling and image of wind, and in the category of “multivariant”, the point is 0.08313797. Table 11 shows the result of the moving word “happy” in the second passage of music, which is analyzed by quantitative theory type I.

Table 11

The result of the word “happy”, used to describe the feeling of being moved by the second passage of music by quantitative theory type I

****Standardized score****						
Happy, Second passage of music						
		Item	Category	Category points	Partial correlation coefficient	
Passionate		X1	1	0.0552666216448818	0.0846494122451616	Celebration of the festival
			2	-0.0876642964022274		Colorful
			3	-0.040020657053188		Red envelope
Uplifting		X2	1	0.118666560733061	0.22821570838979	A bunch of people handling affairs
			2	0.08002065705319		A group of athletes
			3	-0.358094254426039		Beating drums
			4	-0.062824189938956		Metal instrument sound
			5	0.127624571299938		Cheering
		Constant term		3.96		
		multiple correlation coefficient = 0.253421074297324				
		coefficient of determination (square of the multiple correlat) = 6.42222408980101E-02				

From what could be seen from Table 11, the second passage of music sounds “happy” is for that it also has a feeling of “uplifting” and its partial correlation coefficient is 0.22821571, which is higher than “passionate”. And among all those feelings presented in the questionnaire, there are feelings and images like “happy”, because when people listening to the music, the associative visual image come to their mind is cheering. The point in the feeling of “wave after wave” is 0.12762457. Then because the music sounds like that a celebration of the festival, the point in the “passionate” category is 0.05526662.

From the data above, it can be seen that most of the feelings after listening to the two passages of music are light, warm, uplifting and confident. However, as some folk melodies are added into the second

passage of music, people feel more thematic, declaring, like a fight or a celebration in the festival. In addition, the music sounds more solemn and break away from the cocoon besides uplifting.

4. Conclusion

Music and image are two vital fields in the cross-domain design of cultural and creative industry. The design of music is the bridge connecting various kinds of art, and it has the effect of creating atmosphere, setting scene, driving fluctuation in mood and moving people. But what is the inseparable relationship between music and the image? In this study, the author discusses whether images would be produced by the state of sensation of listeners after listening to the music, whether these images are the cause of these feelings and sensations, or whether they impact each other. Through this research, the author hopes to understand the relationship between music and image when creating and designing, and offer more references to more researchers who are engaged in cross-domain design or exhibition.

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