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Preference of Chinese Undergraduate Music Majors for Chinese Xi-Qu and Western Opera

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by

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DEDICATION

I would like to dedicate this dissertation to my Grandmother, Su-zhi Wang (王素芝), for her endless love to me. I also dedicate this dissertation to my Mother, Wen-hua Shang (商文华) and my sister Lei Chen (陈蕾), for their support during the writing process.

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ABSTRACT

The purposes of this study were to explore the preference of the Chinese undergraduate music majors ($N = 27$) for Chinese Xi-Qu and Western opera audiovisual examples, the reasons for preference, influence of familiarity on preference, and the relationship between preference ratings and the emotions as detected by FaceReader. The mixed research method, convergent parallel design, was used to explore this topic in depth. As Xi-Qu and opera integrate multiple art forms, eight audiovisual examples (Xi-Qu, $n = 4$, opera, $n = 4$) were selected as the stimuli to show the characteristics of the two genres. The participants watched the audiovisual examples individually and responded to a questionnaire meanwhile their facial expressions were recorded for FaceReader analysis. The semi-structured interviews were administered to collect qualitative data pertaining to participants' general opinions about the musical examples, familiarity, reasons for preference, and the emotions encompassing when watching the musical examples. Descriptive and inferential statistics were used to analyze the data obtained from the questionnaire. The facial expressions video files were analyzed by FaceReader. The qualitative data obtained from interviews were coded to find themes.

The quantitative findings suggested that the operatic examples received higher mean preference ratings than the Xi-Qu examples. The top three preferred examples were all operatic pieces while the three least preferred examples were Xi-Qu pieces. Results of one-way ANOVA showed that the difference among the preference mean ratings showed the statistical significance, $F(7, 208) = 14.15$, $p < .01$. The operatic examples also received higher familiarity ratings than Xi-Qu examples. The difference among the familiarity mean ratings also showed the statistical

significance, F (7, 208) = 2.99, $p < .01$. The preference and familiarity ratings showed a modest but statistically significant relationship ($r = .45$, $p < .01$). A statistically significant relationship was found between the preference ratings and tempo ($r =. 23$, $p < . 01$). Furthermore, singing was always among the top three most liked elements in the operatic examples, but singing was always among the top three most disliked elements in the four Xi-Qu examples despite that singing was also among the top three liked elements in two Xi-Qu examples.

Numerical FaceReader results showed a strong negative relationship between "angry" and preference (*rho* = -.976, $p < .01$). The moderate relationship was found between "sums of negative emotions" and preference (*rho* = .741, $p < .05$). No statistically significant relationship was found between valence and preference and between arousal and preference. The results of temporal FaceReader analysis showed that the participants' emotional response to the audiovisual examples changed with the unfolding visual and audio information.

The qualitative analysis revealed a model of Xi-Qu and opera preference. The model contained the factors influencing preference for Xi-Qu and opera, including personal factors, cultural and environmental factors, visual factors, musical factors, and musical response. Formal voice training was the most reliable indicator of preference for operatic examples. Familiarity gained through guided listening instead of random repetition was positively related preference for Xi-Qu examples. The unexpected findings were the influence of religion and static perspective on preference for music. Implications and recommendations were discussed, and the suggestions for future research were included.

CHAPTER ONE:

INTRODUCTION

Xi-Qu (戏曲) is an important musical genre in China. The Chinese word 戏 (Xi) means drama or theater and 曲 (Qu) refers to music or melody. Xi-Qu integrates Chinese literature, drama, singing, instrumental music, stylized gestures, dance, visual art and acrobatics that can convey abundant aural, visual, and historical information to audience. Xi-Qu was formed during the twelfth century (G. Zhang & Guo, 2014) and had developed approximately 300 different styles by the 1980s (100 styles probably still exist now) (Hai, 2014). The majority of Xi-Qu styles are based on the regional dialects and music that are only popular in the same or similar dialectic areas of China. Some of the Xi-Qu styles integrated music of different regional styles, such as (京剧)，and Chuan-Ju (川剧). However, some other Xi-Qu styles, such as Kun-Qu (昆曲), did not use the regional dialect but the ancient official spoken Chinese (官话) or the mixture of the ancient official spoken Chinese and regional dialects. Some Xi-Qu styles are still popular and actively performed, especially in the rural areas, although the traditional music market has been shrinking due to the impact of popular and Western European music.

Xi-Qu is similar to Western opera and some Xi-Qu styles are usually known as “opera” or “theatre” in Western countries, such as Jing-Ju opera or Jing theatre. However, Xi-Qu differs from Western opera in many ways. For example, accompanying singing is dominant in Western opera to portray the emotions and actions of the characters, but Xi-Qu has more means to reach this goal. Xi-Qu musicians spend as much time studying singing as studying speech, dance,

acrobatics, and various performance skills to express emotions, communicate the plots, indicate the context, and portray the characters' personalities. Some Xi-Qu roles have special performing skills that need extensive training, such as walking on knees (膝行), squat-walking (蹲功, 蹲行, 矮子功), kicking a spear (踢枪), swinging hair (甩发), long-sleeve (or water-sleeve) skills (水袖功), and long-beard skills (髯口功), just to name a few. Some skills are only performed in certain regional styles, such as change-face (变脸) found mainly in Chuan-Ju (川剧).

Secondly, opera is composer-centered while Xi-Qu is not. Regarding the opera, composers compose the operatic works. Once the composer finished the work, it will be comparatively fixed that the singers and orchestra will play based on the music scores. However, Xi-Qu musicians usually compose melodies themselves or collaborated with the accompanying instrumentalists based on Xi-Qu composition rules (except for Kun-Qu style). Studying the composing and improvising skills is a long-term task that starts at the early stage of training among Xi-Qu musicians. Many well-known Xi-Qu musicians have created the singing and acting styles differing from others therefore have formed various schools within a Xi-Qu style (except for Kun-Qu). The melody or lyrics of the Xi-Qu works might change that even the same musician probably sang differently in different periods of his/her career. However, the old tradition is gradually abandoned as more and more composers who have been trained in Western European music traditions have been involved in Xi-Qu composition and use Western European composing techniques for Xi-Qu works.

Despite the fact that Xi-Qu overall was well recognized as a national heritage, it was marginalized in the general music education system. Only a few examples of Xi-Qu were selected as appreciation materials before the twenty-first century. It may take volumes to explain the reasons for marginalization of Xi-Qu and other traditional musical genres in Chinese school

curriculum, but the simple reason is that China did not have a music education system like the one in Western countries. Thus, when music was included in the school curriculum at the beginning of the twentieth century, music educators mainly used the songs and music that were composed by using Western composition techniques instead of the traditional Chinese music. The social context then was that China had just experienced the military defeat in the Sino-Japanese War and ceded Taiwan and other places to Japan in 1895. Attempting to catch up with other countries, Chinese intellectuals urged the government to carry out radical reform and to build up a new educational system based upon Japanese and European models. Music as a school subject entered the school curriculum and the music education followed the German and Japanese model (D. Ma, 2001). In that context, traditional music, including Xi-Qu, was considered something belonging to the "old" China and therefore did not fit in the "modern" system. Chinese Xi-Qu and many other traditional musical genres were taught privately or in another educational system that mainly cultivated professional Xi-Qu performers. Only those who intended to become professional Xi-Qu musicians would have access to professional Xi-Qu training and such a situation remains. The exclusion of Xi-Qu in the general music education system was a deliberate choice made by generations of Chinese policy-makers and music educators therefore became an institutionalized bias that was hard to eliminate.

Circumstances have changed that the Ministry of Education revised the experimental *Curriculum Standard for Music* (CSM), requiring that students from first through ninth grades must study Jing-Ju (京剧 known as Peking Opera, Bejing Opera, or Jing Theatre), one of the Xi-Qu styles (Ministry of Education, 2008). Fifteen Jing-Ju pieces were selected as teaching content and twelve of them were prevalent modern pieces during the Cultural Revolution (1966-1976). The inclusion of Jing-Ju in the music curriculum provoked a national debate that

many people questioned the feasibility of the policy. The major concerns were the appropriateness of the teaching content, lack of teacher training, and scarcity of research support (Liu, 2011). The prestigious Jing-Ju musician Mei Bao-Jiu (梅葆玖) and the other forty-two members of the national Committee of the Chinese People's Political Consultative Conference (CCPPCC) proposed that the teaching content of Jing-Ju in schools should include more traditional Jing-Ju works instead of the products of the Cultural Revolution. They also suggested that the introduction of Jing-Ju in the schools should be supported by research (Mei, 2008). In response to the proposal and suggestions, the Ministry of Education initiated a national project to investigate the needs of music teachers and students when teaching and learning Jing-Ju. Survey results revealed that the music teachers needed frequent and extensive training to teach Jing-Ju and that the students wanted to study a wider range of Xi-Qu styles in addition to Jing-Ju (Center of Social and Scientific Research, 2008). These findings imply that in-service as well as pre-service music teachers should be well trained to teach a wide range of Xi-Qu styles to meet the students' needs.

Statement of Problems

In the early 2010s, a number of Chinese researchers investigated the current Xi-Qu and Jing-Ju teaching practice in middle and elementary schools (Cui, 2011; Deng, 2013; Z. Z. Huang, 2008; Y. F. Li, 2014; Liu, 2011; R. Ma, 2013; Z. L. Wang, 2013; Y. Wang, 2014; Y. Wu, 2011; Xia, 2011; L. Xie, 2013; Xu, 2011; H. N. Zhang, 2013; Li 莉 Zhao, 2012), but little has been known regarding music teacher training in Xi-Qu at the college level. Some music educators suggested that the pre-service music teacher programs should include Jing-Ju and Xi-Qu courses based upon the revised CSM (J. Li, 2008; Xia, 2011; Li 丽 Zhao, 2009). Thus, the development

of teaching materials for Xi-Qu at college level has become necessary. The studies on music majors' preference for Xi-Qu may offer information for selecting Xi-Qu teaching content, but so far no researcher has explored Chinese students' preference for Xi-Qu. Furthermore, as Chinese music education system was highly Westernized, a comparison of participants' preference for the similar art forms in China and in the Western countries would help better understand the factors influencing Chinese music major's music preference. Opera is the ideal music genre for such a comparison. However, so far studies relating to preference of Chinese music majors for opera are limited. Therefore, more studies should be conducted to address the needs for the relevant information.

Secondly, researchers have long been interested in the relationship between facial expressions and music preference or emotional responses to music, but the existing measures have limitations that need further exploration to useful tools. Literature shows that the existing methods are either subjective interpretations of facial expressions (Geisler, 1990; Gilliland & Moore, 1924) or using surface facial electromyography (EMG) (R. Ellis & Simons, 2005; Khalfa, Roy, Rainville, Dalla Bella, & Peretz, 2008; Lundqvist, Carlsson, Hilmersson, & Juslin, 2009; Roy, Mailhot, Gosselin, Paquette, & Peretz, 2009; Thayer & Faith, 2001; Witvliet & Vrana, 2007). An early attempt to examine music preference by examining participants' facial expressions was the Gilliland and Moore study (1924). Researchers took some pictures of a group of participants' facial expressions when they were listening to the Western European music and jazz pieces. Then the researchers interpreted the meanings of the participants' facial expressions subjectively. The problem was that subjective interpretations could be biased if the researchers did not carefully deal with the factors that would influence their judgments, such as researchers' cultural and racial background, prevailing attitudes toward a musical style in society,

and music preferences of the researchers.

Surface facial electromyography (EMG) is a well-validated measure and could offer more objective data of emotional responses than subjective interpretation, but the limitation is that it is intrusive-looking as participants need to use facial electrodes. The awareness of electrodes on the face might influence participants' responses. Other limitations are that researchers may have to use EMG in a laboratory setting and need extensive training to use it correctly (D'Arcey, Johnson, & Ennis, 2012). Researchers should further explore the measures that are more objective, less intrusive, and adaptive to various settings. The advent of FaceReader provides the possibility of detecting participants' emotions through analyzing facial expressions and facial muscle tensions in real time without placing anything on participants' faces. By avoiding the appearance of using invasive scientific means, this would increase the validity of data.

FaceReader is a software program that can identify participants' emotions through facial expressions. It takes three steps to detect emotions: face finding, face modeling, and face classification. FaceReader can identify not only emotions including happy, sad, angry, scared, disgusted, surprised, neutral, and contempt (in experimental state), but also the level of valence (pleasant- unpleasant) and arousal (activate-inactivate) (Noldus, 2014). The Action Units Module of FaceReader can detect and classify the movement and intensity of facial muscles similar to the functions of facial EMG. In addition, it can identify facial states (left/right eye open/closed, and mouth open/closed), global gaze direction and head orientation. It can estimate the study participant's gender, age, ethnicity, and even the amount of facial hair. FaceReader can generate various results for further interpretation and analysis, including a line chart, summary pie, numerical logs, and a reporting client (an artificial face that dynamically visualizes participants'

facial expressions). Furthermore, the 6.0 version of FaceReader has the Project Analysis Module that can analyze a group of test participants and provide an average emotional valence and arousal. Generally, negative emotional valence (negative value) indicates negative attitudes toward the stimulus while positive valence (positive value) suggesting positive attitudes (Noldus, 2014). However, the relationship between negative/positive emotions and preference has not been explored in music studies. The potentials of FaceReader in music preference and affect studies are worthy of investigation.

Another concern is that researchers usually use audio stimuli in music preference studies although audiovisual materials are commonly used in classroom. In the music classroom settings, it might be advantageous to present audiovisual Xi-Qu and Western opera as many elements may help students understand the context of the piece, including costumes, facial make-up, scenery, acting, body movements and interactions between actors and actresses. After all, the singing portion of Xi-Qu and opera is embedded in the story line, so presenting the visual information might help students appreciate the music in context. Furthermore, research findings revealed that both audio and visual materials could enrich American students' musical experience with Asian music (Fung, 1998) and that audiovisual presentation of music could enhance listeners' musical experience (Finnäs, 2001; Platz & Kopiez, 2012). More music preference studies should be conducted using audiovisual examples, especially those styles or genres integrating multiple art forms and unfamiliar to the students.

Theoretical/Conceptual Framework

The framework for this study of Chinese participants' preference is rooted in the fields of music psychology and music education. The theories and research findings in music psychology

are more related to the understanding of the mechanism of music preference and research design. The theories of music preference include sources of variation in music preference (LeBlanc, 1980; LeBlanc, Jin, Stamou, & McGrary, 1999) and reciprocal response model (North and Hargreaves, 2008). These theories and music preference and affect literature lay a foundation for further exploration in this field. Studies pertaining to preference for world musics, especially Chinese music (Fung, 1994, 1996, 1997, 1998, 2004, 2007) highlighted the influence of cultural background on music preference. Thus, there is a need to study music preference of people of various cultural backgrounds. Furthermore, the literature of preference for audiovisual music stimuli (Finnäs, 2001; Fung, 1998, Geringer, Cassidy & Byo, 1996; 1997; Platz & Kopiez, 2012,), continuous affective responses to music (Geringer, Madsen, & Gregory, 2004; Gregory, 1989, 1994; Madsen & Fredrickson, 1993; Madsen, & Coggiola, 2001; Schubert, 1999, 2004, 2013), and the relationships between facial expressions and music preference and emotions (R. Ellis & Simons, 2005; Gilliland, & Moore, 1924; Lundqvist, Carlsson, Hilmersson, & Juslin, 2009; Khalfa, Roy, Rainville, Dalla Bella, & Peretz, 2008; Roy, Mailhot, Gosselin, Paquette, & Peretz, 2009; Thayer & Faith, 2001; Witvliet & Vrana, 2007) provided rationales for methodology of this study on Chinese participants' music preference.

The theory of music education in China is related to the significance of this study. As aforementioned, the Chinese music education system was highly Westernized before the twenty-first century. Chinese traditional music, including Xi-Qu, had long been marginalized in the general music education system. Since the 1990s, a group of music educators, researchers, and musicians have advocated the inclusion of traditional music into the classroom and proposed a music education system based upon Chinese music traditions, namely, "Chinese culture as the mother tongue music education" (以中华文化为母语的音乐教育) (Du, 2008; J. X. Xie, 1999; S.

G. Zhao, 2000; Y. H. Wang, 1996). They suggested that Chinese traditional music should be the first and primary music language that school students should learn, just as a Chinese should first speak Chinese language before studying a foreign language. As this study is related to Xi-Qu, it is within the framework of Chinese music education theory and is a meaningful attempt to support the establishment of a "Chinese culture as the mother tongue" music education.

Research Questions

The main purpose of this study was to examine Chinese collegiate music majors' preference for Chinese Xi-Qu and Western opera stimuli and the reasons for preference in order to offer suggestions for developing Xi-Qu teaching materials at the college level. In addition, as the literature revealed, familiarity with music would influence music preference (Finnäs, 1989), examining the relationship between self-reported familiarity and preference could help better understand the participants' music preference. Furthermore, I intended to explore the relationship between the emotions as detected by FaceReader and the self- reported emotional response. The following questions guided this study to explore those research areas:

1) What were Chinese participants' preferences for Xi-Qu and Western opera?
2) What were the reasons for Chinese participants' preferences for Xi-Qu and Western opera?
3) What was the relationship between familiarity and preference for the Xi-Qu and Western opera examples?
4) What was the relationship between participants' emotional responses as indicated by FaceReader and music preference as revealed by self-reported measures?

Importance or Significance of This Study

This study is important in three aspects. First, although the Ministry of Education of PRC requires that students from first grade through ninth grade must study Jing-Ju pieces, so far no research has been done regarding the pre-service music teacher training for Jing-Ju and Xi-Qu. The study on Chinese collegiate music majors' thoughts and preferences for Jing-Ju and Xi-Qu is also scarce. Furthermore, as far as can be determined, there is no study that compares preferences between Xi-Qu and Western opera. This exploratory study can provide preliminary information regarding Chinese collegiate music majors' preferences for Xi-Qu (including Jing-Ju) and Western opera upon which music educators may select appropriate teaching materials at college level. The findings of this study may support the teaching and learning of this indigenous art form as part of China's musical heritage and its value in the music education curriculum.

Furthermore, the knowledge of preference for and affective response to music was mostly based upon the research findings in the Western countries. However, as LeBlanc and colleagues suggested, the findings of music preference studies in one country might not be readily applicable to another country (LeBlanc, Jin, Chen-Hafteck, Oliviera, Oosthuysen & Tafuri, 2000-2001; LeBlanc, Jin, Stamou, & McGrary, 1999). Researchers should conduct research to explore preference of people of various cultural backgrounds. Thus, the results of this study may contribute to a better understanding of the complexity of music preference.

Finally, as aforementioned, the relationship between facial expressions and music preference are of many researchers' interest. As FaceReader has the advantages of testing the emotions of test persons in real time, it might be useful in music preference and affective response studies. However, so far it has not been used in music studies. The results of this study would offer basic information regarding the usefulness of this tool in this research area.

Delimitations

The findings of this study were pertaining to Chinese colleges and universities in which undergraduate music majors of different study focus (instrumentalists, vocalists) take Chinese traditional music courses and Western European music courses toward a degree in music. These universities and colleges are located in a Southeastern province of China in which the majority of the residents are Han Chinese.

Terms

As this study is to explore preference of Chinese collegiate music majors' for Xi-Qu and Western opera, some relevant terms need to be clarified. Music preference in this study refers to "affective reactions to a piece of music or to a certain style of music that reflect the degree of liking or disliking for that music, and is not necessarily based on cognitive analysis or aesthetic reflection regarding the music" (Finnäs, 1989, p.2). Affective response refers to "reaction involving feelings and emotions. Learned behavior resulting from a life history of interactions with musical stimuli; encompassing mood-emotional, preference, and taste responses" (Price, 1986).

As FaceReader is to detect the participants' emotions by analyzing facial expressions, the term "emotion" should be defined. So far no consensus has been reached regarding the definition of emotion (Juslin & Sloboda, 2010). In this study, I used the definition proposed by Juslin and Sloboda (2010) in which emotion refers to "a quite brief but intense affective reaction that usually involves a number of sub-components---subjective feeling, physiological arousal, expression, action tendency, and regulation---that are more or less 'synchronized', emotions focus on specific 'objects' and last minutes to a few hours (e.g. happiness, sadness)" (Juslin &

Sloboda, 2010, p.11).

Perceived emotion is the listener's recognized emotion in music without necessarily feeling an emotion him- or herself. Induced emotion is the music-evoked emotion in a listener (Juslin & Sloboda, 2010).

Xi-Qu refers to the Chinese music genre formed in the twelfth century and has been developing since then. It integrates Chinese literature, drama, singing, instrumental music, acting skills, dance, visual arts, and acrobatics.

Western European opera is a musical art form developed in Western Europe in the sixteenth to the twentieth century and remains a major genre of classical music. It refers to the staged drama in which accompanied singing plays a dominant role in portraying the actions and emotions of the characters. The elements of opera include music, drama, poetry, the visual arts, and (at times) dance (Arnold, n.d.).

Several terms relating to FaceReader should be defined and the definitions were quoted from the FaceReader 6.0 manual, including face finding, face modeling, and face classification. Face finding refers to the first step of FaceReader analysis during which "the position of the face in an image is found using a method called the Viola Jones cascaded classifier algorithm" (Noldus, 2014, p.10).

Face modeling is the second step of FaceReader analysis that the Active Appearance Model (AAM) is used to synthesize an artificial face model. It mainly "describes the location of five hundred key points in the face and the facial texture of the area entangled by these points" (Noldus, 2014, p.11).

Face classification is the third step of FaceReader analysis in which the actual classification of the facial expressions is done by training and artificial neural network, which

takes the above vectors as input and the network was trained to classify the six basic or universal emotions described by Ekman (1970): happy, sad, surprised, scared, disgusted and a neutral state (contempt is in experimental state in FaceReader 6.0) (Noldus, 2014).

CHAPTER TWO

LITERATURE REVIEW

This chapter is a review of literature pertaining to the study of Chinese music majors' preference for Xi-Qu and Opera. The first section is an overview of two theoretical models of music preference which lay a foundation for the further exploration in this research area, followed by familiarity and music preference, Chinese participants' preference for Xi-Qu and opera and the reasons for preference, preference studies using audio-visual stimuli, emotional response to music and facial expressions, and the studies relating to preference for sensory stimuli using FaceReader.

Theoretical Model of Music Preference

Music preference has been extensively studied in the Western countries. As the history of music preference study has been discussed in some papers (Geisler, 1990; J.-C. Wang, 2007), I only review two theoretical models regarding the mechanism of music preference, including sources of variation in music preference (LeBlanc, 1980; LeBlanc, Jin, Stamou, & McGrary, 1999) and reciprocal response model (North & Hargreaves, 2008).

Sources of variation in music preference. LeBlanc (1979) proposed an eight-level hierarchical model of source of variations in music tastes in 1970s. The researcher and colleagues conducted a series of studies to test and refine the theory and the model was modified several times (LeBlanc, 1979, 1981; LeBlanc & Cote, 1983; LeBlanc & McCrary, 1983; LeBlance, ,Colman, McGrary, Sherrill, & Malin, 1988; LeBlanc, Jin, Chen-Hafteck, Oliviera,

Oosthuysen & Tafuri, 2000-2001; LeBlanc, Jin, Simpson, Stamou, & McCrary, 1998; LeBlanc, Jin, Stamou & McGrary, 1999; LeBlanc & Sherrill, 1986; LeBlanc, Sims, Malin, & Sherrill, 1992; LeBlanc, Sims, Siivola, & Obert. 1996). The current review is based on the 1999 version of the model.

LeBlanc's model provides has eight levels and the variables in levels eight to four would interact with each other (LeBlanc, 1980). Level eight is located at the bottom of the hierarchy that comprises two groups of variables: "the music" and "the environment." "The music" group contains four variables: physical properties, complexity, referential meaning and performance quality of stimulus; the environment variables include peer group, family, educators and authority figures as well as incidental conditioning. The media variable stands between "the music" and "the environment." As LeBlanc (1980) suggested, the function of media was to select the music stimulus and then present it in a cultural environment.

Variables in level seven to three are categorized into "the listener" group. Level seven, six and five are enabling conditions including physiological enabling conditions, basic attention and current affective state (current mood). These variables enable the listener to process the input information coming up from the lower levels but may block the information due to physiological impairments (loss of hearing ability) or lack of attention. Level four are the listener's more or less stabilized personal characteristics that may influence the information processing, including auditory sensitivity, musical ability, musical training, personality, sex, ethnic group, socioeconomic status, maturation and memory. At level three, the listener's brain is processing the input information.

Levels two and one are the listener's action variables. At level two, the listener is about to make decision, either rejecting the stimulus or further collecting information for the final

judgment. Then at level one, the listener either rejects or accepts the stimulus. The acceptance of the stimulus would lead to repetitive listening to the stimulus with heightened attention.

The influence of familiarity (repetition) was addressed by a repeated sampling feedback loop going from level two back to level eight. The purpose of the repeated sampling was to find more information with some questions in mind. LeBlanc (1987) suggested that the repeated sampling could be considered as the forced repetition required by a music teacher. The repetition would be less effective or welcomed if the students were not motivated to listen to the music repeatedly. LeBlanc emphasized that repetition would have better effect if it was self-directed and goal-oriented.

LeBlanc and colleagues carried out a series of studies reported from 1979 to 1988 to test several variables in the proposed preference model. Findings revealed that participants preferred popular music to classic choral music and folk music, and instrumental music over vocal music (LeBlanc, 1979). Participants liked the music with fast tempo, easily perceivable rhythms, and less amount of vocal vibrato (LeBlanc, 1979, 1981; LeBlanc & Cote, 1983; LeBlanc & McCrary, 1983; LeBlanc et al., 1988; LeBlanc et al., 1986).

The research findings supported some variables in LeBlanc's proposed model. However, the cross-cultural studies on music preferences generated complicated results. In one study (LeBlanc, Jin, Stamou & McGrary, 1999), students from the United States (n = 551), Greece (n = 483), and South Korea (n = 1,008) aged from eight to eighteen listened to 18 music excerpts in the styles of art music, traditional jazz and rock music and rated the level of preference. Results showed that age, gender and country had a statistically significant influence on participants' music preference, but in different ways in the three countries. The correlation between age and preference score was negative in Greece (r = -.39) and South Korea (r = -.37) but positive in the

United States (r = .31). In the other study, LeBlanc and others (2000-2001) examined the preference ratings of participants from Brazil, China, Italy, South Africa, and the United States and confirmed the strong influence of "country" variable on participants' music preference. LeBlanc and others (1999, 2000-2001) concluded that the preference model developed in one country might not be safely applied to other countries.

Reciprocal response model. Some researchers proposed a reciprocal response model to examine the factors that might influence one's music preference and tastes (Hargreaves, MacDonald & Miell, 2005; North & Hargreaves, 2008). The reciprocal response model was in an inverted triangle shape. Three boxes being placed at the points of the triangle represented three major influences on one's responses to music, including music, situations/ contexts, and listener. The fourth box located in the middle of the triangle containing the response variables. The "music" box included variables such as complexity, familiarity, orderliness and prototypicality. Other variables in this box are musical genres, styles, specific piece as well as performance contexts such as live, recorded and non-musical.

The "situation and contexts" box incorporated the situational and contextual influences on one's music preference such as social and cultural context, everyday situations, compliance and prestige effects and any ongoing activities. The "listener" box contained variables emphasizing the influence of individual difference on responses to music, such as gender, age, nationality, musical training, short-term preference patterns, long-term taste patterns and musical identities.

The "response" box which was located at the middle of the triangle denotes three main types of responses to music: physiological, cognitive, and affective. The physiological responses included level of engagement, active or passive control of listening; the cognitive responses were

attention, memory, perceptual coding, expectation, discrimination, and evaluation; the affective responses were emotional responses, like/dislike, and mood.

As North and others (2008) stated, the most important feature of the model was the reciprocal relationships between music, situations/contexts and listener. The relationship between music and situations/contexts referred to the musical "fit" that certain type of music is only played in specific situations and contexts, such as music in a funeral or a wedding reception. The relationship between the listener and music is that a listener's response to music would change and evolve depending on the characteristics of the music and the personal characteristics of the listener. For example, familiarity with the music, perceived complexity of the piece, or the listeners' age, existing preference patterns and music tastes that have developed for a long period. The relationship between the listener and situations/contexts was that listeners listen to particular type of music in specific context to achieve certain goals.

To some extent, the reciprocal response model was similar to LeBlanc's model but also different in many ways. The similarities were that both models contained variables to indicate the influences of music characteristics, listener's characteristics and cultural environment/situations on music preference as well as the interaction, or reciprocal relationships between the three groups of variables. Moreover, they intended to explain the short-term music preference instead of the long-term music tastes although researchers pointed out that established music taste would influence the immediate preference (North et al., 2008).

The major difference between the two models was that the reciprocal response model emphasizes that music preference is highly situational and contextual which means that the listener might respond to the same piece of music differently in various contexts. Moreover, reciprocal response model emphasizes that music preference and tastes are subject to change due

to changes in the context, music, and personal characteristics. The two models also differs in dealing with the responses to the music that the reciprocal response model offered a more comprehensive view of a person's response to music, not just focuses on preference choice.

Despite the efforts to explain the development of music preference comprehensively, the two models have been developed without taking enough consideration of the influence of ways to present music on people's responses to music, namely, listening or "seeing-listening" to music. The model of sources of variation in music preference was developed based upon audio stimuli. Although the variable media between "the environment" and "the music" variables could address the issue of visual variables, the model didn't clearly demonstrate the information relating to the influence of visual information on music preference. North and others (2008) addressed the performance context variables such as live, recorded and non-musical, but the effect of audiovisual stimuli has not been discussed in the reciprocal responses model.

Findings of an early literature review indicated that presenting music live, aurally, and audiovisually had different influence on people's perception of and preference for music, although this topic was still not conclusive regarding how different these ways were (Finnäs, 2001). A recent meta-analysis generated more explicit findings that presenting music audiovisually enhanced appreciation of music performance (Platz & Kopiez, 2012). The meta-analysis involved 15 studies in which researchers compared the effect of audio and audiovisual presentation on people's responses to music. Results showed an average weighted effect size of $d = 0.51$ for the effect of the audiovisual stimuli on the liking, expressiveness, or overall quality of music performance (Platz & Kopiez, 2012). The findings of audiovisual music preference studies should be considered when one is providing a model for music preference.

Familiarity and Music Preference

Researchers started to explore the relationship between familiarity and preference in the early twentieth century in Western countries (Gilliland & Moore, 1924; Washburn, Child, & Abel, 1927; Verveer, Barry, Jr.,& Bousfield, 1933). Since then, the topic has been extensively studied and discussed (Finnäs, 1989; North & Hargreaves, 2008). Researchers usually used the following ways to examine exposure effect, including manipulating familiarity through repeated listening, participants' self-reported familiarity with the music without intervention, and through actual teaching. Some researchers attempted to use the optimal complexity model to explain the relationship between familiarity and music preference (Finnäs, 1989; North & Hargreaves, 2008), but Finnäs (1989) found that the model could not explain some contradicting findings.

The optimal complexity model can be traced back to classical works of Plato and Aristotle and more recently to Gustav Fechner. Then it matured in Berlyne's theory (Hargreaves, 2008). The model explained how the subjectively perceived complexity of music influenced music preference. Namely, people didn't like the music that sounded too complicated and too simple but preferred the music with an optimal degree of complexity. The model suggested that familiarity and preference was an inverted-U relationship, repeated listening increased preference to a peak as the subjectively perceived complexity gradually decreased to an optimal degree. However, further repetitions would make the music sound too simple, therefore lead to the disliking. The maximal preference would be reached with very few repetitions when the person listened to the less complicated musical examples, such as popular music. On the contrary, it would take at least five repetitions to increase the preference for complicated music, such as that found in Western classical music (Finnäs, 1989).

Finnäs (1989) reviewed the literature pertaining to the relationship between familiarity

and preference from the early twentieth century to the 1980s and reported that most of the research findings could be explained by the optimal complexity model. But exceptions were that preference for contemporary and avant-garde music decreased or remained unchanged after repeated listening (Hargreaves, 1984, Hornyak, 1966; Lieberman & Walter, 1968). Finnäs (1989) suggested that the participants' initial attitudes toward the piece or the style should be taken into account when dealing with musical styles having high level of complexity.

Although Finnäs' (1989) literature review covered most of the studies which conducted before the 1990s, the researcher mainly focused on experimental manipulation of familiarity while discussing little about the studies without experimental control and those studies in which researchers used teaching plans to increase familiarity. In addition, as preference studies using world musics excerpts were still scarce then, Finnäs did not specifically discuss the effect of familiarity with world music examples on preference, although a study involving Pakistani music excerpts had been included (Heingartner & Hall, 1974).

Fung (1993) reviewed literature pertaining to preference for world musics examples and found that the students' preferences for music out of Western European traditions would increase due to exposure and instruction. He concluded that five or fewer weeks of exposure and instruction would not change students' preference ratings consistently.

As Finnäs (1989) did not focus on preference for world musics and Fung (1993) didn't cover studies published after 1993, I present a review recent studies pertaining to familiarity with world musics and preference using audio stimulus. First, I review studies involving self-reported familiarity, followed by the studies that adopted teaching plans.

Self-reported familiarity and preference. A number of researchers explored the influence of familiarity on participants' preferences and reported that self-reported familiarity

was positively related to preference (Fung, 1996; Demorest & Schultz, 2004; Teo, Hargreaves, & Lee, 2008; J.-C.,Wang, 2007). Fung (1996) examined the influence of musical characteristics and familiarity on collegiate students' preferences for world musics. Undergraduate music majors (n = 180) and non-music majors (n = 269) rated 36 instrumental excerpts that selected from nine countries on the 7-point Likert scale for preference for and on 3-point scale for familiarity with each piece. Prior to the data collection, 24 judges provided ratings for musical characteristics of each piece regarding tempo, pitch redundancy, tonal centeredness, consonance, brightness in timbre, percussiveness, loudness, textural complexity, and richness in embellishment. Results showed a positive relationship between familiarity and preference across all styles. Furthermore, participants preferred music examples with a fast tempo, loud dynamics, tonal center, and having moderately embellished, smooth-sounding, with bright timbre and various consonant pitches. The difference between music majors and non-music majors was that the former group preferred more complex textures than the latter group.

J.- C. Wang (2007) also reported a consistent, positive relationship between familiarity and preference among American and Chinese undergraduate students. The researcher examined preference for and familiarity with six musical styles including Western classical, Chinese traditional, American pop, Taiwanese pop, Jazz, and world music. Two methods were used to measure preference, verbal rating and report of ownership of musical collections. Results revealed a positive relationship between familiarity and verbal/behavioral preference for all styles. The top three preferred styles for Chinese undergraduates were Taiwanese pop, Western classical, and American pop, while American undergraduates most preferred styles were American pop, Jazz, and Western Classical. The rank of reported ownership of musical collections was closely related to the verbal ratings.

Teo and colleagues (2008) examined the music preference of the secondary students in Singapore (n = 73) and the United Kingdom (n = 58) and reported that familiarity was related to preference but not necessarily related to correct identification of the musical examples. Furthermore, the mainstream culture influenced students' preference regardless their ethnic backgrounds. Participants in both countries were asked to listen to Chinese, Indian and Malay music selections and rated their preference for and familiarity with each musical excerpt. They were also required to identify the musical style of each musical selection. Results showed that girls in Singapore preferred Chinese and Malay music more than their United Kingdom counterparts did. Indian music received the lowest ratings from both groups. Furthermore, students in Singapore could successfully identify the Indian excerpts but were not familiar with them and gave lower preference scores to Indian music. The most interesting findings were that the vast majority of the students in the Singapore sample were Malay students, but they were more familiar with and preferred Chinese music over Malay examples.

Demorest and Schultz (2004) conducted two separate studies on fifth graders (N = 224) preferences for authentic and arranged versions of world music recordings. The researcher selected nineteen authentic vocal world music excerpts and their arranged versions as auditory stimuli. Participants were randomly assigned into two groups and listened to authentic versions and arranged versions respectively. They rated their preference and familiarity on the 6-point scales. Results indicated that no significant difference in participants' preference for either version had been found. However, the correlation between familiarity and preference showed a statistically significant effect (r = .87, p < .01).

Another group of fifth-grade students (N = 113) participated in the second study, and 37 of them had learned seven of the nineteen selected songs before the study. All participants

listened to both authentic and arranged versions of the selections and rated their preference for and familiarity with the music. Results showed a significant preference for arranged versions, but the students who had learned some of the selected songs chose the authentic version more often than those who had not, and their familiarity ratings were also higher than others'. Based on the findings, the authors recommended the arranged version of world music as the starting point to introduce unfamiliar music to students (Demorest & Schultz, 2004).

Notably, the average preference rating in both studies was not strongly positive. The average ratings in the first study were below the midpoint in the 6-point scale; and in the second study, the mean rating was 3.43. The researchers attributed the low preference scores partly to the vocal performing medium and the slow tempo of some selections (Demorest & Schultz, 2004).

Some researchers found that preference for music was not always related to the familiarity with the music (Alkoot, 2009; Fung, 2007; Geisler, 1990). Alkoot (2009) explored non-music major undergraduates' (N = 203) familiarity with and preference for Arabic (Kuwait) music in comparison to other music selected from Congo, Japan, and Mexico. The researcher also examined the effect of student's characteristics and musical characteristics on their preference. Participants rated each of the twelve excerpts on a 5-point scale and rated familiarity on a 3-point scale. Findings suggested that familiarity was positively related to preference for Kuwaiti, Japanese and Mexican music but not for Congolese music. The preference rating of Kuwaiti music ranked on the top, followed by Mexican music, Congolese music, and Japanese music. Rhythm was the most influential factor for liking, followed by tempo and timbre.

Results also showed that gender, ethnicity, and age were not related to familiarity and preference, but with the small proportion of students with ethnic backgrounds in this sample, the

author suggested that the result should be interpreted with caution. Findings also indicated that music training had an impact on participants' ratings. Instrumental students and non-instrumental students were not familiar with the selections, but the instrumentalists' preference and familiarity ratings were higher than the other group. In addition, the students who had early exposure to world musics gave higher familiarity ratings to the musical examples, but no correlation had been found between familiarity and preference for the musical selections (Alkoot, 2009).

Fung (2007) explored the pre-service music educators' personal and external preference for and familiarity with three Chinese musical examples. External preference refers to the "preference for the assignment of one set of goods or opportunities over other sets goods and opportunities for others as well as for oneself" (Pratt, 1992, p.39). Participants (N = 119) responded to the questionnaire regarding their preferences, familiarity, and perceived value on 7-point scales and also selected the most and least preferred pieces and the reasons for liking/disliking. Fung (2007) found that familiarity was moderately related to personal preference for the popular piece and external preference for the orchestral piece, but no relationship found for traditional ensemble music. The ratings for the three pieces differed significantly that the orchestral piece received highest mean rating, followed by traditional and popular pieces. The qualitative data analysis revealed that the most important reasons for choosing the most and least preferred pieces were musical quality and emotional references of the music.

Geisler (1990) investigated music preferences of Chinese (n = 394) and Western (n = 282) eighth graders (aged from 13-15 years) living in Hong Kong. As Geisler's (1990) study involved Chinese Xi-Qu example, I only review the portion relating to familiarity and preference in this section and then reviewed it in detail in the following section. The researcher developed a

Musical Preference Survey (MPI) instrument comprised of nineteen musical examples, including Chinese instrumental music (traditional piece = 2, modern orchestra = 1), Chinese vocal music (Chinese opera=1, Chinese modern song=1, Chinese folk song = 1), Western classical instrumental music (*n* = 5), Western classical vocal music (soprano = 1, choral = 3), country music (*n* = 1), jazz (*n* = 1), hard rock (*n* = 1), and Western folk song (*n* = 1). Each stimulus lasted from 40 to 50 seconds. The researcher administrated the instruments to each of the entire classes. The participants rated preference level on the 7-point Likert scale (1 = strongly dislike, 7 = strongly like) and circled the word that best represented the level of familiarity with piece (never, rarely, sometimes, often). The researcher recorded some MPS sessions as the anecdotal report.

Results showed that the relationship between familiarity and preference was more consistent for Western participants (*r* = .92) than for Chinese (*r* = .74). The Western students' familiarity and preference rankings were almost identical and the Western youth were unfamiliar with all Chinese pieces therefore gave lower ratings. The Xi-Qu piece and a Chinese traditional ensemble piece ranked much lower in preference than in familiarity while the Irish traditional chorus and Stravinsky's piece were ranked much higher in preference than in familiarity. However, the positive relationship between familiarity and preference was evident for other pieces among Chinese students. The "Butterfly" concerto was the most liked and most familiar piece while the Western choral music was less familiar to the Chinese participants and preferred less. Geisler (1990) suggested students might like unfamiliar pieces if the characteristics of pieces were similar to those preferred.

Effect of instruction. A number of researchers used elaborate teaching plans to increase participants' familiarity with the targeted musical styles. Three studies involved specialists or native musicians of the targeted musical styles and reported positive relationship between

preference and familiarity (Baltagi, 2006; Dekaney, Macede & Pye, 2011; Pembrook & Robinson, 1997).

Pembrook and Robinson (1997) designed four modes of teaching Ghanaian drumming: live instructions with authentic instruments, live instructions with traditional classroom instruments, recorded instructions with authentic instruments and recorded instructions with traditional classroom instruments. Six-graders ($N = 252$) were assigned to one of the four teaching methods and received a total of four treatment sessions. A specialist was invited to teach drumming to the live instruction groups while the recorded teaching was used for other groups. Students responded to a 5-point scale before and after the treatment regarding the attitude toward the Ghanaian music and willingness to introduce world music into curriculum. Researchers found that the preference rating of students using authentic drums was higher than those using traditional drum, and the students in the live instruction mode had greater performance gain than those in recorded instruction mode in the posttest. Researcher also found an increased willingness to include world music in the curriculum after the instructions.

Baltagi (2006) examined the fifth graders' ($N = 373$) preferences for folk songs of the United States, France, and Lebanon, and the relationships among preference, familiarity and gender. The researcher selected folk songs from the three countries and the duration of the excerpts ranged from 23 to 59 seconds according to the musical phrases of the original pieces. Twenty-one intact classes from five schools were recruited in the study. The researcher assigned eight classes of two schools as the control group ($n = 150$) and thirteen classes from other three schools as the treatment group ($n = 223$). Specialists in each school taught treatment group Lebanese folk songs for eight weeks based on the investigator-designed lesson plans and teaching procedures. All participants completed pretests and posttests to rate their preference for

and familiarity with the excerpts of the three cultures.

Results showed that the ratings of the treatment group for Lebanese songs increased significantly in the posttest but their ratings for American songs and French songs did not show a significant change. The correlation between familiarity with and preference for Lebanese folk songs was significant ($r = .424$, $p = .01$). It was consistent with earlier findings indicating the positive correlation between familiarity and preference, but there was no significant difference between female and male participants' ratings. The author recommended further investigation on effectiveness of the treatment on other Lebanese folk songs.

Dekaney, Macede and Pye (2011) assessed how the long-term university-school district world drumming partnership influenced high school students' perception of the value of global music and culture. Students ($N = 32$) from two high schools (school A and school B) participated into the study. Students from the school A had been involved in the university-school world drumming partnership for about three years while those from school B only for six month. The visiting Brazilian professional musicians gave instructions to the students for 90 minutes and performed with the students in a university's concert hall. Students rated the importance of the Brazilian music in school and for themselves and the willingness to recommend the music to their friends on the 10-point scale. They responded to two open-ended questions to describe their experience with the music of other cultures and how Brazilian musicians changed their views about Brazilian music and culture.

The quantitative data showed that the experience with Brazilian professional musicians and school-district partnership positively changed the students' attitude toward Brazilian music, especially the students in school A. The preference rating of school A was higher than school B in both pretest and posttest and school B showed significant increase in posttest as the pretest

rating was low. The willingness to recommend Brazilian music to friends also significantly increased after the teaching session.

The qualitative data revealed that students from school B mostly expressed the excitement while students from school A wrote more about their feelings in details about Brazilian music and the influence of the learning experience. The partnership program and learning experience with Brazilian musicians also helped some students transfer the preference to music of other cultures.

Two other researchers developed teaching methodologies to increase students' familiarity with the targeted musical styles (Abril, 2005; Carper, 2001). Carper (2001) investigated the effect of repeated exposure accompanied by instruction on kindergarten and pre-K children's preference for four musical styles: American popular, Children's music, classical music, and Japanese classical and traditional music. Children aged from 41 months to 87 months ($N = 63$) were randomly assigned to experimental and control group respectively and completed the pre- and posttest. The researcher used two methods to measure the children's preference: pictorial measure and time-elapsed measure. The students responded to a scale using graded smiling faces to indicate their preference, and the researcher recorded the length of the time the students stayed on the music excerpts.

The experimental group was given six thirty-minute instructional treatment sessions in which Japanese excerpts were repeated more often than other excerpts. Results showed that, in pretest, Japanese excerpts were least preferred as indicated by the mean score ($M = 3.25$, $SD = .23$). The mean listening time (in seconds) to Japanese music was shortest, 26.84 ($SD = 2.62$), as compared to Children's music, 57.27 ($SD = 5.82$), popular music 64.65 ($SD = 3.39$), and Western classical music, 29.40 ($SD = 4.93$). In the posttest, however, the preference ratings for

Japanese music increased significantly in treatment group while the control group's ratings did not change significantly across all styles. The results indicated that repeated exposure and proper instruction could modify this age group's preference for unfamiliar music.

In another study, the researcher (Abril, 2005) investigated influence of language on fifth grade students' (N = 209) preference for popular songs. Participants were assigned to three groups using different teaching methods: sociocultural-based multicultural instructions, concept-based multicultural instructions, and general music class methodologies. All participants responded to the questionnaire to rate the level of preference for the three versions of the song before and after the ten-week teaching period. Results showed that the three groups' mean preference score for English version is higher than other two versions in pretest and posttest. However, the students in sociocultural-based multicultural instructional group rated the foreign language songs significantly higher than the concept-based multicultural instructional group and the control group. The familiarity with the language was positively related to the preference for the song of that language.

Preference for Xi-Qu and Opera and the Reasons for Preference

The information regarding Chinese people's preference for music can be obtained from the following sources: studies published in English (Fung, Lee, & Chung, 1999/2000; Geisler, 1990; Ho, 2003, 2015; Hui, 2001, 2009; LeBlanc, Jin, Chen-Hafteck, Oliviera, Oosthuysen, & Tafuri, 2000-2001; Morrison & Yeh, 1999; J.-C. Wang, 2007) or in Chinese (Bai, 2006; Cai & Huang, 2006; Huang & Cai, 2007; Ruan, 2007; Tang, 2012; P. Wang, 2003; T. Wang, 2005; Wei, 2009; Xiao, 2013; Yan, 2005; Yu, 2012; X. H. Zhang, 2011). The topic of music preference has been extensively studied in Western countries but it is still new to the Chinese music education

community that most of the Chinese papers were published in the last two decades. The participants in those studies were mainly K-12 students and college music and non-music majors. I review the relevant studies in the two sources in this section. As I only read Chinese and English, studies written in other languages had to be excluded. First, I briefly introduce the research findings regarding preferences of Chinese participants for various musical styles, then focuse on studies involving different Chinese Xi-Qu styles and Western opera and the reasons for preference.

The existing literature revealed the preference of Chinese participants for various musical styles. The general trend was that Chinese participants mostly preferred Chinese popular music, popular music of other countries, Western classical instrumental music, and Chinese orchestral music (composed by Chinese composers using Western composition techniques and played by Western instruments). Furthermore, Chinese traditional instrumental music and Western classical vocal works (choral music, art songs, and opera) are moderately or less preferred, while Chinese folk songs, world musics, and Chinese Xi-Qu were usually among the least preferred styles. This pattern seemed applicable to preschool children (P. Wang, 2003, Wei, 2009), elementary students (Fung, Lee, & Chung, 1999/2000; Ho, 2003; Hui, 2009), secondary students (Fung, Lee, & Chung, 1999/2000; Geisler, 1990; Ho, 2003, 2015; T. Wang, 2005), and undergraduate non-music majors (Bai, 2006; Cai & Huang, 2006; Huang & Cai, 2007; Tang, 2012; J.-C. Wang, 2007). Western European classical music was not the mostly preferred styles among undergraduate non-music majors, but it was ranked as the first musical style about which they wanted to study in school (Bai, 2006). Secondary students wanted to study popular music history and performance in school lessons, but they maintained that both Chinese/European classical, including Xi-Qu, and popular music should be taught in schools (Ho, 2015).

Studies involving music majors revealed some different information. Results of a comparative study (Morrison, & Yeh, 1999) indicated that participants of China mainland overall rated Chinese traditional instrumental music excerpts higher than Western classical and jazz excerpts despite that mean ratings for the three styles were all on the positive side. Living environment also played a role in music preference that the mean rating of Hong Kong students for European music was highest and the ratings for Chinese traditional and jazz were similar. Morrison and Yeh (1999) also found that music majors of American and Chinese participants had stronger preference for Western European pieces. The phenomenon was also evident in Cai and Huang's (2006) study. Western European music (symphony and opera) and Chinese orchestral music were ranked on the top of the preference ranking list, closely followed by popular music of Western countries and China, with Chinese Xi-Qu and rock music at the bottom of ranking of the preference ratings (Cai & Huang, 2006).

Results of some studies revealed that even within a generally–labeled style, participants preferred some examples over others. Xiao (2013) presented 35 Chinese popular songs that categorized into seven types to secondary students and asked students to circle the word that best represents their level of preference (strongly dislike, dislike, like, strongly like, other). Students also selected the reasons for liking. Results showed that over 70% students selected Chinese-Rap and lyrical songs as the favorite ones while only about 20% students liked the "New Age" songs. The major reason for liking was due to the melody of the songs. Huang and Cai (2007) reported that among seven Western European instrumental music, undergraduate music majors (n = 75) and non-music majors (n = 73) selected "Spring" by Antonio Vivaldi as a favorite piece but the other two pieces ,"Till Eulenspeigel" by Richard Strauss and "The Rite of Spring" by Igor Stravinsky, received lowest ratings.

The aforementioned findings revealed a general picture of Chinese participants' music preference for different musical styles. Then the following sections are specifically related to preference for Xi-Qu and opera, and reasons for music preference

Preference for Xi-Qu and opera. Several studies were related to Xi-Qu and opera, but only Geisler (1990) used a regional Xi-Qu example and recorded participants' facial expressions and behaviors. Geisler (1990) did not include Western opera, but a classical female soprano piece was used which probably resembled operatic singing. For the rest of the studies, the researchers asked students to rate the level of preference for various styles, including Xi-Qu and Opera, without presenting stimuli (Bai, 2006; Cai & Huang, 2006; Ho, 2003, 2015). I first introduce studies involving audio stimuli then review studies dealing with secondary and undergraduate non-music and music majors without presenting audio stimuli.

Geisler (1990) investigated music preferences of Chinese (n = 394) and Western (n = 282) eighth graders (aged from 13-15 years) living in Hong Kong. The researcher developed a Musical Preference Survey (MPI) instrument comprised of nineteen musical examples, including Chinese instrumental music, Western classical instrumental music, Western classical vocal music, country music, jazz, hard rock, and Western folk song. Each stimulus lasted from 40 to 50 seconds. The researcher administered the instruments to each of the entire classes. The participants rated preference level on a 7-point scale (1 = strongly dislike, 7 = strongly like) and circled the word that best represented the level of familiarity with piece (never, rarely, sometimes, often). The researcher recorded some MPS sessions as the basis of an anecdotal report.

Results showed that participants of the two groups gave lowest ratings to the Xi-Qu piece and the Chinese folk song featuring the female voice (Chinese participants, M = 2.22 and 1.77 respectively; Western participants, M=1.76 and 1.60 respectively). The top three pieces preferred

by Chinese students were “Butterfly” concerto (Chinese orchestral piece by He, Z. H & Chen, G.), “Mouvenment” by Debussy, and “Concerto for two trumpets” by Vivaldi with the mean ratings of 4.91, 4.77, and 4.68 respectively. Mozart’s soprano was moderately preferred with a mean of 3.75, located exactly in the middle of the ranking order. Furthermore, the Western youth’s top three pieces also contained the Vivaldi’s work, which received highest mean rating (M = 4.27), followed by hard rock “Amy” (M = 4.22), and Irish traditional choral work ““'I'm Seventeen Come Sunday” (M = 4.06). Mozart’s soprano was also near the middle of the rank order (M = 3.37).

The relationship between familiarity and preference were more consistent for Western participants (r = .92) than for Chinese (r = .74). Furthermore, the observations on participants’ facial expressions and behaviors indicated the similar patterns between Western and Chinese participants. Students of both cultures behaved similarly at some moments. At the four points of the sessions, students giggled and made faces and all the four points were related to vocal works. Three of them were female voice (Xi-Qu, Chinese folk song, Mozart’s soprano) and the fourth one was a Chinese Communist choral song. Although Chinese students reacted to the four pieces similarly, the mean preference ratings were different, as Chinese Xi-Qu piece and folk song received lowest ratings while the other two works received moderate ratings in or near the middle of the preference ranking list. Geisler (1990) did not further examine the reasons for the discrepancy between facial expressions and preference.

Some researchers did not use Xi-Qu stimulus but asked the students to rank or rate various musical styles, including a few of Xi-Qu styles, based on the level of preference (Bai, 2006; Cai & Huang, 2006; Ho, 2003, 2015). Ho (2003) explored the effect of gender on elementary and secondary students’ instrumental learning, music preference, and attitudes toward

musical activities in Hong Kong (*n* = 1,275), Shanghai (*n* = 1,300), and Taipei (*n* = 1,289). Students selected the instruments that they studied in schools and rated their preferences for the instruments and music activities on a 5-point scale. They also rated twelve musical types taught in school music lessons on the five-point scale (1 = highly unlike, 5 = highly like), including traditional Western/Chinese instrumental music, traditional Western vocal music, traditional Chinese vocal music such as Peking opera (Jing-Ju) and Taiwanese opera, Chinese or Western folk songs, Mandarin/Cantonese/Western popular songs, and other world musics such as Indian music, African music and East Middle's music.

Similar to Geisler (1990) findings, traditional Chinese vocal music (including Jing-Ju and Taiwanese opera) and Taiwanese regional folk music were least preferred types in Ho's (2003) study. Popular music of various types (Western pop, Mandarin pop, Cantonese pop) was mostly preferred styles among students. The gender difference was that girls preferred Western instrumental music (*M* = 3.7) more than boys did (*M* = 3.34). European traditional and folk songs received the moderate mean ratings. World music received low ratings but slightly higher than Chinese traditional vocal types (Ho, 2003).

In the other Ho's (2015) study, the researcher used mixed methods to explore Chang-Sha (长沙，a city in mainland China) secondary students' (*N* = 1,816) preference for popular music and their opinions about various musical styles. Participants responded to the questionnaire regarding their opinions about inclusion of popular music in school lessons. In addition, they rated 22 musical styles that had been taught in school classes on a 4-point scale (1 = not at all interested, 4= very interested) and also rated which of the same 22 styles they wanted to study in music class on the 4-point scale (1 = not at all interested, 4=very interested). Moreover, the researcher conducted semi-structured interviews with 45 participants to explore participants'

thoughts in depth.

The quantitative results revealed that for the music that had been taught in school lessons, Cantonese opera (粵剧, Yue-Ju)(*M*=1.50) and Kun opera (昆曲, Kun-Qu) (*M* = 1.46) were ranked at the bottom of the ranking list, but Chang-Sha Hua-Gu (花鼓戏， a regional Xi-Qu style in Chang-Sha) (*M* = 1.65) and Beijing opera (Jing-Ju, 京剧) (*M* = 1.58) received slightly higher ratings. The preferred types were Chinese folk songs (*M* = 2.71), traditional Chinese orchestral music (*M* = 2.39), and traditional Western orchestral music (*M* = 2.26) (Ho, 2015).

Regarding the types of music that students wanted to study in school lessons, students overwhelmingly wanted to study popular songs of various countries, immediately followed by Western European instrumental music, world music, and Western opera. Chinese Xi-Qu of all styles was located at the bottom of the list and the mean ratings were all bellow the midpoint (from 1.97 to 1.81). However, the qualitative results showed the other side of the picture, as Ho (2015) found that although popular music was still the most welcomed music, the students being interviewed maintained that Chinese/Western classical and popular music should co-exist in school lessons. Classical music was viewed as more meaningful, systematic, traditional, improving musical literacy, and even “acted as a balance to the influence of popular music” (p. 247).

The following studies pertain to undergraduate non-music and music majors’ preferences. Bai (2006) examined undergraduate non-music majors (*N* = 414) preference for five musical styles, familiarity with the styles, and living environment. Bai (2006) reported that Xi-Qu was the least preferred style (*M* = 2.51) and popular music was the mostly preferred style with the mean rating of 4.3 on the 5-point scale. Familiarity was related to preference in that Western European music and Xi-Qu were the two less familiar styles therefore received lowest ratings.

However, 27% students wanted to learn more about Western European music and about 20% students want to learn Chinese traditional music and Xi-Qu. The living environment was also related to preference. Students living in rural areas gave Xi-Qu higher preference ratings than students who lived in cities. Although Xi-Qu was the least preferred style among students of cities and towns, it was ranked as the first (town students) and third (city students) style they wanted to study in school, but students of rural areas ranked Xi-Qu as the least wanted style in school lessons.

Cai and Huang (2006) compared music majors (n = 139) with non-music majors (n = 161) regarding the preference for different musical styles, purpose of studying or listening to music, and ways of learning music. The researchers reported that music majors' top three preferred types were symphony, opera, and popular music of Western countries, while the non-music majors' favorite styles were Chinese popular, popular music of Western countries and light music. Xi-Qu again was among the least preferred musical types, but the mean rating for Xi-Qu was slightly higher than opera among non-music majors and higher than rock among music majors.

In these studies that involved Chinese participants' preference for Xi-Qu and opera, researchers didn't ask participants the specific reasons for preference but it seemed that familiarity and the overwhelming attitudes toward Xi-Qu might influence students' preference. Xi-Qu had long been excluded from the general and higher music education curricula while Western music was dominant in school curricula, especially in higher education (Cai & Huang, 2006). The feeling of distance to Xi-Qu and familiarity with Western musical styles may lead to the low preference ratings for Xi-Qu but high ratings for Western European music, especially among undergraduate music majors. Furthermore, the exclusion of Xi-Qu and other traditional music from general education before the twenty-first century might convey the negative

information to students that the traditional music was backward and should not be valued in the "modern" school system. The negative attitude toward Xi-Qu in the school education system might exert a subtle influence on music preference and such an influence sometimes was even stronger than familiarity. It probably can explain why Hong Kong students disliked Xi-Qu although they were more familiar with it than some other musical styles.

Since 2001, Chinese educators have embraced the concept of multiculturalism. Therefore world musics have been included into the curriculum and there was more emphasis on Chinese traditional music than before. Various Xi-Qu styles have been introduced into the classroom and have become part of the compulsory teaching content since 2011. More recent studies seemed to reflect the effect of more balanced curriculum on students' preference. Secondary school students being interviewed insisted that Chinese traditional music should co-exist with other musical styles although the students liked popular music and Western European music more (Ho, 2015). Inclusion of Xi-Qu might increase familiarity and more or less adjust students' attitude toward traditional Chinese music, including Xi-Qu. Although I assumed that familiarity and the overwhelming attitudes toward Xi-Qu within institution and in the society might be the reasons for preference, so far no researchers explored this topic. Thus, the reasons for Xi-Qu and opera preference need further examination.

Reasons for music preference. So far no researcher explicitly examined the reasons for preference for Xi-Qu or opera, but some researchers explored reasons for listening to popular music (Xiao, 2013) and children's song (P. Wang, 2003). The findings might help us understand students' preferences for Xi-Qu and opera to some extent.

P. Wang (2003) conducted a qualitative study to explore the features of kindergarten children's favorite songs and the reasons for preferences. The researcher interviewed preschool

children (*n*= 401) aged 5 - 6 years individually and asked them to list their favorite songs and to explain the reasons for liking them. Then the researcher distributed questionnaires to the parents of the children (*n*= 401) to collect data regarding parents' music listening habit. Music teachers (*n* = 8) also completed the questionnaire relating to their criteria for selecting songs for music class.

Regarding the self-reported reasons for liking the songs, P. Wang (2003) found that the main reasons for liking songs were characteristics of the song (good to the ear, gentle, energetic, fast, simple and easy), function of the song (can listen when playing games), familiarity with the song (could sing the song or listen frequently), parents' influence (mom likes the song), and the attractiveness of the cartoon characters (Blue Cat, Sun Wukong) and popular singers (beautiful, handsome). Furthermore, peers and music teachers influenced preference that children of the same class tended to like the same song and the majority of the favorite songs were those taught in kindergartens.

The other study was pertaining to secondary students. Xiao (2013) investigated the preference of secondary students (*N* = 714) for Chinese popular songs of various types and the reasons for liking. The researcher used 35 excerpts that were categorized into seven types, including R&B, Chinese rock, Chinese trend (Chinese Rap), "New Age," campus ballads, dance type, and Chinese pop (lyrical songs). Students also selected the reasons for liking the songs. Results showed that the major reason for liking the songs was the melody of the songs. Chinese trend, Chinese pop, and Chinese rock were the top three types liked and "New Age" songs were the least preferred.

The two studies revealed that some factors influenced music preference, namely, music characteristics, familiarity, peers influence, attractiveness of the singers/cartoon figures, and the

influence of the adults. These factors were the major reasons given by preschool children (P. Wang, 2003) for liking children's songs while melody was the most important factor for liking popular songs among secondary students (Xiao, 2013). These reasons partly supported the suggested reasons for Xi-Qu preference in the previous section and were in accordance with the findings of the Western countries (Hargreaves, MacDonald & Miell, 2005; North and Hargreaves, 2008; LeBlanc, Jin, Stamou, & McGrary, 1999).

Music Preference Studies Using Audiovisual Stimuli

So far the understanding of music preference is largely based on the studies that used audio stimuli. With the advance of technology, researchers also use audio-visual stimulus to examine the influence of visual images on students' music preference (Finnäs, 2001; Fung, 1998; Geringer, Cassidy, & Byo, 1996,1997; Killian, 1990; Platz & Kopiez, 2012). According to Finnäs (2001), audiovisual presentation of music means that "some media, such as film, TV or video, transmit or reproduce music simultaneously with visual material, generally 'moving pictures '" (p. 56). There are three modes of audio-visual presentations, including simple documentary, TV - type documentation, and non-documentary (Finnäs, 2001). The simple documentary mode only uses very few static perspectives while the TV-type documentary mode uses various perspectives that can provide details of the performance. The non-documentary mode uses visual images that are not related to the live performance but uses visual materials such as natural scenery or animated images in accompanying the music.

Two studies were related to the literature of audiovisual stimuli (Finnäs, 2001; Platz & Kopiez, 2012). Finnäs (2001) reported that most studies indicated that participants preferred the audiovisual mode, but some studies showed the opposite results. More experienced musicians

and females preferred the audio presentation to the audiovisual format. As aforementioned, results of Platz and Kopiez (2012) meta-analysis showed that the audiovisual presentation mode significantly enhanced participants' preference and perceived overall quality of music performance in comparison to the audio mode (Cohen's $d = 0.51$). In the following subheading, I first present a study using Asian audiovisual stimuli as the current study is related to Asian music, followed by the studies using vocal audiovisual examples as this study mainly deals with vocal piece.

Asian audiovisual stimuli. Among studies using audiovisual stimuli, Fung (1998) used Asian audio and audiovisual examples to explore the effect of video presentation on perceptual dimensions in perceiving Asian music and preference for Asian music. Undergraduate non-music majors ($N = 49$) were assigned to audio or audiovisual conditions randomly and rated familiarity with and preference for the examples based on the characteristics of the musical selections, such as tempo, color, visibility of movements and so forth. Results indicated that students preferred fast-tempo, instrumental, and bright-timbre audio examples. The preference for video examples was related to the same audio characteristics plus loudness and two visual qualities, including active visible movements and bright visual colors. Fung (1998) suggested that music teachers should use both audio and video materials to enrich students' musical experience.

Vocal audiovisual stimuli. Several studies involved vocal works and the findings revealed that participants preferred video presentation to audio-alone mode (E. S. Ellis, 2013; Killian, 1990). The preference for audiovisual presentation was related to characteristics of the singers or performers (Killian, 1990) and the practical use of the visual information (E. S. Ellis, 2013). Killian (1990) reported that singer's characteristics such as race and gender would influence preference of students of various racial backgrounds. Junior high school students of

various cultural backgrounds (African American = 110, Caucasian = 45, Hispanics = 24) viewed the audiovisual examples of a group of singers singing the same popular song and indicated their preference for which solo they would like to sing. Results showed that participants tended to prefer the solo sung by the performers of the same race and same sex. Male students showed stronger preference than the female students.

E. S. Ellis (2013) found that students preferred audiovisual or audio presentation of music based on the practical use of the version. In E. S. Ellis' (2013) study, adults and elementary students listener/watched both audio and video presentations of the same musical examples. The elementary students also answered the open-ended question to explain the reasons for selecting audio or video versions. Results showed that both adults and students preferred video presentation to audio, although a few students preferred audio version. The reasons for selecting the video presentation were that the video could help one understand the lyrics and that watching the performance would be more entertaining. The reasons for preferring the audio version were to allow free imagination and using music as background music while doing other things.

Singer's physical attractiveness was also related to preference or evaluation for the performance (Wapnick, Darrow, Kovacs, & Dalrymple, 1997). Researchers assigned 82 musicians into audio-alone, visual-alone, and audiovisual conditions to evaluate the performance of 14 singers. Results showed that the attractive male singers received higher ratings in audiovisual conditions than in the other two conditions, but attractive female singers received similar ratings in both audiovisual and audio-alone conditions. The ratings of audiovisual condition were higher than those of audio-alone condition (Wapnick, Darrow, Kovacs, & Dalrymple, 1997).

Relationship between Music Preference, Emotional Response to Music, and Facial Expressions

Researchers have long been interested in the relationships between facial expressions and music preference and have used facial expression analysis as the supportive evidence in music preference studies (Geisler, 1990; Gilliland & Moore, 1924). Participants' facial expressions were analyzed through observation and the preference was inferred subjectively. The recent studies employed facial EMG to explore the relationship between emotional responses to or preference for music and facial expressions. First, I present the studies relating to music preference, followed by those examining emotional responses and facial expressions.

Facial expressions and music preference. Two music preference studies involved examining facial expressions (Geisler, 1990; Gilliland & Moore, 1924). Gilliland and Moore (1924) selected classical and jazz music as stimuli to investigate the repetitive listening on preference of college students. Participants (N = 35) listened to the musical selections in groups for 25 times and responded to the ten-point scale after the first and twenty-fifth hearings. Researchers also collected motor innervation data such as speed of taping, strength of grip after the first and twenty-fifth listening and pulse beat before and during the experiments; the third measurement was to take photographs of participant's facial expression while they were listening to the music.

Gilliland and Moore (1924) reported that the initial ratings for the classical music selections were higher than that for jazz music and that repetitive listening led to an increased mean rating for classical music selections, but the ratings for jazz music almost remained the same. The researchers also reported that participants' serious-looking facial expressions indicated their liking for classical music after repetitive listening. On the contrary, repetitive

listening to jazz led to listless attitudes as indicated by participants' smiling faces. The subjective interpretations of the researchers concerning smiling faces might be misinterpreted as smiling could indicate positive attitudes, too. Some evidence indicated that the researchers' interpretation might be biased. The researchers used "good music" to refer to classical music but "street music" to the jazz selections. They also stated that people who preferred jazz usually had a "musically undeveloped" mind and that the competition between Western classical and jazz was "like a battle between good and evil" (p.309). These implied that the preference of researchers for classical music might lead to misinterpretation of the facial expressions.

The Geisler's (1990) study was reviewed in the previous section. The researcher recorded participants' facial expressions during the listening sessions. As aforementioned, students giggled and made faces when they heard the female voice and choral works. Geisler (1990) also described that students looked surprised when they heard a loud percussion introduction and then giggled. Despite that students reacted to the four pieces similarly, they gave the pieces different preference ratings. Some pieces had the moderate ratings while others received lowest ratings. For the rest of the pieces, students' faces did not make visible changes but appeared attentive.

The findings of the two studies showed that the relationship between facial expressions and preference was a complicated phenomenon. Smiling and giggling was either interpreted as disliking the pieces or associated with moderate or low preference ratings while serious or neutral faces were either interpreted as liking the pieces or related to high or moderate ratings. As the facial expressions were not the main focus of the two studies, the relationship between music preference and facial expressions needs further examination.

Preference and emotions measured by facial electromyography. Researchers have contributed volumes to the theory, research, and applications pertaining to the relationship

between emotion and music and developed various methods to measure the emotional responses to music (Juslin & Sloboda, 2010). Generally, there are two approaches to classifying emotions: the discrete approach and the dimension models. The discrete approach posits that there are several fundamental/basic emotions such as happy, sad, disgusted and so forth (Ekman, 1970, Izard, 1977) that were universal regardless of people's cultural backgrounds. The dimensional model posits that emotion has two dimensions including valence (pleasant - unpleasant) and arousal (activate-inactivate) and that the specific emotion such as happy or sad can be represented by combinations of the two dimensions (Neumann & Waldstein, 2000). A number of researchers conducted studies based on the two approaches to examine the facial muscle tensions while listening to happy or sad music (Khalfa, Roy, Rainville, Dalla Bella, & Peretz, 2008; Lundqvist, Carlsson, Hilmersson, & Juslin, 2009; Witvliet & Vrana, 2007). Facial EMG was used to measure the activations of facial muscles relating to emotions, including zygomatic muscles (smile), corrugator muscles (frown) and orbicularis oculi (eye closure), but the findings were not consistent.

Witvliet and Vrana (2007) investigated the effect of repeated exposure on music preference and zygomatic/corrugator/orbicularis oculi muscles tensions. The music stimuli were categorized into four groups: a) positive valence/low arousal, b) positive valance/high arousal, c) negative valence/low arousal, d) negative valence/high arousal. There were three pieces in each category. The other three stimuli having moderate valence and arousal were used as practice pieces before the formal testing. Undergraduate students listened to the stimuli six times and rated the stimuli after the first and sixth listening in terms of pleasantness, arousal, preference, and familiarity on the 20-point continuum. Facial EMG data was also collected at the first and sixth listening continuously. Results indicated that participants preferred positive high arousal

pieces more than negative low arousal music. Repeated listening increased the ratings only for positive music while decreased the ratings for negative music. The high-arousal music was related to higher pleasant ratings while negative music generated higher arousal ratings. The pleasant ratings were positively related to the preference for the piece.

Furthermore, the zygomatic EMG reactivity scores were higher for positive music than for negative music and participants' smiles were related to positively arousing music. As expected, corrugator EMG scores were significantly higher when listening to negative music than to positive music. The orbicularis oculi muscle was influenced by arousal as the reactivity of orbicularis oculi increased during high arousal conditions than low arousal conditions. The corrugator and orbicularis oculi EMG decreased after repeated exposure. However, the zygomatic EMG was higher in both phases for positive music, and at the final repetition, zygomatic EMG scores were highest for positive high-arousal music and lowest for negative low-arousal music. Combined with the results of survey instrument, high preference ratings were more related to zygomatic activations

Other researchers explored the relationship between facial expressions and emotions but did not examine the music preference. Khalfa and colleagues (2008) examined the effect of happy and sad music on the activation of zygomatic muscles and corrugator muscles. Adults (N = 50) listened to six classical instrumental music excerpts and orally judged the emotions of the excerpts. Researchers also collected the facial EMG data. Results showed that zygomatic activity was larger when listening to happy music than to sad excerpts. The corrugator was more activated by the sad music than by the happy excerpts, but the difference was not statistically significant.

Lundqvist and others (2009) explored the relationship between participants' (N = 32)

self-reported perceived emotions and facial muscle activity while listening to the popular song with either happy or sad emotion. Results revealed similar patterns as the Khalfa and others' (2008) study. Zygomatic activity increased during happy music, but for the sad music, corrugator activity did not differ from that for happy music.

Some researchers (Roy, Mailhot, Gosselin, Paquette, & Peretz, 2009) explored the effect of pleasant and unpleasant music on facial muscle tension. Researchers used pleasant and unpleasant music of the same arousal level and asked the participants ($N = 16$) to rate the valence and arousal of the music after listening to each excerpt. They also collected facial EMG data relating to the activity of zygomatic muscle, corrugator, and orbicularis oculi. Findings revealed that activity of orbicularis oculi and Corrugator increased while listening to the unpleasant music more than during pleasant music, but the difference in zygomatic muscle activity was not significant between the pleasant and unpleasant conditions. The valence ratings paralleled with the pleasant and unpleasant music, which indicated that participants recognized the emotions of the music.

Thayer and Faith (2001) explored the relationship between musically induced emotions and facial EMG activity. Participants ($N = 12$) listened to eight musical selections categorized into joy, serenity, agitation, and sadness groups and rated the intensity of the emotions. Results indicated that joy ratings were positively related to left zygomatic activity and sadness ratings were related to left corrugator activity.

Preference Studies Using FaceReader

FaceReader (Noldus Information Technology, 2014) is an automatic facial expression analysis (AFEA) program released in 2007. It can classify facial expressions into discrete basic

emotions as described by Ekman (1970), including happy, sad, angry, surprised, scared, disgusted, and neutral. Contempt is in the experimental state in FaceReader 6.0 (Noldus, 2014). The 6.0 version FaceReader can also visualize the test person's state of arousal and valence through Circumplex Model of Affect module as proposed by Russell (1980). It indicates that FaceReader embraces both discrete and dimensional approaches to classify emotions. Literature showed that researchers used FaceReader in marketing and consumer behavior studies, psychology, education, gaming, and user experience research (Noldus, 2014), but so far no studies were related to music. The research projects that used FaceReader to explore participants' preference for sensory stimuli were reviewed in this section as the main purpose of this study is to explore the participants' preference for Chinese Xi-Qu and Western opera video examples.

Literature showed that researchers used FaceReader to examine the relationship between emotions as indicated by facial expressions and preference for video advertisements and brands (Lewinski, Fransen, & Tan, 2014) and for food and drinks (Danner, Haindl, Joechl, & Duerrschmid, 2014; Danner, Sidorkina, Joechl, & Duerrschmid, 2014; de Wijk, Kooijman, Verhoeven, Holthuyzen, & Graaf, 2012; de Wijk, He, Mensink, Verhoeven, & de Graaf, 2014). The findings of food and drink preference studies revealed that facial expressions were good indicators for disliking. de Wijk and others (2012) investigated the changes in participants' (N = 31) facial expressions when inspecting, smelling, and tasting their liked and disliked food respectively and reported that negative facial expressions were related to disliked food. Participants (children, n = 16; young adults, n = 15) visually inspected, smelled, and tasted their three liked and three disliked food. Their facial expressions were recorded and their autonomic nervous system (ANS) responses (skin conductance responses, heart rate, and finger temperature) were also collected. Results of FaceReader analysis showed that the scores of "sad," "disgusted,"

and “angry” for the first encounter of the disliked foods were higher than those for the liked food. Facial expressions for smelling and visually inspecting foods were not related to the liked foods. Moreover, tasting disliked foods produced higher scores of “happy,” “neutral,” and “sad” than the liked foods. The researchers concluded that facial expressions could successfully predict preference for disliked but not for liked foods (de Wijk, Kooijman, Verhoeven, Holthuyzen, & Graaf, 2012).

In another study, young adults’ (N = 19) ANS responses to and facial expressions for five breakfast drinks with similar liking ratings were investigated (de Wijk, He, Mensink, Verhoeven, & de Graaf, 2014). Participants tasted five liked drinks for five times and responded to the two 10-point scales anchored with “absolutely unpleasant” or “very low intensity” on the left and “absolutely pleasant” or “very high intensity” on the right respectively after each tasting to indicate preference and intensity of preference. Their facial expressions were recorded and ANS responses data were collected (skin conductance response, heart rate, and skin temperature). FaceReader 4.0 was used to analyze participants’ facial expressions. Results showed that liking was related to neutral facial expressions, increased heart rate and skin temperature. Intensity of liking was related to more neutral and negative expressions such as sad, angry and surprise. Except for neutral, liking scores were negatively related to all other emotions, including “happy” (De Wijk, He, Mensink, Verhoeven, & de Graaf, 2014).

Some researchers (Danner, Haindl, Joechl, & Duerrschmid, 2014) explored the relationship among participants’ (N = 81) autonomic nervous system (ANS) reactions (skin conductance level, skin temperature, heart rate, and pulse volume), emotions, and self-reported preference for six fruit and vegetable juices. FaceReader 5.0, a biofeedback device with radio module MULTI, and a 9 point hedonic scale in German language were used to collect relevant

data. In particular, researchers collected participants' unintentional facial expressions (spontaneous facial expressions while tasting the juice) and also asked the participants to show how much they liked the juice samples by facial expressions (intentional facial expressions).

Results showed that the juices receiving low self-reported preference ratings elicited significantly more "disgusted" and "sum of negative emotions" than those with high preference ratings. The least preferred juice elicited highest decline of "neutral" in comparison to the baseline. Similar to the de Wijk and others' (2012) findings, the least preferred juice elicited the most intense unintentional "happy" facial expression. The participants explained that they smiled when tasting disliked juice because they were surprised. The relationship between facial expressions and liking ratings were that, for both unintentional and intentional facial expressions, "disgust" showed strongest negative correlation with the self-reported liking (*rho* = -.413 for the unintentional facial expressions, *rho* = -.510 for the intentional facial expressions). The unintended "happy" was negatively correlated with self-reported liking ratings while the intended "happy" was positively related to the liking ratings. Moreover, the self-reported ratings, facial expressions, and ANS reactions only weakly or moderately correlated. The researchers concluded that the intended facial expressions could better differentiate liked, disliked, and neutral juice samples than unintended facial expressions. They suggested that researchers should further explore the meaning of the facial expressions and ANS responses regarding food experience and food related behaviors (Danner, Haindl, Joechl, & Duerrschmid, 2014).

Some researchers (Danner, Sidorkina, Joechl, & Duerrschmid, 2014) also found that explicit facial expressions (intended facial expressions) could better predict participants' preference for six orange juices than the implicit facial expressions (unintended facial expressions). Two groups of young adults (group A = 61, group B = 57) tasted six different

orange juices and rated the juice samples on a 9-point hedonic scale. Participants in group A were informed of recording before data collection whereas participants in group B were unaware of recording when tasting the samples. Findings revealed that explicit facial expressions were related to liking ratings, especially "happy" and "disgusted." As for the implicit facial expressions, "happy" was not related to liking rating significantly, but "neutral" showed a strong negative relationship with disliking, and "angry" and "disgusted" were positively related to disliking.

Unlike the aforementioned studies that were all related to food and drink, Lewinski, Fransen, and Tan (2014) specifically examined the relationship between facial expressions of happy (FEH) and preference ratings for the amusing video advertisements and corresponding brands. Video advertisements with different level of amusement (high, medium, low) were used in this study as stimuli. Participants' ($N = 90$) watched three video advertisements posed online and their facial expressions were collected via webcam. The participants also responded to the 5-point Likert scale regarding their preference for the advertisement and for the brand respectively. FaceReader 5.0 was used to analyze participants' facial expressions. Spearman's rank-order correlations were computed to examine the correlation between facial expressions of happiness and preference ratings for the advertisements and brands. Results showed that facial expressions of happy were positively correlated with preference ratings for the advertisement videos and corresponding brands with high and medium level of amusement whereas no correlation was found for the advertisement with low-level of amusement (Lewinski, Fransen, & Tan, 2014).

Summary

This chapter was a review of literature pertaining to the study of Chinese music majors' preferences for Xi-Qu and opera. I reviewed two models of music preference in the first section: source of variations in music preference and reciprocal response model. The two models stressed the musical, personal, social, and contextual factors that may influence one's music preference and shed light on the understanding of music preference from various perspectives. Limitation was that neither models clearly addressed the influence of audiovisual presentations on music preference. Notably, "country" (LeBlanc et al., 1999; 2000-2001) or "nationality" (North et al., 2008) have been identified as factors influencing music preference in the two models respectively. The comparative studies involving Chinese participants also reveal the effect of cultural background on music preference (Morrison, & Yeh, 1999, J.-C. Wang, 2007). Therefore, researchers should explore music preference of people of various cultural backgrounds. Moreover, the influence of audio-visual stimuli on music preference should be further explored with consideration of familiarity with the musical examples.

The second section was related to the relationship between familiarity and music preference. I first introduced the optimal complexity model and then briefly reviewed Finnäs (1989) and Fung (1993) literature reviews pertaining to familiarity and preference. The focus was on the studies using world music stimulus in which researchers either used self-reported familiarity ratings or developed familiarity with the musical styles through teaching. Findings revealed that in some cases, familiarity was not related to preference consistently. How familiarity influences preference still needs further examination.

The third section covered studies relating to preference for opera and Xi-Qu of different styles among Chinese students and the reasons for music preference. Xi-Qu was generally among

the least preferred styles among music and non-music majors. Opera usually was moderately liked but sometimes was the least preferred among non-music majors. Popular music of various countries was the most welcomed style among non-music majors, but music majors preferred Western European music, including instrumental music and opera, to other styles. The reasons for preference might be familiarity, overwhelming attitudes toward musical styles within the institution and in society, music characteristics such as fast tempi, melody and attractiveness of the singers, as well as the functions of the music and influence of others.

The limitations of the existing literature were the scarcity of study involving listening to Xi-Qu and focusing the factors influencing Xi-Qu preference. Only one study involved Xi-Qu excerpts therefore researchers should further explore Xi-Qu preference based on music listening. Furthermore, the aforementioned reasons were only assumed to be applicable to Xi-Qu as no researcher has examined the specific reasons for Xi-Qu preference. The knowledge of Xi-Qu preference and reasons for liking/disliking Xi-Qu would help music teachers select appropriate teaching materials, and therefore enhance students' experience with Xi-Qu in class. In addition, reasons for liking/disliking opera might help understand the influence of training on music majors' preference for different musical genres and styles. Researchers should further explore these research areas.

The fourth section was an overview of studies relating to audiovisual stimuli, with the focus on studies pertaining to Asian music and vocal examples. Findings suggested that audiovisual presentation of music received higher preference ratings as compared to the audio only presentation, although some researchers reported the opposite results (Finnäs, 2001). Participants preferred video presentation for several reasons, including characteristics of the music plus visual qualities (Fung, 1998), characteristics of the singers such as race and gender

(Killian, 1990), and physical attractiveness to the audience (Wapnick, Darrow, Kovacs, & Dalrymple, 1997). The practical use of the visual information also influenced preference for audiovisual presentation (E. S. Ellis, 2013). So far just a few of studies used audiovisual music out of Western European music traditions. Researchers should use music of various cultures to gain a deeper understanding of the influence of visual information on people's music preference.

The fifth section was a review of literature pertaining to preference for and emotional response to music as measured by subjective interpretation and facial EMG. According to the findings obtained from subjective interpretation, similar facial expressions were related to different levels of self-reported preferences (Geisler, 1990) while neutral and serious-looking faces were related to higher preference ratings (Geisler, 1990, Gilliland & Moore, 1924). The facial EMG literature showed that increased zygomatic activity (smiles) was related to positive valence or happy/joy music (Khalfa, Roy, Rainville, Dalla Bella, & Peretz, 2008; Lundqvist, Carlsson, Hilmersson, & Juslin, 2009, Thayer & Faith, 2001; Witvliet & Vrana, 2007) although exceptions exist (Roy, Mailhot, Gosselin, Paquette, & Peretz, 2009). The relationship between corrugator activity and negative, sad, or unpleasant music was not yet conclusive as a number of researchers did not find a strong relationship between the two (Khalfa, Roy, Rainville, Dalla Bella, & Peretz, 2008; Lundqvist, Carlsson, Hilmersson, & Juslin, 2009) while others reported positive relationship (Roy, Mailhot, Gosselin, Paquette, & Peretz, 2009; Thayer & Faith, 2001; Witvliet & Vrana, 2007). As just a few of studies dealing with the topic of music preference and facial expressions, the relationship between emotional states as indicated by facial expressions and liking/disliking still need further examination so that new methods and tools would be tested and utilized in music preference study.

The sixth section was the review of literature pertaining to preference for sensory stimuli, including gustatory samples and visual stimuli, using FaceReader. Literature showed that facial expressions could better differentiate samples and could better predict preference for disliked food/drinks than for the liked ones. Neutral instead of happy were more related to higher ratings in some studies and happy was more related to lower preference ratings. Explicit facial expressions were well related to preference ratings while the implicit facial expressions were less reliable predictor of preference. Findings involving visual stimuli (amusing video advertisement) offered the different information regarding the relationship between "happy" and preference in that the preference ratings for the video advertisements (with high and medium level of amusement) and advertised brands were positively correlated facial expressions of happy. The findings suggested that the relationship between preference for various sensory stimuli and facial expressions was complicated and needed further exploration.

According to the literature, preference for Xi-Qu and opera using audiovisual stimuli and as measured by FaceReader in music studies was still untapped research areas. The knowledge of preference for Xi-Qu and opera would offer useful information for the Chinese music education community as Xi-Qu had become the compulsory teaching content in general education system. A comparison between Xi-Qu and opera might help music educators understand to what extend the training background would influence music majors' preference. Furthermore, the knowledge of the effect of FaceReader in music preference studies would offer preliminary information to the music researchers. Therefore, the study of Chinese participants' preference for Xi-Qu and opera was warranted.

CHAPTER THREE:

METHODOLOGY

Research Design

The mixed research methods were used for this study of Chinese participants' music preference. I used mixed methods because I intended to investigate the general features of the Chinese participants' music preferences and also to explore the specific reasons for the quantified results in depth.

In comparison to quantitative and qualitative methods, mixed methods research is still a new research paradigm (Creswell & Plano Clark, 2011). Creswell and Plano Clark (2011) provided the definition of mixed methods research based upon the core characteristics:

> In mixed methods, the researcher collects and analyzes persuasively and rigorously both qualitative and quantitative data (based on research questions); mixes(or integrates or links) the two forms of data concurrently by combining them (or merging them), sequentially by having one build on the other, or embedding one within the other; gives priority to one or to both forms of data (in terms of what the research emphasizes); uses these procedures in a single study or in multiple phases of a program of study; frames these procedures within philosophical worldviews and theoretical lenses, and combines the procedures into specific research designs that direct the plan for conducting the study. (p.5)

Since I attempted to explore participants' preference and the reasons for their preference, the convergent parallel design was appropriate for this study. As Creswell and Plano Clark (2011)

defined, the convergent parallel design was an approach when the researcher "uses concurrent timing to implement the quantitative and qualitative strands during the same phase of the research process, prioritizes the methods equally, and keeps the strands independent during analysis and then mixes the results during the overall interpretations" (p.71). In short, the convergent parallel design features collecting quantitative and qualitative data simultaneously. During the data collection process, I used a survey instrument and a video camera combined with FaceReader installed in a computer to collect data for quantitative analysis. I also collected qualitative data by interviewing the participants regarding the reasons for their responses to the survey questionnaire. In this way, participants' preferences for the given stimulus were measured by using different instruments.

Population and Sample

The population of this study was Chinese undergraduate music majors in the Southern China. The main reason for selecting music majors in the South was to investigate the influence of regional culture on music majors' preferences for Xi-Qu styles. As the population was too large, I drew a small sample for this exploratory study. The sampling procedures involve locating cites/location, finding participants, determining sampling strategy, and recruiting participants (Creswell & Plano Clark, 2011). For the convergent parallel design, Creswell and Plano Clark (2011) suggested that researchers should make important decisions such as whether the quantitative and qualitative samples are the same participants and if the sizes of the two samples are equal.

Based on the research purposes and research questions of this study, I used the same participants and equal size for the two samples. Creswell and Plano Clark (2011) specifically

discussed the problems of the sample size in convergent design using equal size for two samples. If the sample size was too big, the qualitative data would lose some of the richness; but small sample size would result in limited statistical analysis and low statistical power. As I mainly used descriptive statistics and one-way ANOVA to analyze the data, 27 participants were recruited as the sample. The sample size could generate acceptable statistical power and also made the qualitative data analysis and FaceReader analysis manageable.

The locations of this study were two institutions in a Southern province of China. As the literature revealed, some people concerned that students in the Southern areas might only like regional Xi-Qu styles so they would refuse to study Jing-Ju, which was developed in the North (Liu, 2011). Recruiting participants in Southern China would address the concern at the college level. The preferences and opinions of music majors in the South would shed light on the understanding of the influence of regional culture on music preferences among music majors.

As for the institutions, school A is a normal university that cultivates teachers of different majors while the other institution (school B) is a college that mainly offers programs relating to foreign language studies. Both institutions have a music school that offers undergraduate music program. After graduation, the music majors in the two institutions are supposed to become music teachers of different levels, but they could also pursue a career as professional performers if they would like to. Furthermore, the majority of the students in the two institutions were local residents of this Southern province.

The qualitative maximal variation sampling strategy was used to draw a purposeful sample for this study (Creswell & Plano Clark, 2011). The maximal variation sampling is a strategy that researchers choose diverse individuals who may hold different perspectives on the research topic. In this study, I purposefully recruited students who played different primary

instruments (Chinese/Western vocalist and Chinese/Western instrumentalist) and might have different experience with Xi-Qu and opera.

I met the deans of the two music schools to discuss the possibility of obtaining permissions to recruit participants for this study. The purposes of the study and the criteria of selecting participants were introduced to the deans in detail. After receiving the deans written permission letters, I obtained the IRB approval at the University of South Florida. I sent the IRB approval letter to the deans of the two institutions by email and later discussed with deans the details of recruitment on the campuses. The deans of schools A and B allowed me to present the research purposes before or after several classes to find the prospective participants. School A divided the undergraduate students into classes based on the majors, so I presented in two instrumentalist classes (instrumentalist, $n = 43$), a voice class (vocalists, $n = 50$), and a popular music major class (vocalists, $n = 21$). After the presentations, some prospective participants in school A directly gave me their contact information and I also left my contact information to the class in case some students might be interested later. The dean in school B offered names of some students ($n = 20$) who might be interested in the study and gave me chance to present the research purpose to the students on school B campus. A few of students showed interest in this study and left their contact information to me. I also left my contact information to the rest of the prospective participants. Finally a sample of 27 participants was recruited for this study.

Central Phenomenon

The central phenomenon of interest of this study was preferences of Chinese collegiate music majors for the examples of Chinese Xi-Qu and Western opera. I collected both quantitative and qualitative data to explore and describe the phenomenon. Descriptive statistics

and inferential statistics were used to portray the general picture of this phenomenon and qualitative interviews were conducted to explore the complexity of the phenomenon in depth. The FaceReader results further described this phenomenon from the psychophysiological perspective in addition to the data collected by self-reported methods.

Musical Stimuli

Four Chinese Xi-Qu and four Western European opera audiovisual examples were selected as stimuli for this study. Both Chinese Xi-Qu and Western European operas have developed considerable body of repertoires that it is nearly impossible to present all characteristics in a single study. A sample was selected for this study based on the following criteria: 1) covering more singing forms (aria, duet, chorus music); 2) being originated from different geographic locations (south, north, and middle of China or different countries). I attempt to show the diversity of Xi-Qu and opera and to examine the participants' preference for different Xi-Qu styles.

Taking all the considerations into account, I selected four Xi-Qu examples originated from or developed in the South and North of China respectively to demonstrate various characteristics of Xi-Qu. The Western opera examples were from Italian, French, and the United States operatic repertoires. The selected examples included choral music, duet and aria of female and male roles to indicate the diversity of Western European opera (see Table 1). I introduced more details of the Xi-Qu examples as these examples probably were not widely known in the Western countries. The Four Xi-Qu examples were selected from the repertoires of four Xi-Qu styles, Jing-Ju (京剧), Kun-Qu (昆曲), Yue-Ju (越剧), and Hebei Bangzi (河北梆子). The four styles and the relevant examples were chosen because of the following reasons.

Table 1.

Audiovisual Stimuli

Country*	Style/Title**	Duration	Tempi***
C	Yue-Ju/The Story of Stones (越剧/红楼梦), Burying Flower Petals (葬花)	1'11"	53
C	Hebei Bangzi/Zhongkui (河北梆子/钟馗), I See the Birds Singing in the Trees (俺只见枝头鸟语弄清声)	1'28"	88
C	Jing-Ju/Yezhu Woods (京剧/野猪林), The Warm April (四月晴和微风暖)	2'45"	67
C	Kun-Qu/Peach Blossom Fan (昆曲/桃花扇),Nan Bolaocui (南鲍老催)	2'37"	43
US	Porgy& Bess, Summertime	1'30"	58
F	Lakmé, Flower Duet	2'04"	112
I	Nabucco, Hebrew Slaves Chorus	1'28"	46
I	Rigoletto/La donna è mobile	1'02"	138

* C = China, I = Italy, F = France, US = the United States of America.
** Only Chinese stimuli offered style information.
*** The value represents the beats per minute

Jing-Ju was the style that the Ministry of Education required the students from first through ninth grades to study, so including this style would make the study relevant to the current circumstances. As for the specific example, this piece was “the Warm April” from the Jing-Ju film “Yezhu Woods” produced in the 1960s. There were a male singer and a female singer sang in turn, acting as a couple on the way to the temple to worship the Buddha. This piece lasted for 2'45" which was the longest example in this study, and the tempo was 67 beats per minute. During the first half of the piece, the male and female singer sang in turn but during the second half of the piece, only the female singer sang. The singers moved several times, mostly making gestures, walking, or looking at each other. Two more Xi-Qu performers were also present in the video but they were just standing behind the two main characters without singing a word.

Kun-Qu was chosen as it was one of the oldest Xi-Qu styles and it has influenced the

formation of many other regional Xi-Qu styles, including Jing-Ju. In addition to the value as music, Kun-Qu was closely related to the Chinese classical literature as all the lyrics were poems that composed by educated scholars. The literature of Kun-Qu can be read as independent classical works without music, a feature that most of the other Xi-Qu styles don't have. At the college level, all the undergraduate students majoring Chinese literature would study some Kun-Qu works as they were significant to Chinese cultural heritage. Thirdly, Kun-Qu was originated in the South of China but once it was influential nationwide. Although it was originated in the South, it doesn't use regional dialect but the ancient official spoken Chinese which was different from many other regional styles that used dialects. Thus, I chose this style due to the uniqueness and the values Kun-Qu bears in Chinese culture.

The Kun-Qu example was selected from the Kun-Qu work "Peach-Blossom Fan" (桃花扇). This work integrated modern elements in the traditional Kun-Qu, such as lighting, costumes, stage scenery design, and composition. This work was newly edited in 2007 and performed in China and overseas since then. Despite the modern elements, the singing skills and stylized acting were still of traditional Kun-Qu. This work was chosen to show the new trend in Kun-Qu performance. This example lasted for 2'37" and the tempo was 43 beats per minute. Two singers acted as a young couple who departed in war and reunited after the war. They sang in turn with gentle dance movement and sobbed, showing sad emotion. The second half of the example was the two singers' acting with instrumental accompaniment.

Yue-Ju style was chosen because this style was one of the regional Xi-Qu styles in the province from where the sample was drawn. The participants' response to this Yue-Ju example would help understand the influence of regional culture on preference for Xi-Qu. Furthermore, Yue-Ju style was also one of the regional Xi-Qu styles that enjoyed wider popularity than other

Xi-Qu styles within this province as it was considered one of the “Big Five” regional Xi-Qu styles in China. Even in the areas in which people speaking different dialects from this Southern province also enjoyed this style. The Yue-Ju example was “Burying Flower Petals” selected from the Yue-Ju work “Story of Stone” (红楼梦) which was a well-known and classical Yue-Ju work. This example lasted for 1'11" and the tempo was 53 beats per minute. In this piece, a female singer sang and had gentle dance movements that differed from that in “Yezhu Woods.” The scenery was a garden in which the main character sang and tried to bury flower petals.

Hebei Bangzi was chosen because it was one of the Northern Xi-Qu styles. I intended to select equal number of Southern and Northern styles to gain insights in the influence of the regional culture on preference. Hebei Bangzi was originated from the Western China, but developed in the North and used the Northern dialect, so it was different from the Southern style Yue-Ju. There were many Northern Xi-Qu styles, such as Ping-Ju (评剧), Hebei Laodiao (河北老调) , but as the dialect of these styles were similar, selecting Hebei Bangzi could serve the current research purpose. The example was selected from the Hebei Bang-Zi film “Zhongkui” produced in 1990s. Zhongkui was a well-known god in Chinese myth whose duty was to capture evils and ghosts. The singer in this piece was a female but played a male role and the type of facial make-up was painted-face. The face color was mainly red, indicating that the character was a loyal and righteous person. This example lasted for 1'28" and the tempo was 88 beats per minute. The singer sang while danced and the dance movements were more difficult and complicated than that of the other three Xi-Qu examples.

The operatic examples were selected from Italian composer Verdi’s operas “Rigoletto” and “Nabucco,” Delibes’s “Lakmé,” and Gershwin’s “Porgy and Bess.” The specific examples were “La donna è mobile” (tenor, 1'02", 138 bears/minute), “Hebrew Slaves Chorus” (chorus,

1'28", 46 beats/minute), “Flower Duet” (duet, 2'04", 112 beats/minute), and “Summertime” (soprano, 1'30", 58 beats/minute) respectively. I selected two Verdi’s work as I wanted to see the participants’ preference for the different works of a same composer so that the comparison would be more meaningful. I selected Gershwin’s work because the music style of his work was different from the Western European opera therefore to show the diversity of Western opera. As Delibes was a French composer, selecting his work would show the diversity of the Western European opera.

The singers of these examples were prestigious opera and Xi-Qu musicians. Particularly, the Xi-Qu musicians were well acknowledged not only by the audience, but also by the Chinese government. Some of them were the winners of the national Xi-Qu contest “Plum-flower Perform Award;” others were older Xi-Qu musicians that were highly regarded as the representatives of the relevant Xi-Qu styles. The younger singers in “Peach-Blossom Fan” were among the new generation of Xi-Qu musicians and were awarded as the “Excellent Young Musician” in the national Kun-Qu contest. I have decided to keep the singers anonymous to avoid a stardom effect and privacy concerns.

Instruments/Measures

I used multiple measures and instruments to explore Chinese music majors’ music preferences. The data were collected on three sources: questionnaire, FaceReader, and interview. These self-reported methods (questionnaire, interview) and psychophysiological measure (FaceReader) collected quantitative and qualitative data to address the research questions.

Quantitative instruments and measures. I used two instruments to collect quantitative data. A questionnaire was used to collect quantitative data; a video camera and FaceReader

installed in a computer were used collected quantified facial expressions analysis results.

Purpose of the instruments. The purpose of the quantitative questionnaire was to collect participants' self-reported ratings regarding preference for and familiarity with the stimuli, their most liked and disliked elements of the given stimulus, their demographic information and musical training backgrounds. The collected data pertained to participants' preference, familiarity with the musical examples, the reasons for preference, participants' primary instruments, years of musical training, and demographic information of the participants.

The purpose of using FaceReader plus video camera was to collect participants' quantitative results of facial expressions while they were watching the stimuli. The recorded facial expressions alone were not considered as quantitative data until the data were analyzed by FaceReader and changed to quantified results. The quantified data were the scores of emotions, valence, and arousal upon which one can examine participants' emotional responses to the given stimuli.

The rationale for using FaceReader was to provide data triangulation, to explore the effectiveness of this device in music preference study, and to acknowledge the time-dependent nature of music. As affect and emotion are subjective phenomena, any method measuring affect and emotion has limitations to collect data accurately and completely, so multiple methods should be used for data triangulation (Hodges, 2010, Koelsch, Siebel, & Fritz, 2010; Schubert, 2010; Zentner & Emerola, 2010, Västfjäll, 2010). Researchers usually used post-performance self-report measures (Schuber, 2010; Zentner, & Eerola, 2010) in preference and emotional response studies as it was easier to collect and interpret data. The limitations of self-reported measures included demanding characteristics, strategic responding and limited access to the internal process (Västfjäll, 2010). Researchers have tried to use methods that can measure

participants' affect and emotion more objectively and indirectly, such as psychophysiological measures, functional neuroimaging and indirect perceptual, cognitive, and behavioral measures (Hodges, 2010; Koelsch, Siebel, & Fritz, 2010; Västfjäll, 2010). Problems may arise as the data collected by some methods could not be interpreted without self-reported responses. Thus, it would be desirable to use multiple measures in a single study to increase the validity of the data. In this study, I used FaceReader to collect participants' emotional responses based upon participants' facial expressions. The facial expressions data can be triangulated with the data collected by self-reported methods (Likert-scale, non-multiple choice questions, and oral comments).

Secondly, as discussed in the first chapter, FaceReader was less intrusive than some equipments and devices to measure facial expressions. The non-intrusive feature of FaceReader may reduce the possibility of participants' nervousness accompanied with some other devices. A number of studies have revealed positive results regarding the validity of FaceReader analysis (Drozdova, 2014; Lewinski, Fransen, & Tan, 2014; Terzis, Moridis, & Economides, 2010), which lays a foundation for exploring the music research domain. Moreover, the 6.0 version FaceReader has enhanced ability to analyze the East Asian faces which probably would increase the validity of the analysis results.

Finally, in the recent four decades, a number of researchers suggested that as music was time dependent, participants' emotions might vary as the music unfolds. Thus, the emotional response to music should be measured continuously (Schubert, 2010). In this study, the continuous measurement could help understand the changes of emotional states during the listening process and find reasons for such changes dynamically. Using FaceReader fitted in the purpose of this research with the consideration of the time-dependent property of music.

Content, format, and scoring of the instruments. *Questionnaire*. Items on the questionnaire were related to participants' level of preference for the stimuli, most liked and disliked elements of the stimuli, familiarity with the given stimuli, participants' demographic information, and participants' music training background (see appendices A and B).

I used the 7-point Likert-scale (1 = strongly dislike, 7 = strongly like) to collect participants' self-reported preferences. Participants marked the number that would best express their preference for the stimuli. In general, the higher rating scores indicated higher level of preference while lower ratings suggested lower level of preference. The other 7-point Likert-scale (1 = not familiar at all, 7 = very familiar) were used to determine the participants' familiarity with the stimuli. The higher ratings suggest higher levels of familiarity with the stimulus and vice versa.

I used two non-multiple choice questions to determine the most liked and disliked elements of the given stimuli, including singing, dancing, acting, accompanying instrumental music, costumes, facial make-up, and scenery for the play. These elements were the integral parts of the Chinese Xi-Qu and some operatic works. Participants were asked to mark the items that they liked and/or disliked the most. Participants marked "other" to indicate the liked/disliked elements that were not listed.

The last section of the questionnaire contained multiple choice questions and open-ended questions to collect information regarding participants' age, gender, ethnicity, primary instrument, years of studying primary instruments and classification.

FaceReader and video camera. FaceReader was a software program that could analyze pictures and videos to generate quantitative data. The formats of the data were numerical logs and charts to show the scores of valence, arousal, emotions, and the ongoing emotional responses

to the stimuli.

Qualitative instrument. The instrument that collects qualitative data was an interview protocol. The purpose of using interview protocol was to collect participants' oral explanations for the responses to the questionnaire.

Format of interview. As I wanted to elicit more information regarding the reasons for participants' responses to the questionnaire, I used the semi-structured interviews to collect data. The features of a semi-structured interview were that participants answered the same set of questions, but the researcher could ask more relevant questions as the conversation flowed to explore the phenomenon based on the participants' individual experience with the stimuli.

The main reason for using a semi-structured interview was that the qualitative portion of the data was to explore the reasons for the preference scores in depth. Considering that participants might have different study focus (vocalist or instrumentalist) and previous experience with the musical examples, the participants would be allowed opportunities to tell the reasons for their preferences that might be unique to the individual, and the information might help in understanding complexity of their music preference for Xi-Qu and opera.

As Creswell and Plano Clark (2011) suggested, researchers should ask parallel questions in both the quantitative and qualitative data collection process in the convergent design. They further suggested that the same concepts need to be addressed in both quantitative and qualitative data collection so that the two sets of data could be merged and compared. Thus, the interview protocol was closely related to the quantitative survey instruments. The questions were related the participants' specific reasons for the responses to the questionnaire, including reasons for the preference ratings, familiarity ratings, and the liked and disliked elements. Some questions pertained to the emotions that encompass the participant during the watching process. The

questions in the protocol were as follows:

1, What are your general impressions about the artwork in this video?

2, Describe your previous experience with this piece or style.

3, Did you find any elements in this piece that are interesting or that you don't like? Why?

4, What were the emotions that encompassed you when you were watching the video?

Data Collection

Creswell and Plano Clark (2011) suggested that the procedures of data collection in mixed methods research included sampling procedures, obtaining permissions, collecting information, recording data, and administering the procedures. The sampling procedures were presented in the previous section, so I present the rest of the data collection procedures in this section.

After obtaining the University of South Florida Institutional Review Board approval, I sent the consent form to the prospective participants to inform them of the study purpose and procedures through email at least one week prior to the data collection. Then I scheduled the data collection dates with the prospective participants who were willing to participate. Before data collection, I first orally presented the details of the study to the prospective participant, and started collecting data after obtaining the signed consent form.

The data were collected individually in a quiet classroom on campus. During the data collection, the participant watched the musical examples in different order on a Lenovo laptop running Windows 7. A Panasonic video camera was placed on the top of the laptop to collect participants' facial expressions while watching the musical examples. After watching each of the

eight examples, the participant responded to the questionnaire pertaining to the preference level, familiarity with video, and the most liked and disliked elements. The interview protocol was administered to collect participants' thoughts and opinions about the video. I went through the same procedures for all eight musical examples. The interviews were recorded through Microsoft Windows Sound Recorder on a Lenovo laptop. While interviewing, I took notes regarding the words and phrase mentioned by the participants that might be important and also wrote down my short comments on the participants' responses.

After watching all the musical examples, the participants answered the last section of the questionnaire regarding their age, gender, classification, study focus and musical training. The recorded video and audio files were stored in a password-protected laptop.

Measures for Maintaining Confidentiality

In order to maintain confidentiality, each participant was assigned a subject number when storing the data. No identifiers appeared on the saved video data or questionnaire and all data have been kept confidential. 27 pseudonyms were used and the final report didn't contain any information locating the individual, such as the names of the students, institutions, and city. Only groups of data were presented in this report.

The visual data were stored in a password-protected computer. All collected data were stored in a locked location for 5 years upon study closure with the IRB. The dissertation committee and IRB personnel were the only individuals with access to data when needed.

Data Analysis

The general data analysis procedures included preparing the data for analysis, exploring the data, analyzing the data, representing the data analysis, interpreting the results, validating the data and results. For the convergent design, the researcher needs to decide the dimensions and to specify the information that would be compared from the quantitative and qualitative databases (Creswell & Plano Clark, 2011). I followed these procedures to analyze the two databases separately and then to compare the results and findings to answer the research questions.

Quantitative analysis. ***Questionnaire.*** I scored the questionnaire to prepare for analysis. Descriptive analysis and inferential statistics were used to analyze the data obtained from the survey instrument. Specifically, I used descriptive statistics to compute the mean, median, range, standard deviation, skewness, and kurtosis of the preference and familiarity ratings.

Furthermore, I use Pearson Product-moment Correlation Coefficient to examine the relationships between familiarity and preference ratings. One-way ANOVA was computed to examine the difference in the mean reference ratings for the eight musical examples. Tables and figures were created to present the results and answer the research questions.

Finally, I computed the frequency of the mostly liked and disliked elements as selected by the participants in order to find the reasons for liking or disliking the piece. I create figures and tables to present the quantitative analysis results.

FaceReader files. I first examined the quality of the facial expression videos and found that all the videos were qualified for further analysis. I prepared the data for analysis by assigning numbers to the participants (1-27). Each participant had eight facial expression videos that were assigned numbers from 1 to 8 in the order of "Story of Stone," "Zhongkui," "Yezhu Woods," "Peach-Blossom Fan," "Summertime," "Flower Duet," "Hebrew Slaves Chorus," and

"Rigoletto." If the video was the facial expressions of participant number 2 when watching "Rigoletto," the video's representative number was 2-8. All the video data were numbered accordingly. The numbered files were loaded in FaceReader 6.0 for analysis. The EastAsian face mode was selected to analyze participants' facial expressions.

After obtaining the individual emotional states files, I used the Temporal Analysis Module to examine participants' facial expressions for each stimulus in group. Namely, this module was to examine all the participants' facial expressions when they were watching the same video. I took notes of the obvious emotional changes among participants and examine the reasons for the changes. Then I used the Numerical Analysis Module to calculate average emotional states, valence, and arousal for each musical example. FaceReader automatically generated numerical logs, figures and charts and I used the outputs of FaceReader to present the results.

Furthermore, Spearman rank order correlations were computed to examine the relationships among the preference ranking, the rankings of each emotion for the musical examples, the sum of negative emotions, and the rankings of valence and arousal of the musical examples.

Reliability of the quantitative data. Reliability was the consistency with which an instrument measures (Boyle & Radocy, 1987). I calculated coefficient alpha to estimate the internal reliability of the instrument. The results were presented in the fourth chapter.

Moreover, Royle and Radocy (1987) suggested that researchers should increase the reliability by offering comfortable testing environment, give simple and clear directions, and strive for potential for a wide range of scores. I took following strategies to increase the reliability of the test. I used a quiet classroom with minimal decorations to avoid distraction. The

classroom resembled the teaching environment with which the participants were familiar. In addition, the wording of the questions in survey questionnaire was simple and straightforward. The questionnaire was sent to two experienced music education faculty members to check the clearness and appropriateness of the questions. During data collection, I introduced the study and explained the questions on the questionnaire until the participants said that they fully understood the research procedures and questions. As to the potential for a wide range of scores, it is my intention to select examples that to show the diversity of Xi-Qu and opera. I selected musical examples from different regions or countries and try to cover more roles and singing formats.

Validity of the quantitative data. I took several strategies to increase the validity of the study. I first considered how well the questionnaire and musical examples cover the construct of Xi-Qu and opera as well as preference for these styles (content validity). I consulted a music history faculty member and a voice faculty member in the United States to select the operatic examples. They both have a doctorate in related areas. A Chinese music education faculty member and a doctoral student majoring music education were consulted to select Chinese Xi-Qu examples to ensure the diversity of Xi-Qu. They had experience of teaching Xi-Qu in conservatory and performing some Xi-Qu styles on stage. I did not consult professional Xi-Qu musicians because the vast majority of Xi-Qu styles have formed schools within a style, the musicians of certain school probably might be protective to their own school's musicians and Xi-Qu works.

The eight prospective musical examples (four Xi-Qu and four opera) and a questionnaire were sent to three Chinese judges. They held the master's degree in music education or voice and all have studied Western vocal skills and Xi-Qu singing skills. They were required to recognize the styles of the Xi-Qu examples, and rated the overall quality of the musical examples on the 7

point Likert scale (1 = not good at all; 7 = very good). All specialists recognized the Xi-Qu styles correctly and seven musical examples received scores above 6 which were acceptable for the test. One Xi-Qu example received moderate rating from one judge due to the sounding effect. The other Xi-Qu example was selected and sent to the judges again and then received agreement among judges on the good quality. Therefore this new example replaced the previous one as the musical stimulus for this study.

Secondly, I recruited undergraduate instrumentalists and vocalists who had different experience with Xi-Qu and opera to increase the external validity of the study. However, I only attempted to generalize the results to a subpopulation, namely, the music majors in a Southern city in China.

During data collection, I tried to follow the same procedures, and played music on the same computer. I also tried to create similar lighting conditions throughout the data collection as this study might be carried out in different universities. It ensured the consistency in the quality of the facial expression videos.

Qualitative data analysis. I transcribed the interview recordings to prepare for data analysis. While transcribing the interviews, I repeatedly listened to the conversations and transcribed verbatim. I also took notes when I found the opinions or words or phrases that might be important for further analysis. Sometimes I watched the videos of facial expressions to examine if their comments regarding their emotional responses were in accordance with what was shown in the videos. Finally, the 32-hour interview recordings generated 608 pages of text in 12-point font, single-spaced Chinese transcripts. After I finished transcribing, I had a general idea about each participant's opinions about opera and Xi-Qu.

***Coding the transcripts*.** I printed out a hardcopy of the transcripts and divided the copy into 27 parts by each participant so that I could carry it and read it more conveniently. During the process of the first round of coding, I read through the transcripts and immersed myself into the data. I made notes on a notebook when I found the words and sentences that might be important. I paid special attention to the statements or opinions directly relating to the research questions and underlined the relevant statements using red color pen. I also wrote my thoughts in the margins of the page. Meanwhile, I created Microsoft Word files in my laptop and copied and pasted the participants' comments that might be related to the research questions on the files based on the specific topics. The files were saved in my laptop with names of the relating issues/elements and each participant's comments were denoted with the page number, the assigned number of the participant, and the names of the musical examples on which the participant made comments.

I tried to create codes using the participants' words but sometimes I abstracted the codes from the trunks of the text. As there were existing models of music preferences (LeBlanc, Jin, Stamou, & McGrary, 1999; North & Hargreaves, 2008), I tried to avoid the influence of the existing models but to find patterns based on the responses of this group of participants. Later I found that the participants' responses generated codes very similar to the items in the existing literature so I kept these codes for further analysis. After the first found coding, I derived a list of codes and the files of the quotes relating to the codes.

During the process of the second round coding, I used blue color pen to differentiate the previous marks on the hardcopy. I tried to connect the codes with the research questions and to compare the participants' responses to the same questions. It was helpful to see the similarity and difference in the participants' perspectives toward the same topic. I found that some participants

shared the same or similar opinions so I counted the number of participants who held the similar opinions about an element, a concept, or an event. I also referred to the codes created during the first round coding and reflected on the need to revise the codes or to create new codes.

Finding the themes. I used pile sorting (Bernard, 2011) to find the themes. I first wrote the codes on the 8×10 cm paper cards and wrote the page number on the back of the card. I used a 120 × 240 cm table to group the cards into piles and named each pile. Some codes were easily put into groups while others needed grouping and regrouping back and forth. I named the piles and further explored and coded the piles to see if I could put them into lager categories (Bernard, 2011). The codes were sorted for several times until the framework emerged (see Appendix C). I found that the participants' responses formed a model of Xi-Qu and opera preference to demonstrate the factors influencing their preference decisions. By this point, I started to translate the structure of the model and the relevant quotations from Chinese into English.

After completing two data sets analysis, I compared the two sets of results by creating a side-by–side comparison table to present the results (Creswell & Plano Clark, 2011). The dimensions of the comparison were preference, reasons for preference, and familiarity. The quantitative results were place on one side while the qualitative themes and quotations were on the other. I answered the research questions with the compared and merged results.

Reliability and validity evidence. I took the following strategies to increase the reliability and validity of qualitative data and data analysis. I sent the transcripts of the interview to the participants for member checking. They were asked to delete the portion that might distort their true opinions. Secondly, a second coder who was the music education faculty member in a Chinese college coded the transcript for inter-coder reliability. The faculty member held a master's degree in music education and conducted qualitative research before. We discussed and

exchanged opinions and reasons for sorting the codes into categories after pile sorting. We agreed with the most of the themes and subthemes, but at first disagreed with some subthemes under "familiarity" of "personal factors." After discussion, I decided to delete a subtheme from the prospective model as the content in this section might be integrated into other subthemes. Furthermore, I compared responses of participants of the same institution regarding the curriculum and school activities (data triangulation). Furthermore, I compared the qualitative results to the preference theory and literature for theory triangulation.

Bernard (2011) suggested that researcher needed to constantly check the validity of the data and analysis results. People were less likely to tell their true feelings to a person about whom they never knew, so it was important to build rapport with the participants (Spradley, 1979). I contacted the participants several days before data collection to chat and had dinner or lunch together so that they could talk with me with ease during the data collection. Secondly, I looked for consistencies and inconsistencies among the participants' responses and tried to find out why they held different opinions (Bernard, 2011). I also paid attention to the inconsistencies in the participant's responses to the same questions for the different musical examples and tried to find the underlying factors for the diversity of the responses.

Summary

This chapter presented the methodology of this study. I mainly discussed the research design, population and sampling strategy, questionnaire, and interview protocol. Data collection and analysis procedures were introduced. I also discussed the measures of maintaining confidentiality as well as the evidence of reliability and validity of data and analysis. In the following chapters, chapter four presents the results of questionnaire and FaceReader, and

chapter five presents the results of qualitative interviews. Chapter six contains the combined results to answer the research questions. Furthermore, discussion and recommendations for future research are discussed.

CHAPTER FOUR

QUESTIONNAIRE AND FACEREADER RESULTS

This chapter contains the results of the questionnaire and FaceReader pertaining to Chinese music majors' preference for Chinese Xi-Qu and Western operatic examples. First, I present the questionnaire results. The second section focuses on the results of FaceReader.

Music Preference Questionnaire

The results of the questionnaire are presented in this section. First, I present the participants' demographic data, followed by their musical training backgrounds, preference and familiarity mean ratings for the individual musical example and the two genres (Xi-Qu and opera), the relationships between familiarity and preference, and the most liked and disliked elements in each musical example.

Demographic information and training backgrounds. The participants responded to the questions pertaining to their demographic information and training backgrounds on the last page of the questionnaire. Descriptive statistics were used to examine the participants' age, gender, years of training in primary and secondary instruments, place of birth, ethnicity, and classifications. As shown in Table 2, a total of 27 participants (female, $n = 19$, male, $n = 8$) from two higher education institutions (school A, $n = 25$, school B, $n = 2$) completed the data collection. The gender ratio was common in Chinese higher education as more females than males pursue a degree in music. 25 participants were sophomores and 2 of them were freshmen. The participants' ages ranged from 18 to 22 ($M = 20.18$) and all of them were of Han Chinese

ethnicity. The majority of the participants (*n* = 25) were local residents of this Southern province while two of them were from a province in the middle region of China.

Table 2.

Demographic Table with Mean (SD)

	Instrumentalists (*n* =14)	Vocalists (*n* =13)
Age	20.0(.96)	20.4(1.08)
Gender (F/M)*	12/2	7/6
Place of birth(W/O)**	14/0	11/2
Type of primary instrument (C/W/P)***	2/12/0	3/6/4
Years of studying primary instrument (C/W/P)***	6 (2.82)/4.9 (2.34)/0	3.7(1.52)/3.0(0)/2.5(1.0)

* Female/Male
**Within this Southern province/ Outside of this Southern province
*** Chinese instrumentalist or vocalist/Western instrumentalist or vocalist/popular vocalist

As for the musical training backgrounds, this sample contained 13 vocalists and 14 instrumentalists and the participants overall had had comparatively balanced training for voice and musical instruments. The vocalists could be further divided into three subgroups: Chinese style vocalists (*n* = 3), Western style vocalists (*n* = 6), and popular music majors (*n* = 4). The average years of training ranged from three years and seven months for Chinese style, three years for Western style, and two years and six months for popular style.

Piano was the required secondary instrument among the Western and Chinese style vocalists. Some of them had three years of experience with the piano (*n* = 6) and the rest of the participants had at least six months of training in the electronic keyboard. The popular style vocalists studied a varieties of secondary instruments, including guitar (*n* = 1), saxophone (*n* = 1), Guzheng (古箏) (*n* = 1), Guqin (古琴) (*n* = 1), and drumsets (*n* = 2). The years of studying secondary instruments among popular style vocalists ranged from ten years to less than one year.

The instrumentalists had two subgroups: Western instrumentalists (n = 12) and Chinese instrumentalists (n = 2). Some instrumentalists had studied their main instruments for seven to ten years (n = 4), while others studied for six years or less (n = 10). All instrumentalists had voice trainings at least for one year, and the majority of them studied voice for two years (n = 7) or more than three years (n = 4). In addition to primary instruments, two participants studied Guzheng and one participant studied bamboo flute (竹笛) and saxophone. The two Chinese instrumentalists had six months of piano training.

Internal consistency of the preference ratings. Cronbach's alphas were calculated to determine the internal reliability of the preference ratings. An alpha of .73 was obtained for all the musical examples. The alphas for the two genres were also obtained based on the four Xi-Qu and four operatic pieces respectively: Xi-Qu, .81; Western opera, .37. The coefficients of the preference ratings for Xi-Qu were acceptable, but the alpha for Western opera was low. The results indicated that the ratings for Xi-Qu examples were more consistent than those for Western opera.

The correlation matrix was created to examine the relationships among the four Xi-Qu examples. Results showed that the Pearson's rs among the four Xi-Qu examples ranged from low to moderate, with the correlations of .25 to .73. The correlation between "Peach-Blossom Fan" and "Zhongkui" didn't show a statistically significance, while the rest of the correlations were statistically significant (see Table 3).

Pearson's Product-Moment Correlations were computed to examine the relationships among the four operatic examples regarding the preference ratings. As shown in Table 4, the correlation coefficients ranged from .27 to -.01. Notably, the correlation between "Rigoletto" and "Hebrew Slaves Chorus" was negative (r = -.01).

Table 3.

Correlation Matrix of the Preference Ratings for the Xi-Qu Examples

	1	2	3	4
1. *Story of Stone*	---			
2. *Zhongkui*	.45*	---		
3. *Yezhu Woods*	.59**	.46*	---	
4. *Peach- Blossom Fan*	.73**	.25	. 64**	---

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 4.

Correlation Matrix of the Preference Ratings for the Operatic Examples

	1	2	3	4
1. *Summertime*	---			
2. *Flower Duet*	.03	---		
3. *Hebrew Slaves Chorus*	.17	.16	---	
4. *Rigoletto*	.16	.27	-.01	---

Internal consistency of the familiarity ratings. Pearson's Product-Moment Correlations were computed to examine the relationship among the Xi-Qu examples and the operatic examples regarding the familiarity ratings. First, the correlation matrix was created to examine the relationships among the four Xi-Qu examples regarding the familiarity ratings (see Table 5).The moderate correlations were found among the four Xi-Qu examples, and the *r*s ranged from .71 to .41.

The correlation matrix was created for the operatic examples (see Table 6). Results showed that the correlations ranged from .09 to .56 and most of them showed statistical significance. The only exception was that no statistically significant relationship was found between "Hebrew Slaves Chorus" and "Summertime."

Table 5.

Correlation Matrix of the Familiarity Ratings for the Xi-Qu Examples

	1	2	3	4
1. *Story of Stone*	---			
2. *Zhongkui*	.68**	---		
3. *Yezhu Woods*	.41*	.52**	---	
4. *Peach- Blossom Fan*	.55*	.71**	. 66**	---

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Table 6.

Correlation Matrix of the Familiarity Ratings for the Operatic Examples

	1	2	3	4
1. *Summertime*	---			
2. *Flower Duet*	.47*	---		
3. *Hebrew Slaves Chorus*	.09	.50**	---	
4. *Rigoletto*	.38*	.56**	.37*	---

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Preference ratings. The participants' responses to the first question on the first through the eighth pages of the questionnaire were the preference ratings for the musical examples. Descriptive statistics were computed to examine the mean preference ratings of the musical examples (see Table 7).

As shown in Table 7, results indicated that "Rigoletto" was the most preferred piece (M = 5.85, SD = 0.95), followed by "Summertime" (M = 4.85, SD = 0.91), "Hebrew Slaves Chorus" (M = 4.67, SD = 1.14), "Story of Stone" (M = 4.52, SD = 1.19), "Flower Duet" (M = 4.19, SD = 1.21), "Peach-Blossom Fan" (M = 4.00, SD = 1.33), "Zhongkui" (M = 3.74, SD = 1.40), and "Yezhu Woods" (M = 2.85, SD = 1.49). The smaller standard deviations of "Rigoletto" and "Summertime" indicated that this group of participants was more homogeneous in preference for

the two examples. On the contrary, participants had more diverse opinions for Xi-Qu examples as indicated by the bigger standard deviations.

The composite mean preference rating of Xi-Qu was obtained by averaging the mean preference ratings of the four Xi-Qu examples, while the composite mean preference rating for opera was obtained by averaging the mean preference ratings of the four operatic pieces. The composite mean preference ratings for the two genres were 3.78 (*SD* = 1.47) for Xi-Qu and 4.89 (*SD* = 1.20) for Western opera (see the last two rows in Table 7).

Table 7.

Results of Descriptive Statistics of Preference Ratings

Stimulus	*M/SD*	*Skewness/SE*	*Kurtosis/SE*
Western Opera			
Rigoletto	5.85/.91	-.69/.45	.04/.87
Summertime	4.85/.91	- 1.02/.45	2.36/.87
Hebrew Slaves Chorus	4.67/1.14	.39/.45	-.41/.87
Flower Duet	4.19/1.21	.18/.45	-.32/.87
Chinese Xi-Qu			
Story of Stone	4.52/1.19	.18/.45	.21/.87
Peach-Blossom Fan	4.00/1.33	-.21/.45	.31/.87
Zhongkui	3.74/1.40	-.22/.45	-1.07/.87
Yezhu Woods	2.85/1.49	-.03/.45	-1.46/.87
Genre			
Chinese Xi-Qu	3.78/1.47	-.26/.23	-.44/.46
Western Opera	4.89/1.20	-.23/.23	-.41/.46

Boxplots were created to show the distributions of the participants' preference ratings. As Figure 1 shown, among the operatic examples (piece 5-8), almost all the ratings for "Rigoletto" and "Summertime" were on the positive side except for a few of outliers. However, the ratings

for “Hebrew Slaves Chorus” and “Flower Duet” were less consistent. For “Flower Duet”, 50% of the participants gave the neutral preference ratings or lower while the rest 50% participants gave the preference ratings above the midpoint of the scale. For “Hebrew Slaves Chorus”, 15% of the preference ratings were on the negative side.

As for the Xi-Qu examples, the ratings for “Story of Stone” were more toward the positive side as 75% of the preference ratings were on the positive side, while “Yezhu Woods” were more on the negative side of the continuum as 75% of the preference ratings were on the negative side. The preference ratings for “Zhongkui” and “Peach-Blossom Fan” were more heterogeneous than the other two Xi-Qu pieces. Especially “Peach-Blossom Fan,” 25% of the ratings ranged from “5” to “7” while 25% of the ratings ranged from “1” to “3.”

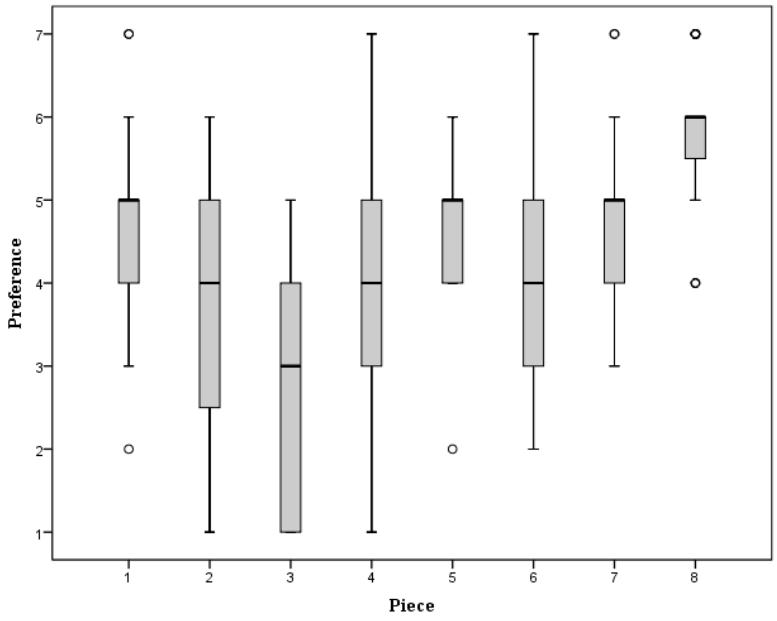

Figure 1. Boxplots of the preference ratings. On the X-axis (Piece), 1 = “Story of Stone”, 2 = “Zhongkui,” 3 = “Yezhu Woods”, 4 = “Peach-Blossom Fan,” 5 = “Summertime,” 6 = “Flower Duet,” 7 = “Hebrew Slaves Chorus,” and 8 = “Rigoletto.” The Y-axis represents the preference ratings.

One-way ANOVA was computed to compare the preference means of the eight examples. Results showed that the difference was statistically significant regarding the preference ratings among the eight musical examples, F (7, 208) = 14.15, $p < .01$. Further, results of Tukey's HSD analysis indicated that "Rigoletto" received significantly higher preference rating than other examples except for "Summertime." "Summertime" received significantly higher preference rating than "Zhongkui" and "Yezhu Woods." Furthermore, "Yezhu Woods" received significantly lower preference rating than the other examples except for "Zhongkui."

Familiarity ratings. The participants' responses to the second question on the first through the eighth pages were the familiarity ratings for the eight musical examples respectively. Descriptive statistics were computed to examine the familiarity variable (See Table 8).

Table 8.

Results of Descriptive Statistics of Familiarity Ratings

Stimulus	*M/SD*	*Skewness/SE*	*Kurtosis/SE*
Western Opera			
Rigoletto	4.00/1.98	.26/.45	-1.17/.87
Summertime	2.33/1.04	.82/.45	-.21/.87
Hebrew Slaves Chorus	3.15/1.46	.84/.45	.58/.87
Flower Duet	2.70/1.49	.40/.45	-.82/.87
Chinese Xi-Qu			
Story of Stone	3.22/1.72	.17/.45	-1.24/.87
Zhongkui	2.78/1.83	.72/.45	-.87/.87
Peach-Blossom Fan	2.89/1.78	1.01/.45	-.21/.87
Yezhu Woods	2.33/1.59	.80/.45	-.36/.87
Genre			
Chinese Xi-Qu	2.81/1.74	.63/.23	-.85/.46
Western Opera	3.05/1.63	.81/.23	.04/.46

Results showed that the mean familiarity rating for "Rigoletto" was highest (M = 4.00 , SD = 1.98), followed by "Story of Stone" (M = 3.22 , SD = 1.72), "Hebrew Slaves Chorus" (M = 3.15 , SD = 1.46), "Peach-Blossom Fan" (M = 2.89 , SD = 1.78), "Zhongkui" (M = 2.78 , SD =

1.83), “Flower Duet” (*M* = 2.70 , *SD* = 1.49), “Summertime” (*M* = 2.33 , *SD* = 1.04), and “Yezhu Woods” (*M* = 2.33 , *SD* = 1.59). The composite mean familiarity ratings for Xi-Qu and Western opera were obtained based on the four Xi-Qu and four operatic pieces respectively. The composite familiarity rating for Xi-Qu was 2.81, *SD* = 1. 74, while the composite familiarity rating for opera was 3.05, *SD* = 1.63 (see the last two rows in Table 8). Except for “Rigoletto,” the mean familiarity ratings of the seven examples were below the midpoint of the 7-point Likert scale.

Boxplots were created to show the distributions of the familiarity ratings (see Figure 2). Generally, the majority of the familiarity ratings were below the midpoint on the 7-point Likert scale, and the familiarity ratings for the majority of the examples had the wide ranges. Except for “Summertime,” almost all the familiarity ratings for “Summertime” were on the negative side except for the outliers. Furthermore, for “Peach-Blossom Fan”, 75% of the familiarity ratings ranged from “1” to “3” which indicated that the majority of the participants were not familiar with this piece comparing to the other three Xi-Qu examples. For “Story of Stone”, 25% of the familiarity ratings ranged from “5” to “7” which indicated that more participants were familiar with this example comparing to other three Xi-Qu examples. Furthermore, seven of the boxplots showed wide ranges which indicated that participants had heterogeneous familiarity ratings for the majority of the musical examples.

One-way ANOVA was used to compare the familiarity means of the eight examples. Results showed that the difference was statistically significant among the eight musical examples, $F(7, 208) = 2.99$, $p < .01$. Results of Tukey’s HSD analysis indicated that “Rigoletto” received significantly higher familiarity rating than “Peach - Blossom Fan” and “Summertime.”

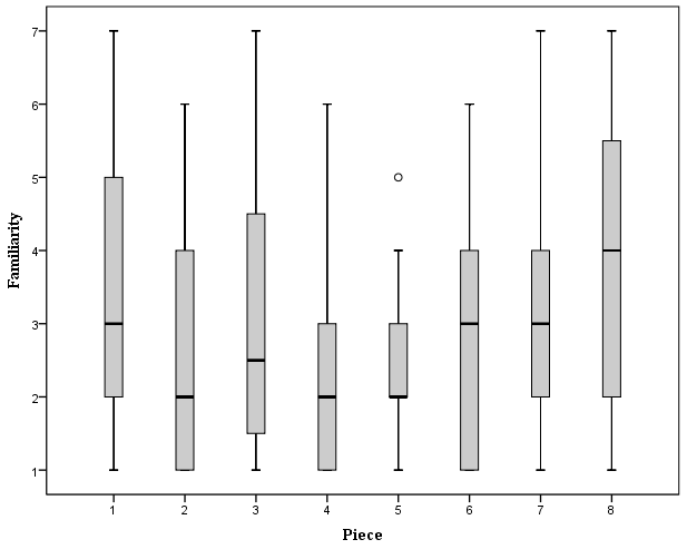

Figure 2. Boxplots of the familiarity ratings. On the X-axis (Piece), 1 = "Story of Stone," 2 = "Zhongkui," 3 = "Yezhu Woods," 4 = "Peach-Blossom Fan," 5 = "Summertime," 6 = "Flower Duet," 7 = "Hebrew Slaves Chorus," and 8 = "Rigoletto." The Y-axis represents the familiarity ratings.

Relationship between preference and familiarity ratings. Pearson's Product-Moment Correlation Coefficients were used to examine the relationship between the familiarity ratings and preference ratings. Results showed a modest relationship between preference and familiarity ($r = .45$, $p < .01$).

Relationship between preference and tempo. Pearson's Product-moment Correlation Coefficients were computed to examine the relationship between preference ratings and the tempo of the examples (beats per minute). A statistically significant relationship was found between the two variables ($r =. 23$, $p <. 01$).

The liked and disliked elements. The participants responded to the two non-multiple questions (question 3 and 4) in the survey instrument by selecting the most liked and disliked elements in the given stimulus. These elements were singing, accompanying instrumental music, acting, dance, costumes, facial make-up, and the scenery. Singing and accompanying

instrumental music were of the audio category while the rest of the elements were related to visual effect.

Descriptive statistics were computed to examine the frequency counts of the liked and the disliked elements in each piece to examine the relationships between the frequency counts and the preference ratings. The distributions of the liked and the disliked frequency counts within each piece were also calculated in order to find the main reasons for participants' preferences for the particular musical example. I first presented the results of the liked elements, followed by the results of the disliked elements.

The liked elements. The participants' responses to the third question on the first through the eighth pages of the survey instrument were related to the liked elements in the musical examples. The distributions of the liked elements in each musical example were computed in order to find the major reasons for liking the musical examples. The distribution of the liked elements in each musical example was calculated by counting the number of the selected liked elements in each piece. If the participant selected three elements in a musical example as the liked ones, each of the three elements gained one point respectively and the rest of the elements were all scored zero. The procedures were repeated until all the participants' liked elements in the same musical example were counted and scored. The maximal points of each element in one musical example were 27 as there were 27 participants would possibly select the element. The last step was to add each element's points from 27 participants and obtained a set of scores for the musical example. Each musical example went through the same procedures. As there were eight musical examples, eight sets of scores were obtained to illustrate the distributions of the liked elements within each musical example.

The percentage of each element in the musical example was calculated through the

following procedures: the score of each element within each piece divided by 27 (the number of the participants) then multiplied by 100. The score represented the number of the participants who selected the element as the liked one for the musical example. The percentage represented the percentage of the participants who selected the element as the liked one.

The elements that received 14 points or more were first examined (see Table 9). The purpose was to find the elements that influenced the majority of the participants' preference ratings for the musical examples. Among the operatic pieces, at least two elements in each piece gained the majority participants' positive responses. "Rigoletto" was the only musical example in which three elements received high scores, including singing (n = 22, 81.4%), acting (n = 20, 74%), and instrumental music (n = 16, 59.2%). For the rest of three examples, acting and singing were the top two liked elements in "Summertime" while singing and scenery were the top two liked elements in "Hebrew Slaves Chorus" and "Flower Duet".

Table 9.

Distributions of the Most Liked Elements in Operatic Examples

Stimulus	Singing	Instrumental music	Acting	Dance	Costumes	Facial make-up	Scenery
Rigoletto	22/81.4*	16/59.2*	20/74.0*	---	7/25.9	3/11.1	10/37.0
Summertime	17/62.9*	8/29.6	18/66.7*	---	5/18.5	1/4.7	9/33.3
Hebrew Slaves Chorus	14/51.9*	10/37.0	11/40.7	---	9/33.3	1/4.7	19/70.3*
Flower Duet	20/74.0*	3/11.1	8/29.6	---	7/25.9	---	15/55.6*

Note. The number on the left represents the liked scores (frequency counts) while the number on the right represents the percentage of the participants who selected the element as the liked one in the given piece.
* The element was selected by at least 50% participants as the like one.

Singing was the only element that received the majority of participants' positive scores (50% or more) across all operatic examples, but the scores of singing were not always related to the preference ratings. The liked score of singing for "Flower Duet" was 20 which meant that 74% participants liked the singing of this piece, but it was the least preferred among the four

operatic pieces that it ranked fifth among the musical examples.

Among the Xi-Qu examples, the elements that received a score of 14 or more were first examined to find the elements that influenced the majority of the participants' preference for the musical examples (see Table 10). "Story of Stone", which is the regional Xi-Qu style in this Southern province, received high scores for facial make-up (*n* = 14, 51.9%), costumes (*n* = 14, 51.9%), and scenery (*n* = 14, 51.9%). However, none of these three elements were related to the audio information. The other Southern style piece, "Peach-Blossom Fan", scored 16 for acting (59.3%) and 13 for instrumental music (48.1%). The rest of the two pieces that were originated from or developed in the North of China did not receive as many as 14 liked scores for any elements.

Table 10.

Distributions of the Most Liked Elements in Xi-Qu Examples

Stimulus	Singing	Instrumental music	Acting	Dance	Costumes	Facial make-up	Scenery
Story of Stone	9/33.3	11/40.7	13/48.1	6/22.2	14/51.9*	14/51.9*	14/51.9*
Peach-Blossom Fan	3/11.1	13/48.1	16/59.3*	3/11.1	11/40.7	4/14.8	2/7.4
Zhongkui	9/33.3	8/29.6	13/48.1	6/22.2	6/22.2	7/25.9	7/25.9
Yezhu Woods	6/22.2	4/14.8	6/22.2	1/4.7	10/37.0	1/4.7	1/4.7

Note. The number on the left represents the liked scores (frequency counts) while the number on the right represents the percentage of the participants who selected the element as the liked one in the given piece.
* The element was selected by at least 50% participants as the liked one.

Furthermore，the liked element scores in "Story of Stone" were approximately evenly distributed. Only the scores of singing (*n* = 9, 33.3%) and dance (*n* = 6, 22.2%) were lower. For "Peach-Blossom Fan," the liked scores were mainly distributed to acting (*n* = 16, 59.3%), instrumental music (*n* = 13, 48.1%), and costumes (*n* = 11, 40.7%). As for "Zhongkui", acting was the top liked element (*n* = 13, 48.1%) while the rest of the liked scores were approximately

evenly distributed, ranged from "6" to "9." In "Yezhu Woods," costumes received the higher liked score (n = 10, 37.0%). Unlike the operatic examples, singing was not the top reason for liking any Xi-Qu examples.

The disliked elements. Participants' responses to the fourth question on the first through the eighth pages of the survey instrument were related to the disliked elements in the eight musical examples respectively. The frequencies and percentages of the disliked elements in the individual example were computed to examine the distributions of the disliked elements in each musical example. The purposes were to find the major reasons for disliking each piece. The procedures of obtaining the eight sets of scores were the same as those for the liked elements scores.

Table 11.

Distributions of the Most Disliked Elements in Operatic Examples

Stimulus	Singing	Instrumental music	Acting	Dance	Costumes	Facial make-up	Scenery
Rigoletto	1/4.7	---	---	1/4.7	1/4.7	3/11.1	2/7.0
Summertime	---	1/4.7	3/11.1	---	2/7.0	---	2/7.0
Hebrew Slaves Chorus	---	---	3/11.1	1/4.7	1/4.7	---	1/4.7
Flower Duet	3/11.1	---	4/14.8	1/4.7	8/29.6	9/33.3	---

Note. From the second to the eighth columns, the number on the left represents the disliked frequency counts while the number on the right represents the percentage of the participants who selected the element as the disliked one in the given piece.
* The element was selected by at least 50% participants as the disliked one.

As shown in Table 11, among the operatic pieces, the majority of the elements received the low disliked element scores that ranged from "1" to "3", including "Rigoletto," "Summertime," and "Hebrew Slaves Chorus." The low scores suggested that just a few participants disliked the elements of these three examples. However, "Flower Duet" received higher disliked scores in comparison to the other three operatic examples. The majority of the

disliked scores of "Flower Duet" were given to facial make-up (n = 9, 33.3%) and costumes (n = 8, 29.6%), and the rest of the disliked scores were for acting (n = 4, 14.8%), singing (n = 3, 11.1%), and dance (n = 1, 4.7%).

As shown in Table 12, Xi-Qu examples generally received higher disliked scores in comparison to the operatic examples. Among the Xi-Qu examples, two examples received higher disliked scores for singing, including "Yezhu Woods" (n = 14, 51.9%) and "Peach-Blossom Fan" (n = 13, 48.1%). The high scores suggested that about 50% participants were not comfortable with the singing of the two pieces. "Yezhu woods" was the least preferred piece among the musical examples. In addition to singing, the top three disliked elements in "Yezhu Woods" were facial make-up (n = 11, 40.7%) and acting (n = 8, 29.6%). Furthermore, the top three disliked elements in "Peach-Blossom Fan" were singing (n = 13, 48.1%), facial make-up (n = 6, 22.2 %) and scenery (n = 6, 22.2%).

Table 12.

Distributions of the Most Disliked Elements in Xi-Qu Examples

Stimulus	Singing	Instrumental music	Acting	Dance	Costumes	Facial make-up	Scenery
Story of Stone	4/14.8	1/4.7	3/11.1	---	1/4.7	2/7.0	2/7.0
Peach-Blossom Fan	13/48.1	1/4.7	3/11.1	---	---	6/22.2	6/22.2
Zhongkui	6/22.2	3/11.1	1/4.7	1/4.7	4/14.8	8/29.6	3/11.1
Yezhu Woods	14/51.9*	4/14.8	8/29.6	---	2/7.0	11/40.7	6/22.2

Note. From the second to the eighth columns, the number on the left represents the disliked frequency counts while the number on the right represents the percentage of the participants who selected the element as the disliked one in the given piece.
* The element was selected by at least 50% participants as the disliked one.

The top three disliked elements in "Zhongkui" were facial make-up (n = 8, 29.6%), singing (n = 6, 22.2%), and costumes (n = 4, 14.8%). The facial make-up of "Zhongkui" received

the similar liked and disliked scores (n = 7 and n = 8 respectively) which indicated that participants held different opinions regarding the attractiveness of painted-face in this piece.

The disliked element scores of "Story of Stone" ranged from "1" to "4" that were lower than those of the other three Xi-Qu pieces. Singing received highest disliked score in this piece (n = 4, 14.8%), followed by acting (n = 3, 11.1%). The low disliked scores indicated that the majority of the participants were comfortable with this piece. It would not be a surprise that this piece received highest preference mean among the four Xi-Qu pieces.

Top three liked and disliked elements. The top three liked and disliked elements in the eight musical examples were combined in order to find the main reasons for liking or disliking a piece (see Table 13). In "Rigoletto" and "Hebrew Slaves Chorus," the top three disliked elements that only scored "1" were not listed as including too many elements might complicate the analysis. In the other examples, the top three elements that received the same scores were both listed.

By examining the ranking of the participants' preference ratings and the scores of the top three liked and disliked elements, the pattern of the participants' preference for musical examples emerged. First, the comfort with the singing of the pieces among the participants was critical to the preference for the musical examples. As shown in Table 13, the musical examples that received higher liked scores for singing were more likely to rank higher on the preference ratings. On the contrary, the musical examples that received higher disliked scores for singing were more likely to rank lower on the preference list. The high liked score of singing usually appeared among the operatic pieces while the high disliked score of singing were always for Xi-Qu pieces. Considering that Xi-Qu overall had lower preference ratings in comparison to the operatic pieces, singing might play an important role in participants' decisions on preference ratings.

Secondly, natural-looking facial make-up was less likely to receive negative comments. As shown in Table 13, the top three preferred pieces, including "Rigoletto," "Summertime," and "Hebrew Slaves Chorus," received zero or low liked and disliked scores for facial make-up and the singers in these pieces all featured light and natural facial make-up. It seemed that although the light facial make-up in these three pieces did not contribute a lot to the preference ratings, it did not exert much negative influence. Moreover, the top liked element in "Story of Stone" was facial make-up and the singer in this piece featured moderate facial make-up. The rest four pieces that featured heavy facial make-up received lower preference ratings and facial make-up was always among the top three disliked elements.

Table 13.

The Top Three Liked and Disliked Elements in Each Musical Example and Ranking of Preference Ratings

Stimulus	Rank of preference	Top three liked elements	Top three disliked elements
Rigoletto	1	1, singing (*n* = 22) 2, acting (*n* = 20) 3, instrumental music(*n* = 16)	1, facial make-up (*n* = 3) 2, scenery (*n* = 2)
Summertime	2	1, acting (*n* = 18) 2, singing (*n* = 17) 3, scenery (*n* = 9)	1, acting (*n* = 3) 2, costumes and scenery (*n* = 2)
Hebrew Slaves Chorus	3	1, scenery (*n* = 19) 2, singing (*n* = 14) 3, acting (*n* = 11)	1, acting (*n* = 3)
Flower Duet	5	1, singing (*n* = 20) 2, scenery (*n* = 15) 3, acting (*n* = 8)	1, facial make-up (*n* = 9) 2, costumes (*n* = 8) 3, acting (*n* = 4)
Story of Stone	4	1, facial make-up, Costumes, and scenery (*n* = 14)	1, singing (*n* = 4) 2, acting (*n* = 3) 3, facial make-up and scenery(*n* = 2)
Peach-Blossom Fan	6	1, acting (*n* = 16) 2, instrumental music (*n* = 13) 3, costumes (*n* = 11)	1, singing (*n* = 13) 2, facial make-up and scenery (*n* = 6)
Zhongkui	7	1, acting (*n* = 13) 2, singing(*n* = 9) 3, instrumental music (*n* = 8)	1, facial make-up (*n* = 8) 2, singing (*n* = 6) 3 costumes (*n* = 4)
Yezhu Woods	8	1, costumes (*n* = 10) 2, singing and acting (*n* = 6)	1, singing (*n* = 14) 2, facial make-up (*n* = 11) 3, acting(*n* = 8)

Thirdly, acting was among the top three liked elements in seven musical examples but the scores were not always related to the preference ratings. As shown in Table 13, the pieces that received high preference ratings, such as "Rigolleto" (n = 21) and "Summertime" (n =19), received high scores for acting, but those with lower preference ratings, such as "Peach-Blossom Fan" (n=17) and "Zhongkui" (n =13) received considerable scores for acting too.

FaceReader Results

Results of FaceReader analysis were presented in this section. The Project Analysis Module was used to analyze the participants' facial expressions and generated the numerical and temporal results. The numerical results were the scores of the identified emotions for each stimulus while the temporal analysis generated line charts to show the continuous emotional changes. The numerical results were presented first, followed by the temporal results.

Results of the numerical analysis. The numerical analysis results were the scores of the identified emotions for the musical examples based on participants' facial expressions while watching the given example (see Table 14). The classified emotions were scaled from 0 (not present at all) to 1 (maximum intensity). In addition, the sums of negative emotions (SNE) were obtained by averaging the five negative emotions values for each musical example, including "sad", "angry", "scared", "disgusted", and "contempt". The sums of negative emotions were calculated due to the concern that mixed emotions might occur.

Results indicated that the dominant emotion was "neutral" across all musical examples and the values ranged from 0 .6982 to 0.6600. "Rigoletto" received highest preference mean rating and also received highest "happy" (M = 0.0817, SD = .21) and "disgusted" (M = 0.0627, SD = .14) scores. The lowest emotion scores of "Rigoletto" were "sad" (M = 0.2514, SD = .24)

and “angry” (*M* = 0.0916, *SD* = .09). It also received the lowest SNE score (*M* = 0.6097). Moreover, the least preferred piece “Yezhu Woods” received highest “angry” score (*M* = 0.1644, *SD* = .19) and lowest “neutral” score (*M* = 0.6600, *SD* = .25).

Table 14.

Mean Scores of Identified Emotions by FaceReader for Musical Stimuli

Stimulus	Neutral	Happy	Sad	Angry	Surprised	Scared	Disgusted	Contempt	SNE*
Rigoletto	0.6699/.27**	0.0817/.21	0.2514/.24	0.0916/.09	0.0615/.07	0.0158/.02	0.0627/.14	0.1880/.16	0.6097
Summertime	0.6982/.23	0.0302/.09	0.3531/.27	0.0938/.09	0.0535/.07	0.0224/.03	0.0229/.04	0.1756/.16	0.6679
Hebrew Slaves Chorus	0.6754/.25	0.0253/.10	0.3451/.28	0.1097/.10	0.0621/.07	0.0185/.03	0.0426/.11	0.2023/.20	0.7184
Story of Stone	0.6735/.25	0.0410/.09	0.3045/.24	0.1153/.11	0.0715/.11	0.0094/.01	0.0355/.04	0.2045/.17	0.6694
Flower Duet	0.6747/.24	0.0227/.06	0.4061/.28	0.1108/.12	0.0569/.07	0.0081/.01	0.0357/.09	0.2029/.17	0.7636
Peach-Blossom Fan	0.6724/.24	0.0237/.06	0.3729/.27	0.1161/.10	0.0381/.05	0.0172/.03	0.0407/.07	0.1813/.16	0.7288
Zhongkui	0.6605/.25	0.0529/.05	0.3011/.30	0.1403/.16	0.0484/.07	0.0173/.02	0.0546/.13	0.1967/.16	0.7102
Yezhu Woods	0.6600/.25	0.0440/.16	0.3297/.29	0.1644/.19	0.0458/.06	0.0085/.01	0.0394/.10	0.1935/.17	07358

*SNE=Sums of Negative Emotions
** Mean/Standard Deviation

Spearman's rank-order correlations were computed to examine the relationships between the rankings of the emotion scores (including SNE) and the ranking of the self-reported preference ratings. Results showed a strong relationship between "angry" and preference (*rho* = -.976, $p < .001$). The moderate relationship was found between "sums of negative emotions" and preference (*rho* =.741, $p < .05$). Furthermore, the ranking of the preference ratings were not correlated with any other emotions (see Table 15). Particularly, the correlation between "disgusted" and preference was 0.

Table 15.

Spearman Correlations among the Rankings of the Preference Ratings and Emotions

Emotions	Preference ratings	
	rho	*p*-Value
Neutral	-.619	.102
Happy	.071	.867
Sad	-.143	736
Angry	-. 976	< .001
Surprise	.643	.086
Scared	.167	.693
Disgusted	.000	1.000
Contempt	- .167	.693
Sums of Negative Emotions	-.714	.047

The valence and arousal scores for each musical example were also obtained. Valence indicated if the emotional state of the test person was positive (pleasant) or negative (not pleasant). The value of valence was obtained by the intensity of "happy" minus the intensity of the negative emotion with the highest intensity (Noldus, 2014). The valence was scaled from -1 (not pleasant) to 1 (pleasant) to indicate the level of pleasantness. Results showed that the valence values for all musical stimuli were negative (see Table 16). "Rigoletto" obtained the highest valence mean, $M = - 0.2347$, $SD = .35$, followed by "Story of Stone" ($M = - 0.3066$, *SD*

= .24), “Zhongkui” (*M* = - 0.3233, *SD* = .30), “Summertime” (*M* = - 0.3723, *SD* = .26), “Hebrew Slaves Chorus” (*M* = -0.3742, *SD* = .27), “Yezhu Woods” (*M* = -0.4012, *SD* =.33), “Peach-Blossom Fan” (*M* = - 0.4117, *SD* =.25), and “Flower Duet” (*M* = - 0.4170, *SD* = .28).

Table 16.

Valence and Arousal Means and Rankings and Preference Rankings

Stimuli	Preference Ranking	Valence		Arousal	
		M/SD	Ranking	*M/SD*	Ranking
Rigoletto	1	- 0.2347/ .35	1	0.3378/ .06	1
Summertime	2	- 0.3723/ .26	4	0.3073/ .06	3
Hebrew Slaves Chorus	3	- 0.3742/ .27	5	0.2994/ .06	5
Story of Stone	4	- 0.3066/ .24	2	0.3045/ .07	4
Flower Duet	5	- 0.4170/ .28	8	0.2743/ .07	8
Peach-Blossom Fan	6	-0.4117/ .25	7	0.2847/.07	6
Zhongkui	7	- 0.3233/ .30	3	0.3135/ .06	2
Yezhu Woods	8	- 0.4012/ .33	6	0.2754/ .06	7

Arousal indicated if the test person was active (+1) or not active (0). Results revealed that the arousal scores ranged from 0.2743 to 0.3378. In descending rank order, the arousal means for musical stimuli were as follows: “Rigoletto” (*M* = 0.3378, *SD* = .06), “Zhongkui” (*M* = 0.3135, *SD* = .06), “Summertime” (*M* = 0.3073, *SD* = .06), “Story of Stone” (*M* = 0.3066, *SD* = .07), “Hebrew Slave Chorus” (*M* = 0.2994, *SD* = .06), “Peach-Blossom Fan” (*M* = 0.2847, *SD* = .07), “Flower Duet” (*M* = 0.2743, *SD* = .06), and “Yezhu Woods” (*M* = 0.2754, *SD* = .06).

Spearman rank-order correlations were computed between the ranking of the self-reported preference ratings and the valence and arousal rankings. Results showed not significant correlations were found between preference and valence, and between preference and arousal. However, a strong relationship was observed between valence and arousal, *rho* = .905, $p < .01$.

Results of the temporal group analysis. The temporal group analysis module generated the line charts based on the mean emotional scores to show the emotional changes continuously. By observing the line chart for each musical example, the lines of "neutral," "sad," and "contempt" were always higher than the rest of the emotional lines. The changes in "sad" emotion (purple line) were found in "Rigoletto," "Flower Duet," and "Yezhu Woods" comparing to the rest of the musical examples. Furthermore, the "sad" line of several pieces presented similar pattern that the line went down at the onset of the video, and then went up gradually. These pieces included "Yezhu Woods," "Story of Stone," "Rigoletto," "Hebrew Slaves Chorus," and "Flower Duet." The "happy" line (green) of "Rigolleto" and "Zhongkui" appeared to be higher than the rest of the videos. The "angry" line also showed higher values in "Flower Duet," "Yezhu Woods," "Story of Stone," and "Zhongkui." The obvious changes in the emotional lines and the information in the related videos were combined to find the reasons for the changes. The following paragraphs focused on the analyses of the line charts combined with the information in the video.

The line chart of "Rigoletto" showed that the "sad" line (purple line) indicated a big change during the first five seconds (see Figure 3). The line decreased from the beginning of the line chart, and then moved upwards from the sixth second, and was slightly up again from the twelfth second. The most of the peak values of "sad" appeared at the second half of the line. Furthermore, during the first two seconds, the "happy" line (green line) also showed a sudden ascending and slightly waved until the end of the video.

The changes in the "sad" and "happy" lines seemed to coincide with the information in the "Rigoletto" video. the details in the "Rigoletto" video were that during the first five seconds, the instrumental introduction of the song was going on in full orchestra which was rhythmic and

loud. The singer turned round, threw his hat away, then put his sword on the table, and faced the audience with clearly visible smile. The music and the acting of the singer seemed to induce the increased "happy" and decreased "sad" from the participants. From about the sixth second of the video, the volume of the introduction part decreased suddenly and only the sound of the woodwind instruments were audible. The singer started singing from around the twelfth second.

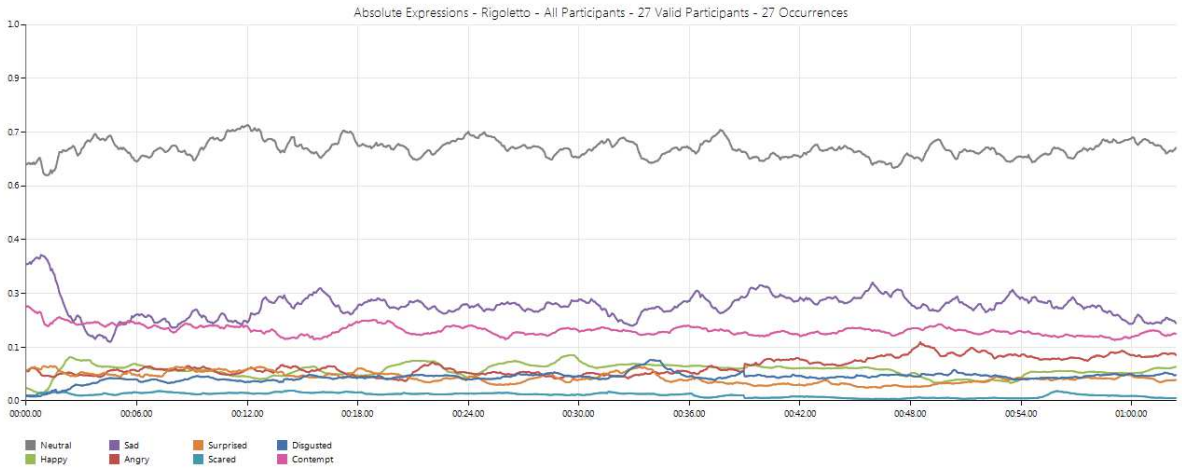

Figure 3. Absolute temporal group analysis line chart for "Rigoletto."

The observation of the line chart of "Flower Duet" indicated that "neutral" and "sad" showed obvious changes during the first twenty-four seconds (see Figure 4). The "sad" line started to descend from the onset and slightly waved during the first five seconds, and then it started to ascend from around the fifteenth second and kept going up until at the point of 1' 24''. The peak "sad" value appeared at this point and was close to 0.60. On the contrary, the "neutral" line (grey line) showed an opposite direction to the "sad" line. It started to ascend from the beginning and then descended from around the fifteenth second. In addition, the "contempt" (pink line) and "angry" (red line) lines were higher than the rest of the emotion lines.

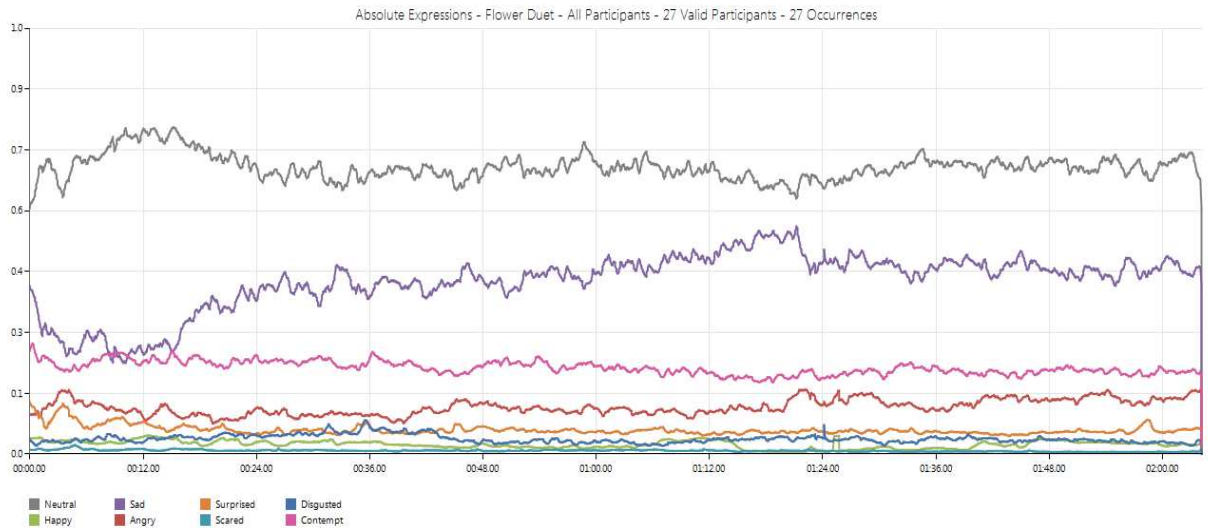

Figure 4. Absolute temporal group analysis line chart for "Flower Duet."

The information in the "Flower Duet" video was that, during the first fifteen seconds, the two singers were singing expressively with obvious smile and the song was melodic. The head-to-upper-waist perspective was used. The first fifteen seconds were related to the decreased "sad" and increased "neutral" (grey line). From the fifteenth seconds, the song changed to recitative and then the main melody reoccurred at around 1'03''. The perspective changed to the long shot from around the fifteenth second to show the full view of the stage from the distance and the perspective did not change ever since. This recitative part of the song with the long shot perspective was accompanied by the increasing value of the "sad" emotion. The "sad" started to decrease at around 1'20'' when the singers were singing the melodic tunes.

The analysis of the line chart of "Yezhu Woods" showed that the "sad" line went down from the onset with a value of around 0.30 to about 0.12 at the eighth second, and from then it started to go upwards. The peak values (around 0.4) occurred from about 1' 46'' to 2'26''. In the video, the male singer started singing from the 2'', and then the female singer and the male

singer sang in turn. From the 1’14’’ of the video, only the female singer sang throughout the rest of the video. The female singer sang with smile, walked, and gestured. The perspectives changed frequently from face close-ups, head to waist, and head-to-foot. Combining the information of the sad line and the video, the peak values of “sad” occurred during the female singer’s solo (see Figure 5). The “contempt” and “angry” lines also showed the higher position in the chart in comparison to the rest of the four emotions lines but didn’t show big changes.

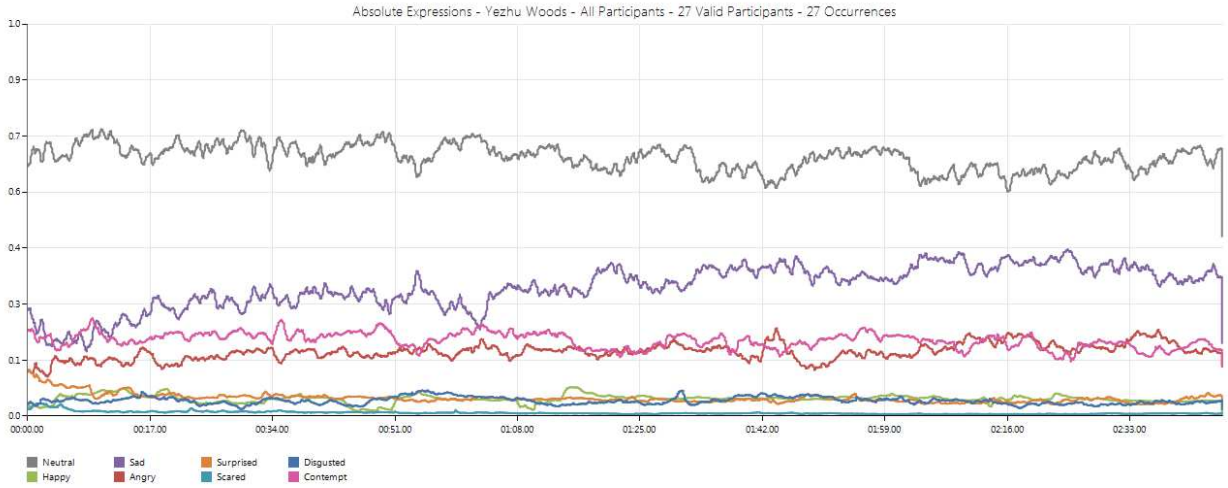

Figure 5. Absolute temporal group analysis line chart for “Yezhu Woods.”

The analysis of the line chart of “Story of Stone” showed that the changes in “sad” line were related to the singing and lyrics (see Figure 6). The first five seconds were the instrumental introduction of the song during which the “sad” line decreased. The singer started to sing at around sixth second when the “sad” line started to ascend. The “sad” line gradually ascended as the lyrics started to indicate the sad emotions. Especially from the 45” to 1’07” when the singers started to sing “sorrowful is the willow, hateful is the peach-blossom. The fate of the trees and

flowers was just like mine, being bullied and tortured", the "sad" line gradually ascended and reached the peak values. Furthermore, the lines of "contempt", "angry", "surprised", "happy", and "disgusted" were more active which was different from the line charts of the other seven examples.

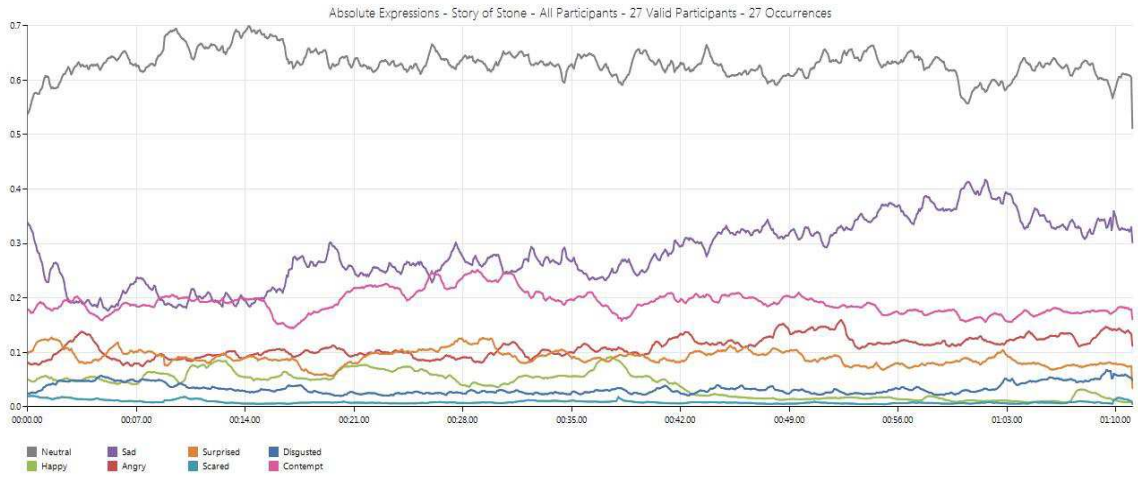

Figure 6. Absolute temporal group analysis line chart for "Story of Stone."

The analysis of the line chart of "Summertime" showed that the "sad" line had comparatively bigger values as it was above the majority of the emotion lines except for "neutral". The singer in this video started to sing at 2" and the first sentence finished at around seventeenth second. The "sad" line gradually ascended from the beginning of the song and then descended near the end of the first sentence of the lyrics, and then the line waved and slightly ascended. All the peak values of "sad" appeared during the singing of the last sentence of the lyrics which started at the 50". During the time the singer sang expressively with obvious smile and the choral singers also sang with the main character. The "neutral" line went oppositely to

the “sad” line that once the value of “sad” increased, the “neutral” value decreased and vice versa (see Figure 7).

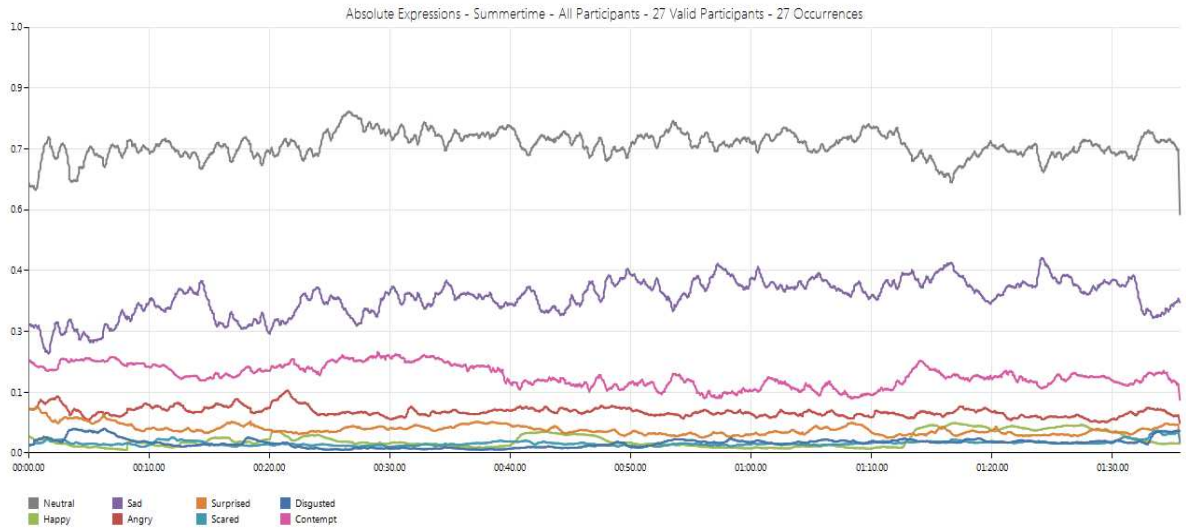

Figure 7. Absolute temporal group analysis line chart for “Summertime.”

In the line chart of “Peach-Blossom Fan” (see Figure 8), four lines appeared at the higher position, including “neutral”, “sad”, “contempt”, and “angry”. The “sad” line was related to the video. It waved from the beginning to the 17” and then went upwards to around 35”. The information in the video was that, from the beginning to 17”, the singers’ face could not see clearly as it was a long shot perspective. Then from around the 17”, the male singer’s face turned to the audience and showed sad facial expressions. The lyrics also started to express sad emotions. By observing the video and the “sad” line, I found that the peak “sad” values were always related to the moment when the singers expressed strong sad emotion by singing or acting, such as singing the sad lyrics or frowning and sobbing.

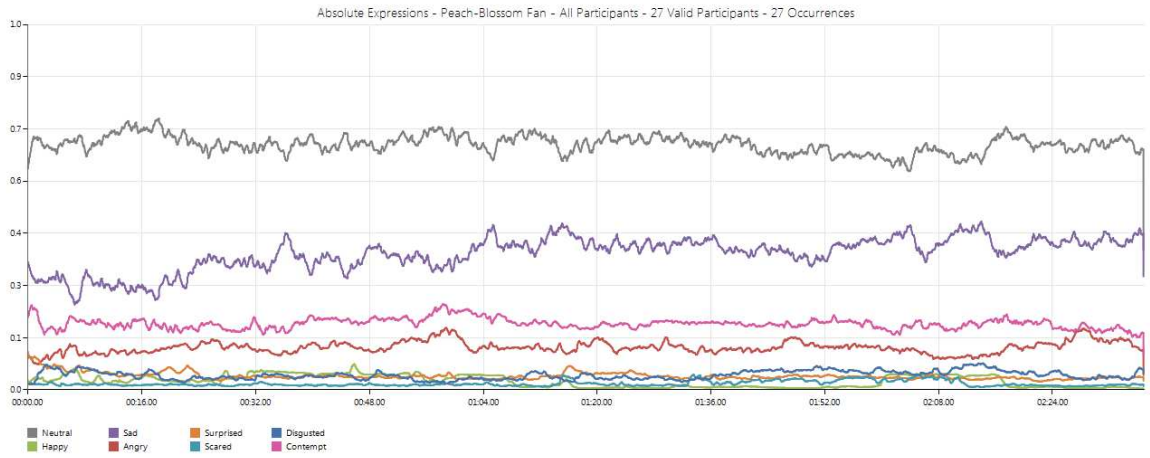

Figure 8. Absolute temporal group analysis line chart for "Peach-Blossom Fan."

The line chart of "Zhongkui" showed that at the beginning of the video, the "sad" line descended. And then the lines of "sad" and "angry" went up from 3" to 9". During the first nine seconds, there was a close-up perspective to show the singer's painted face. It seemed that the close-up of the painted face increased the "sad" and "angry" values. However, the happy line also ascended slightly. From the tenth second, the perspective changed to show the full stage and the singer started to dance. The "sad" line became stable and only waved slightly. Meanwhile, the "angry" line started to descend and the "happy" line ascended. It seemed that the long shot plus singing and dancing increased the positive emotion. Then from the 27" to around 38", the "happy" line also ascended and showed the bigger values. During the period, the singer showed a series of dance movements. Furthermore, the "sad" line showed two peak values that occurred at the 36" and 1'03". At the point of 36", the singer stood on one foot which was a difficulty dance movement. At the point of 1'03", the perspective changed back to the close-up perspective to show the painted-face. The "contempt" line was comparatively stable, but from the 37" to 44"

the line ascended. (see Figure 9).

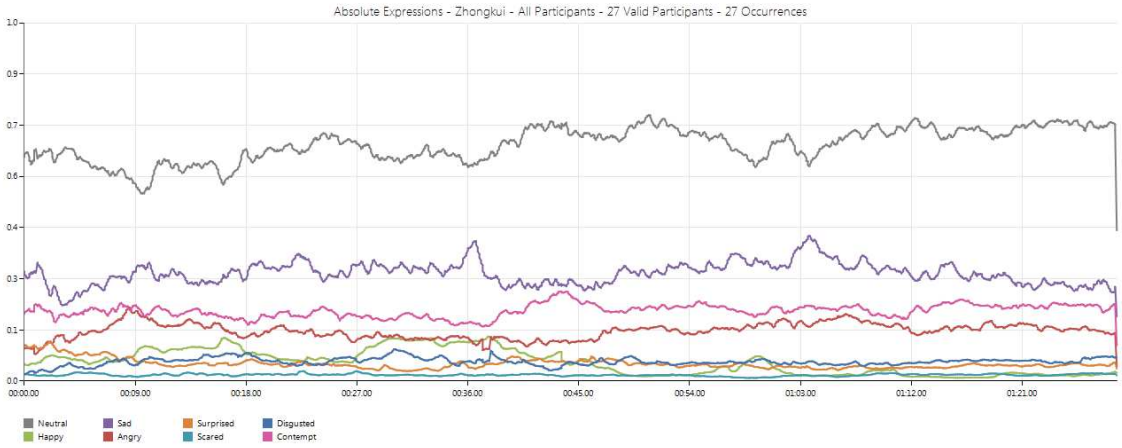

Figure 9. Absolute temporal group analysis line chart for "Zhongkui."

The line chart of "Hebrew Slaves Chorus" showed that the "sad" line went down from the beginning of the video and then gradually waved and ascended until to the 45". The movement of the "sad" coincided with the changes of perspectives that when the perspective changed to the close-up or the head-to-waste perspectives, the "sad" line would ascend while when the perspective changed to the long shot, the "sad" line descended. The changes in the "sad" line indicated that when the singers' sad facial expressions could be seen, the participants would respond to the expressed emotions. If the facial expressions of the singers could not be seen clearly, the intensity of the emotional responses would decrease. Other emotion lines were comparatively stable, especially from 40" to the end of the video during the time the lines of "contempt", "angry", and "surprise" just slightly waved.

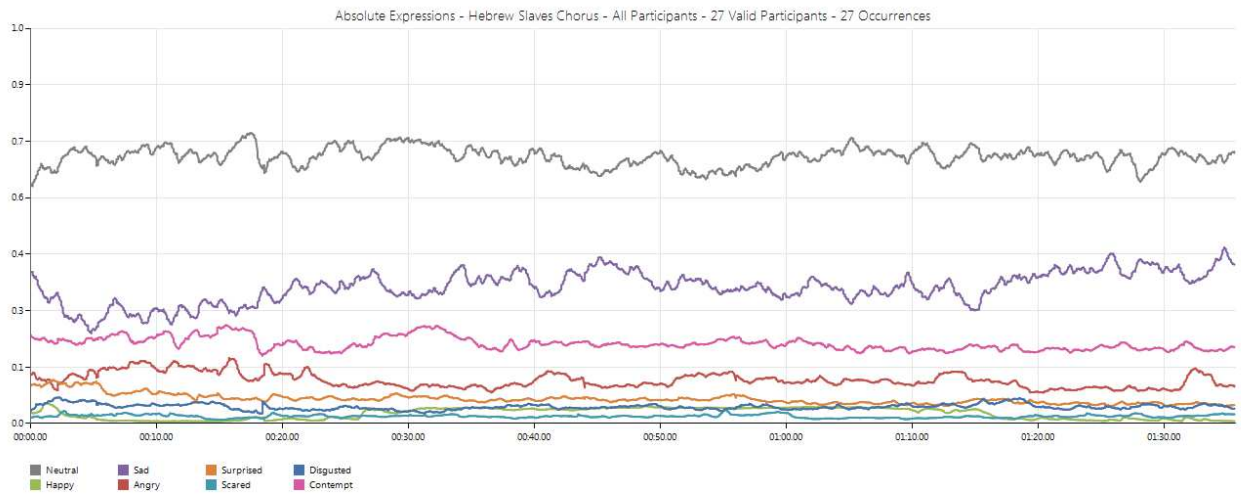

Figure 10. Absolute temporal group analysis line chart for "Hebrew Slaves Chorus."

The observations of the temporal group analysis line charts suggested that the participants' emotional responses were the ongoing process and changed as the music examples unfolded. The line charts also indicated that sometimes several emotions were activated simultaneously, suggesting the diversity in the participants' emotional responses to the same example or the occurrence of the mixed emotional responses.

Summary

The findings obtained from the survey questionnaire and FaceReader were presented in this chapter. The findings of the survey instrument showed that the participants preferred operatic examples than Xi-Qu examples as indicated by the mean preference ratings. The preference ratings of the eight examples showed a statistically significant difference. The relationship between preference ratings and familiarity ratings showed a modest but statistically significant relationship. Preference and tempo also showed a statistically significant relationship. The mean familiarity ratings of the eight examples also showed a statistically significant difference. The

results of the most liked and disliked elements showed that singing and acting were always among the top three most liked elements across the four operatic examples, and the top three disliked elements in the operatic examples were all related to visual information. As for the Xi-Qu examples, singing and facial make-up were always among the top three disliked elements.

The results relating of facial expressions showed that "neutral" was the dominant emotional state across the eight examples. "Angry" was the only emotion strongly related to the self-reported preference ratings. The preference rakings were also related to the "sums of negative emotions" (SNE) and the relationship showed a statistical significance. Furthermore, "happy," "valence," and "arousal" could well predict the most preferred piece, but the relationship between these variables and rankings of preference ratings didn't show a statistical significance. The temporal line charts showed that the emotional responses to the musical examples changed as the musical videos unfolded. For some pieces, the emotional responses were less consistent as both negative and positive emotions showed higher values at some points of the video which indicated the diversity in the participants' emotional responses to the video or the occurrence of the mixed emotions.

CHAPTER FIVE

QUALITATIVE RESULTS

This chapter is the findings of the qualitative interview regarding the factors influencing the participants' preference for Xi-Qu and opera examples. The participants answered the questions regarding their general impressions and thoughts about the video examples, familiarity with the video examples, the most liked and disliked elements and the reasons for liking/disliking, and the encompassing emotions when watching the videos. The qualitative analysis revealed that a model of Xi-Qu and opera preference emerged to demonstrate the factors influencing preference for the musical examples for this study and the responses caused by the musical videos.

The Xi-Qu and opera preference model contains the following groups, including personal factors, cultural/environmental factors, visual factors, musical factors, and musical responses. The personal factors were the features of the participants that related to music appreciation, including familiarity and religion; the cultural/environmental factors were to present the influence of Han-Chinese culture, regional culture, education, including general education and formal training, media (television programs and internet), community activities, and peers. The visual factors included acting, attractiveness of the singers, facial make-up, costumes, the color of the video, changes of perspectives, and stage scenery. Musical factors included singing and instrumental music. The musical responses included the cognitive responses, such as making sense of the context, affective responses, including emotional responses and preference, and psychophysiological response. I would discuss these groups of variables separately, and then

present the model and the relationships between these factors.

Personal Factors

In this study, personal factors referred to familiarity derived from the cultural and environmental influence and the religious belief. Furthermore, findings revealed that the following variables contributed to familiarity with the musical styles, including musical training and general education, the influence of family members, media (television programs and internet), community activities, and peers. I presented the findings relating to these factors in "familiarity" section although I proposed that they should be in the cultural/environmental group. I presented the findings of familiarity, followed by religion.

Familiarity. Familiarity is defined as the "assumption of having heard it somewhere before. Predictability, as a result of repeated exposure to same or similar music." (Price, 1986, p.153). During the interview, the researcher asked a question about participants' previous experience with the given musical example. The participants explained the reasons for giving familiarity ratings and also described the ways of getting familiarity with a piece or a style. Findings revealed that participants adopted two criteria for familiarity ratings. Furthermore, participants got familiar with Xi-Qu and opera through different ways and developed various attitudes toward Xi-Qu and opera. The level of familiarity was related to the dimensions of appreciation. The proceeding paragraphs first focused on the criteria for ratings familiarity, followed by ways of gaining familiarity with Xi-Qu and opera, effect of different ways of gaining familiarity, and the relationship between familiarity and the dimensions of appreciation.

Different criteria for rating familiarity. The participants were sophomores and freshmen who had not previously enrolled in Chinese music history and Western music history coursework.

Thus, the majority of participants were generally unfamiliar with the musical examples for this study. Findings revealed that they used two sets of criteria for rating familiarity which could be put into two categories: absolute criteria and relative criteria.

The absolute criteria meant that the participants rated the level of familiarity based upon previous experience with the music examples. Participants provided high ratings if they listened to the piece frequently and provided moderate ratings for known pieces listened to several times. They would rate "1" (not familiar at all) if they never heard the piece.

The relative criteria meant that the participants rated the level of familiarity based upon the previous experience with a style or genre. They did not know the specific piece, but they were familiar with other works of the same style or of the same genre. If they found similarities in melody, singing skills, scenery, costumes, and tone color etc. between the new piece and those familiar ones, they would give ratings based upon how similar those pieces are. By examining the self-reported level of familiarity and the familiarity ratings on the questionnaire, I found that all participants took both absolute and relative criteria for familiarity ratings.

Among the eight musical examples, some participants confirmed that they heard certain operatic pieces before. Two participants were familiar with "Hebrew Slaves Chorus" as they sang this piece in the Philharmonic Choir in the city. Seven participants heard "Rigoletto" or watched the video in music appreciation class. Furthermore, two participants reported that they heard "Flower Duet" and were quite familiar with the melody. Two participants found that they heard "Summertime" in high school music appreciation class. These participants' familiarity ratings for the familiar pieces were usually above the midpoint of the scale on the questionnaire. In these cases, the participants used absolute criteria for familiarity ratings. Although the rest of the participants never heard or watched the musical examples for this study, their familiarity

ratings for the operatic examples ranged from “1” to “5”. In these cases, participants used both absolute and relative criteria.

All participants did not watch or listen to the four Xi-Qu examples but the majority of them reported that they had a sense of familiarity with one or more Xi-Qu styles. The familiarity ratings for the four Xi-Qu examples ranged from “1” to “7”, which meant that participants adopted both absolute and relative criteria for rating the Xi-Qu examples.

Findings suggested that the participants mainly gave the familiarity ratings based on the perceived familiarity with the style or the genre instead of with the piece. These participants didn’t select “1” even if they orally reported that they never heard the piece. The reason was that they had experience with other operatic or Xi-Qu works that shared common features with the musical examples in this study. Melody, singing skills, scenery, costumes, and singing tone color etc. were the features upon which the participants made the decisions on familiarity ratings.

The predictability of the melody gave some participants a sense of familiarity. Some participants selected “2” to “4” for unfamiliar operatic pieces due to the sense of predictability of the melody. A Western instrumentalist, Ming-Hui, exemplified this:

> I feel that those songs (of opera) were similar. The melodies (of operatic songs)… feel like they are of the same type. This song (“Summertime”)… I never heard. But feel like when I was listening to the melody, I could predict what it would sound like and the contour of the song. I was able to have a general idea about the song when I heard the beginning of the song.

Ying-Qi, the popular style vocalist whose parents were professional Yue-Ju musicians, was familiar with multiple elements in the Yue-Ju example “Story of Stone” and also found the similarities among the different Xi-Qu styles. He stated that he watched his parents’ performance

on stage and studied Yue-Ju singing skills in his childhood, so he could quickly identify the style of Yue-Ju example. He gave the highest familiarity rating, "7", to the Yue-Ju example "Story of Stone", but when the researcher asked him if he watched this piece before, his answer was negative. As he stated:

> I am familiar with all of them (elements in Yue-Ju), singing, costumes, stage scenery, acting… but I don't know what this piece is… I read several chapters of it (the novel "Story of Stone"), but I never watched the Yue-Ju "Story of Stone", so just now I did not connect this piece to the novel at all.

Although Ying-Qi was not familiar with the other three Xi-Qu styles, he still gave moderate familiarity ratings as he found some common features between the familiar style and the unfamiliar styles. He explained:

> My mother and father were Yue-Ju musicians, so I know a little bit about it (the Kun-Qu example "Peach-Blossom Fan")… I know it is Xi-Qu, but I don't know which style it is. I cannot say I am familiar with it very much, so I chose a neutral (familiarity) rating… I definitely did not hear or watch this piece before, but I found the instrumental accompaniment was similar (with Yue-Ju).

Furthermore, Li-Ying, a Western instrumentalist, found the similarities among the Xi-Qu styles， and gave "3" to all the Xi-Qu examples as the familiarity ratings. She told the researcher that she accompanied her grandparents watching Xi-Qu on television occasionally and asserted that all Xi-Qu styles were the same regarding the tone color and costumes. She felt that Yue-Ju "Story of Stone" sounded more similar to what her grandfather watched on television, but she insisted that the difference among the Xi-Qu styles was not pronounced. So finally she gave the same familiarity rating to all the Xi-Qu examples.

However, some of the participants clearly differentiated the familiar style from the unfamiliar ones regardless the common features among the Xi-Qu examples. Fang-Yuan, a Western style vocalist exemplified this. He told the researcher that he watched Yue-Ju live performance in his childhood. He gave a familiarity rating of "5" to "Story of Stone" although he did not know this work. He rated "1" for the rest of three Xi-Qu pieces. The reason was that he was "unfamiliar with it." Fang-Yuan also encountered Jing-Ju style on television and could quickly identify Jing-Ju style, but he denied that he was familiar with Jing-Ju because he lacked extensive experience with it. As he commented:

> It ("Yezhu Woods") must be Jing-Ju…all of them were high-pitched tunes, I hate it (Jing-Ju)… Sometimes I saw it (Jing-Ju performance) on television when I was switching television channels, the CCTV Xi-Qu channel, it broadcast Jing-Ju…of course I switched to other channels quickly, never stopped at it (the Xi-Qu channel)… I am not familiar with it (Jing-Ju), I immediately switched channel when I saw it, so actually I never watched it seriously.

Fang-Yuan clearly differentiated the familiar style from the unfamiliar styles among the Xi-Qu examples, but he judged the operatic pieces differently. He rated "Rigoletto" and "Summertime" "5" and "2" respectively and reported that he heard the two pieces somewhere before. He told the researcher that he did not know "Flower Duet", but he gave a neutral familiarity rating ("4") to it, even higher than that for "Summertime". His reason was that "those songs (operatic songs) all sound similar". As a Western style vocalist, Fang-Yuan watched and listened to the Western art songs often. His experience with the Western singing skills and repertory may have given him more confidence in the familiarity ratings for the operatic pieces.

The aforementioned participants exemplified the adoption of the relative criteria and the mixture of the relative and absolute criteria. By examining participants' familiarity ratings and self-reported familiarity with each example, I found that no participant continued with only one criterion throughout the eight examples. Thus, the real meanings of familiarity ratings were multi-faceted.

Ways of getting familiar with Xi-Qu and opera. During the interview, I found that watching television and participating community activities with family members were the main ways of gaining familiarity with Xi-Qu, but all the participants gained familiarity with Western opera mainly from formal training (see Table 17). The influence of grandparents in childhood was due to Chinese customs in which grandparents usually took care of the children in the third generation. Findings revealed that the majority of the participants (n = 16) watched the recorded or live Xi-Qu performance on television with grandparents or parents while others (n = 9) watched live performance with grandparents and/or parents in community. Some participants (n = 7) also encountered certain Xi-Qu styles on the street, in a public park, or when switching television channels. Seven participants mentioned knowing Xi-Qu in general music classes while two participants got familiar with Xi-Qu painted-faces in Chinese classes or school activities. Two participants studied Kun-Qu singing in a university course. Only a popular vocalist studied Yue-Ju with his parents in childhood while a vocalist took a few private lessons for Lǔ-Ju (吕剧, a regional Xi-Qu style in Shandong Province). Four participants reported that their classmate or friend liked Yue-Ju so they knew this style.

On the contrary, all participants (N = 27) studied voice by taking private lessons in senior high school, since singing an art song was an audition requirement regardless of study areas. Furthermore, the majority of the participants (n = 23) took a voice course in the universities as a

requirement. Some participants (n = 11) also watched opera videos or listened to opera audio materials in music appreciation class in senior high school and at the university. A number of the Western style singers (n = 4) actively listened to the Western art songs and Western/Chinese operas in order to better study the singing skills. Two participants sang operatic choral works in choir and two participants reported encountering opera on television. One participant reported that her classmate sang an operatic piece in a school concert.

Table 17.

Ways of Gaining Familiarity with Xi-Qu and Opera

	Watching television	Community Activities	Private Lessons	University Course	Peers	School Education (1-9 grads)	Internet
Xi-Qu							
	Watched with family members (n =16)	Watched live performance with family members (n = 9)	Studied Yue-Ju with parents (n =1)	Instructor taught Kun-Qu in music appreciation class (n =2)	Classmates in high school studied Yue-Ju (n =2)	Studied songs, concepts in general music classes (n = 7)	Encountered online (n =1)
	Encountered when switching television channels (n = 2)	Encountered in public locations (n = 5)	Studied L ǔ -Ju for several times (n =1)		Classmate in university studied or performed Yue-Ju (n=2)	Knew painted-face in Chinese class (n =1)	
						Made painted-face in a school contest (n =1)	
Opera							
	Encountered on television (n = 2)	Sang operatic works in choir (n = 2)	Studied voice in high school (n = 27)	Watched videos in music appreciation class (n = 8)	Listened to peer's singing in school concert (n = 1)	Appreciated opera in high school music appreciation class (n = 3)	Found singing materials on line (n = 4)
				Took voice course as a requirement (n = 23)			

* N= No response to this category

Some participants (n = 13) reported multiple ways of gaining familiarity with Xi-Qu and opera. They watched Xi-Qu on television and also watched live performance in community.

Furthermore, they had formal training in Western style singing and also appreciated some opera works in school. In these cases, the participants usually explained how each way influenced their familiarity with and preference for Xi-Qu and opera. I present the findings relating to the effect of the different ways on familiarity in the following section.

Effect of familiarity on music preference. The ways of gaining familiarity with Xi-Qu and opera exerted different influence on participants' attitudes toward various musical genres and styles. I first discuss the influence of watching television with a highlight on the effect of family member's guidance on the participants' music listening activities, followed by community activities, formal training (including private lesson and school course), general music classes and university course, internet, and peers.

Watching television. The majority of participants became familiar with Xi-Qu through television programs whereas watching television was not an important way to get familiar with opera. As the finding revealed, accompanying grandparents and/or parents was a frequently mentioned reasons for watching Xi-Qu on television while a few of participants only encountered some Xi-Qu styles when switching television channels. The participants were either passively or actively involved in the television programs and developed negative or positive attitudes toward Xi-Qu.

The majority of the participants commented that Xi-Qu was their grandparents' favorite style and they accompanied their grandparents watching Xi-Qu on television. Some of the participants stated that they only watched Xi-Qu on television passively and did not enjoy it too much. The instrumentalist, Li-Ying, exemplified this situation:

> When I was little, I encountered it (Yue-Ju) when my family members (grandparents) watched it on television. I did not watch it on purpose, just by chance… I visited my

grandparents. My grandfather only liked such kind of thing (Yue-Ju). It (Yue-Ju) was boring, but I could not watch other things, so I sometimes accompanied them. I only listened to such things while my brain was blank. I could stand for just sitting there with them, but I definitely did not care about what kind of things they (the Yue-Ju musicians) were performing and acting.

For some other participants, watching Xi-Qu on the television, with grandparents passively, was less annoying, sometimes even interesting, but it did not mean that they liked Xi-Qu. Wu-Ji, a Western style vocalist, exemplifies this:

I am not familiar with it too much (Jing-Ju), but my grandparents watched Xi-Qu at home, such as Jing-Ju, and Huangmei-Xi (黄梅戏, a regional style in Anhui Province) in the Xi-Qu television channel, so sometime we watched together. There was a television program that was a contest, like, many Xi-Qu fans sang Xi-Qu in the contest, (singing) various Xi-Qu styles. They (grandparents) often watched this program… They usually let me choose what I would like to watch first, but sometimes I did not find anything interesting (on television), I would watch Xi-Qu with them. I like Yue-Ju "Story of Stone". My grandmother always played the CD of "Story of Stone". I listened to it for many times so sometimes I hummed with it. I could sing a piece in this work actually (she sang the piece)…but I think Western music is better than it (Xi-Qu), I don't know why, just feel like that. I think the Western music is more formal and orthodox, but Xi-Qu is not. I am a kind of person admiring the Western things… If you ask me to watch a Xi-Qu live performance, I'd rather to watch an operatic work instead.

Unlike those participants who watched Xi-Qu on television with family members passively, Xiao-Fan, the Western instrumentalist, found it enjoyable to watch Xi-Qu with her

grandparents' guidance in her childhood. Her grandparents were not just Xi-Qu listeners but actively practiced Xi-Qu at home. Xiao-Fan developed interest in several Xi-Qu styles and expressed quite different opinions about Xi-Qu from those of the aforementioned participants:

> My grandmother could sing many Xi-Qu pieces and she always sang at home when she was young and healthy. But now her health deteriorated so she only watches the Xi-Qu channel on television. She loves that (Xi-Qu). She told me a lot of things about Xi-Qu and told me all kinds of stories of Xi-Qu and folk songs…I was interested in it very much at that time, but now probably I feel it is not as interesting as it was before. Possibly because I studied more things, so I switched my interest to other things. Actually I think the (government's) efforts to preserve and disseminate traditional Xi-Qu were not strong enough. Now we don't have chance to get in touch with Xi-Qu at all. The whole society is promoting opera and other things from the Western countries. I think if Yue-Ju and Jing-Ju were available in school, I would let my next generation to study (Xi-Qu) in future.

No matter passively or actively, the majority of the participants who watched television with family members were influenced by the Xi-Qu style to various extents. The styles that they ever watched usually received higher preference ratings than the other styles. Li-Ying, who claimed that she disliked all Xi-Qu styles, gave low preference ratings for the Xi-Qu examples, but she still gave Yue-Ju "Story of Stone" a higher preference rating ("2") than that for the other three ones ("1"). As she said, this piece was more similar to what she watched with her grandfather and sounded "a little bit comfortable". Furthermore, those who watched Xi-Qu on television with enjoyment were more likely to generalize their preference to the unfamiliar styles, as Xiao-Fan's preference ratings for the four Xi-Qu styles ranged from "5" to "6".

A few of participants only encountered some Xi-Qu styles when switching television channels without the family members' guidance. Such experience didn't have positive influence on participants' attitudes toward some Xi-Qu styles. Some of the participants stated that they encounter Jing-Ju on television and disliked this style very much. A Western instrumentalist, Gan-Jiang, exemplified this:

> I knew Jing-Ju, usually I saw it (on television) but quickly passed it. Such kind of screaming, such kind of high pitches, I just wanted to switch the channel… I am comparatively familiar with it, the high pitches, so as soon as I heard it I got to know that that was the kind of thing I didn't want.

As aforementioned, the Western style vocalist, Fang-Yuan, had the similar experience with Gan-Jiang and also developed strong negative attitude toward Jing-Ju style. The high-pitched singing tone color was the identifier for recognizing Jing-Ju. Both Fang-Yuan and Gan-Jiang gave low preference ratings for the Jing-Ju example "Yezhu Woods" due to the negative impressions about Jing-Ju. Interestingly, the other two participants, the vocalists Kong-Xiang and Luo-Fei, who watched Jing-Ju works on television with family members (grandfather or father) found the singing of "Yezhu Woods" comfortable and preferred this piece to some other Xi-Qu examples. Both the participants reported that their grandfather/father told the stories of the Jing-Ju works to them and they were interested in the story. It seemed that watching television with the family members' companion and guidance exerted more positive influence on the participants' preference for certain Xi-Qu styles than encountering Xi-Qu on television without guidance.

Generally speaking, watching television was the frequently mentioned way of getting familiar with Xi-Qu and the Xi-Qu channel of China Central Television (CCTV) was the main

source of Xi-Qu programs and recorded Xi-Qu performance. According to the findings, watching television led to different level of engagement and familiarity and was not automatically related to positive attitudes toward Xi-Qu. Participants' attitudes toward Xi-Qu were much dependent on the family members' guidance and the participants' own willingness to engage in the Xi-Qu performance.

Participation in community activities. Watching regional Xi-Qu works in community activities was another way of getting familiar with Xi-Qu for some of the participants. The live performance during the Spring Festival (Chinese New Year) period and on social events (weddings, parties) was the frequently mentioned community activities. Some participants mentioned that, in their hometown, the traditional customs were still active. If someone, especially the older adults, wanted to celebrate the birthday, the person usually spent money to invite local Xi-Qu troops to perform at the open areas. Anyone in the village could watch the live performance for free. Furthermore, some people also invited Xi-Qu musicians in wedding receptions.

Some of the participants watched live performance in the community activities with their family members. Findings revealed that there were two levels of engagement in live Xi-Qu performance, including watching with focused attention and watching while doing other activities. The Western style vocalist, Yu-Yang, exemplified the former:

> Each year the Huagu-Xi (花鼓戏, a regional Xi-Qu style) troops would come to my hometown during my elementary school years. I liked it very much, such as "Liang-Zhu" (<梁山伯与祝英台>, a Xi-Qu tragedy), it was so touching that I cried… many people in the auditorium shed tears.

Unlike Yu-Yang's deep engagement with the Xi-Qu performance, some participants

watched Xi-Qu while playing with peers as they watched the live performance at the open area. The Western style vocalist Fang-Yuan exemplified this:

> The Yue-Ju troops came to my hometown during the Spring Festival… they performed on a boat and we watched on the bank…well, I could play around, and had something to eat. My friends were there too, I remember we crawled under the (performance) stage to play, it was so exciting, with my friends.

Two participants told the researcher that they did not focus on the live performance mainly because they could not understand what was going on. The live performance given at the open areas usually did not offer lyrics, so only those who were familiar with the Xi-Qu works could possibly know what the singers sang about. As the participants watched the live performance in childhood when they didn't have extensive experience with Xi-Qu, the lack of background information resulted in the lack of interest in Xi-Qu performance. The Western instrumentalist, Tian-Hao, watched live Xi-Qu performance with his father during the Spring Festival season, but he could not concentrate on the performance. As he stated:

> We children were just like that (in childhood), watching while playing. But it was terrible that sometimes they did not offer lyrics. Since I did not know what they (Xi-Qu musicians) were singing about, I would not pay too much attention to it.

Two other participants watched Xi-Qu live performance in restaurant or in a wedding reception respectively and were impressed by the acting skill, "changing-face" (变脸). They also watched Xi-Qu on television with their grandparents/parents, but they didn't find anything especially interesting to them. The experience with Xi-Qu in the social environment seemed to be more interesting. One participant suggested that if the researcher selected a piece showing "changing face" for this study, she would like it.

No matter watching Xi-Qu live performance with focused attention or not, the participants associated the live performance with pleasant memories, such as playing around and eating food or candy with family members. These participants generally held positive or neutral attitudes toward the familiar Xi-Qu works or styles. However, those who watched without paying focused attention admitted that although they knew the value of Xi-Qu and would not dislike it, they could not like it too much. Tian-Hao exemplified this. He positively told the researcher that Xi-Qu was the "national quintessence", but later he felt frustrated to watch through all the four Xi-Qu examples because he could not stand for watching any Xi-Qu style for too long time. On the contrary, those who watched live performance with focused attention were more likely to focus on the familiar Xi-Qu styles and held more positive opinions about Xi-Qu. Mei-Yuan, a female popular style vocalist exemplified this:

> I think my classmates might not be comfortable with it ("Zhongkui") but I think it is quite good…it is part of the traditional culture… I don't think liking popular music is contradicted to liking the traditional music. Popular music also contains Chinese traditional elements in it… Why should we dislike Xi-Qu? We can like both (popular music and Xi-Qu). Just like, we celebrate Christmas, but also celebrate Chinese New Year.

As the findings indicated, family members' accompanying was the major reason for participating community activities. Furthermore, all participants stated that they mainly participated in community activities in childhood. As they grew up, the influence of community activities decreased because they left hometown for education and no longer went back to their hometown frequently. Watching live performance developed different attitudes toward Xi-Qu among this group of participants depending on the level of engagement with the performance.

Formal training. Formal training refers to taking private voice lessons during pre-college years and/or taking voice lessons in university regularly. All participants attributed the familiarity with opera to their learning experience with Western style singing skills and they also believed the strength of formal training on the development of familiarity with and preference for Xi-Qu.

During the interviews, I found that all participants took private voice lessons in senior high school, preparing for the auditions of the universities and colleges. The instrumentalists must sing an art song in auditions, selected either from Western or Chinese repertories. After entering the college/university, the popular style vocalists didn't need to take Western style voice lessons any more while the instrumentalists must take voice lessons for one year as the degree requirement. The vocalist continued to study voice throughout the university years. However, no participants studied any Xi-Qu styles regularly before attending college and no course were offered to study Xi-Qu singing professionally. The popular vocalist Ying-Qi's parents were Yue-Ju musicians and taught him Yue-Ju in his childhood. He later switched to piano because his father thought that studying Yue-Ju was too difficult.

The influence of formal training on familiarity seemed to be strong. All participants felt familiar with the singing skills of the operatic pieces. When the researcher asked the reason why, the answer was always "I studied it before." Some participants also reported that they were familiar with Xi-Qu, but they felt more familiar with opera due to the training in the Western style singing. The vocalist Wen-Yi exemplified this:

> After all, I study Western style singing, feel like, very familiar (with "Hebrew Slaves Chorus")…If I didn't study Western style singing, I think I was more familiar with Xi-Qu, but now it's totally different, it (Western style singing) is my major…I am familiar with

it , the singing methods.

The formal training not only developed the participants' familiarity with the Western style singing, but also changed some participants' attitudes toward opera and Xi-Qu. The Western style vocalist Wen-Yi exemplified this:

> Actually I disliked the Western style singing before studying it…it's like, they (opera singers) looked as if they pretended to be (the great singers)…but after studying it, I found it (Western style singing) sounds quite good.

Training in Western singing skills also changed the perceptions of the Xi-Qu singing skills. The vocalist Yu-Yang liked Yue-Ju style very much and was in tears when she watched a Xi-Qu tragedy with her grandparents in childhood, but she told the researcher that the training in Western style singing made her always feel uncomfortable with Xi-Qu singing methods. As she stated:

> It ("Yezhu Woods") sounds so strange… I liked it (Xi-Qu) very much before, but since I studied my singing method (Western style singing) I felt this singing method (Xi-Qu singing) was so strange. Their (Xi-Qu musicians) lips didn't move too much, looked like their mouth did not move, but they could produce the high-pitched sound, (the voice is) so flat. It is not like the way we sing songs… They sang very differently from we usually do.

Some participants claimed that they disliked both opera and Xi-Qu, but the training in Western style singing made them feel more comfortable when watching the operatic examples. The popular style vocalist Hua-Liang exemplified this:

> It sounds so comfortable ("Hebrew Slaves Chorus"). After watching the Xi-Qu examples I saw some familiar things, I felt much better at once…because I am a music major after

all…I studied the Western style singing at the beginning of my music training, I mean, this thing (opera), I have some (good) feeling about it…I like it (opera) a little bit more (comparing to Xi-Qu).

The formal training in Western style singing developed the stereotyped opinions about the two singing styles among some participants. The instrumentalist Jun-Qing exemplified this. Jun-Qing sang in a choir for about ten years before entering the college and was currently taking voice course. She mentioned that she studied a Kun-Qu piece in a university course. She liked some Xi-Qu pieces and held positive attitudes toward Xi-Qu in general. Her preference ratings for the four Xi-Qu examples ranged from "5" to "6" which were very high in comparison to the ratings of the majority of the participants. However, she still suggested that Xi-Qu musicians should study Western singing methods to improve their singing because the Western singing methods were superior. As she stated:

I think the tone color sounds very good ("Rigoletto"), and they sang (the Western opera singers) so expressively, (they were) better than we Chinese, it was by nature, they were really better than us by nature. I think we Chinese are just good at acting and speech… but regarding singing, we were not able to compete with them. After all it (opera) has hundreds years of history, so we are not able to compete with them…Xi-Qu singing should be based upon the Italian singing methods, of course, the Italian singing methods were better than Xi-Qu singing methods.

Most of the participants knew Xi-Qu earlier than opera, and some of them thought that they were more familiar with Xi-Qu than opera, but the formal training was influential in shaping their preference for different musical styles. As a vocalist said, "I actually knew Xi-Qu earlier than opera, but I like opera more." When the researcher asked if their training background

influenced their music preference, the answer was always positive. However, for those who had extensive experience with Xi-Qu, they were more likely to accept Xi-Qu. By extensive experience it refers to the participants' deep engagement with certain style, including watching live performance or television programs with focused attention and guidance, or having experience of studying the singing/acting skills. The good memory about Xi-Qu counterbalanced the effect of the formal training in Western style singing to some extent. As the popular vocalist Mei-Yuan said, "We can like both."

The participants believed that formal training for Xi-Qu could develop positive attitudes toward Xi-Qu and increase their preference for Xi-Qu examples. During the interviews, the researcher asked some participants (n = 12) as the conversation flowed that what if they also had formal training for Xi-Qu. All the participants being asked believed that if they studied Xi-Qu formally just like studying Western singing skills, they would like Xi-Qu more, or at least would not dislike Xi-Qu. The vocalist Fang-Yuan exemplified this. He once asserted that he disliked Xi-Qu in general although he kept neutral to a familiar Xi-Qu style and had good impressions about "Peach-Blossom Fan" due to the good acting. However, he believed that formal training would increase his preference for Xi-Qu and he attributed his current attitude toward Xi-Qu to the lack of extensive learning experience. As he commented:

> Yes, of course (If I studied Yue-Ju I would like it more). Actually I never had a deep understanding of it (Yue-ju), I never tried to find some materials to study it seriously, never. I just heard it before… If I studied Xi-Qu, I am sure that I would be more interested in it. Then I would further evaluate the quality of the singing (in Xi-Qu videos), to see if they really sang well…

The vocalist Wu-Ji also thought that only by extensive training, could she change her attitude toward Xi-Qu. As she said, "If I studied it frequently, taking many lessons, probably it (training in Xi-Qu) would influence me. But if I just took a few lessons in school, it would not help too much."

Some participants inferred, based on their previous learning experience, that they might be more positive about Xi-Qu after studying it. The vocalist Hua-Liang exemplified this:

> If I studied such kind of things (Xi-Qu) probably I would like it a bit more. Because I studied dance when I was in elementary school and at first I disliked it (dance). But later I found it not bad…If I studied Xi-Qu, I am not sure if I would like it, but probably I would not hate it any more.

The participants' comments indicated that formal training was an important way of developing and modifying one's music preference.

Effect of general education and university course. General education refers to the school education for students from the first to the twelfth grades, including the course of music and other school subjects. University course refers to the non-voice courses in the music programs in universities. Findings revealed that the influence of general music education on Xi-Qu was weak in comparison to watching television with family members, participation in community activities, and formal training. By weak it meant that the participants didn't have clear memories of the music class that introduced Xi-Qu and they were not interested in the teaching content. They didn't have experience of watching the Xi-Qu videos or listened to authentic Xi-Qu works but just studied some concepts of Xi-Qu and the time spent on these concepts was minimal. Some participants developed false impressions about Jing-Ju and opera. The university course helped develop participants' familiarity with Xi-Qu and opera, but the participants' attitudes toward the

familiar piece differed.

The participants who had previous experience with Xi-Qu in general music classes commented that they did not find the teaching content interesting as they mainly studied the concepts. As a participant simply put, “The teacher taught about it (Xi-Qu), but we were not interested, so the teacher stopped.” the other two participants provided some details of the music classes. The instrumentalist Li-Ying exemplified this:

> I remember the name (of the Kun-Qu style). My music teacher taught it (Kun-Qu), but just some concepts…for example, a unite was about Xi-Qu, the teacher let us point out (in the picture) which one was the female role, such kind of stuff.

The Chinese style instrumentalist, Chang-Feng, also told the researcher that the music teacher talked about some concepts of Xi-Qu:

> My music teacher taught some concepts of it (Xi-Qu), in elementary or in middle school, I could not remember…such as how many(Xi-Qu) styles, and (introduced) some kinds of Xi-Qu styles…I did not pay too much attention… but at least I knew something about it (Xi-Qu).

As for Western opera, findings revealed that the participants usually learned about opera in general music class during the senior high schools years and watching opera videos in classroom was the main teaching activity. Some participants could recognize the operatic examples and confirmed familiarity for these pieces heard in senior high school. However, other participants could not differentiate Western opera from musicals. When the researcher asked the details of the teaching content about opera, some of the participants listed the names of the Western musicals, such as “Cats”, “The Phantom of the Opera”, and “Notre Dame de Paris”. These results suggested that although all the participants studied voice, some participants did not

learn adequate and correct information about Western opera in general music classes.

A number of participants were also confused about Jing-Ju. The popular style vocalist Mei-Yuan liked the regional Xi-Qu style, Yue-Ju, but when the researcher asked if she knew anything about another style Jing-Ju, she mentioned a popular song "Sing and Talk about the Painted-Face" ("说唱脸谱") heard in general music class. She commented that the singing tone-color of the Jing-Ju example "Yezhu Woods" was so different from the song she ever heard. This song was Mei-Yuan's only previous experience with Jing-Ju and some other participants also mentioned this song in general music classes when the researcher asked about their previous experience with Xi-Qu. However, this song was a popular song that integrated some Jing-Ju tunes so it was not considered as an authentic Jing-Ju piece. Interestingly, this song was not supportive to Jing-Ju, but depicted a controversial situation about the preservation of Jing-Ju. The main idea behind the lyrics was that, "my grandfather liked Jing-Ju, but we young people could not understand it (Jing-Ju)." The song ended with the conclusion that "only by reforming Jing-Ju could we pass on this national heritage to the next generation."

Findings suggested that the experience outside the music class provoked two participants' interest in the painted-face of Xi-Qu in their elementary school years. The familiarity with the painted-face increased their preference for "Zhongkui" featuring painted-face. The Western style instrumentalist, Li-Wen felt sleepy when he was watching some of the Xi-Qu examples, but he told the researcher that there was nothing in "Zhongkui" that he disliked. He admitted that the tempo and tone color of this piece might give him a good impression, but the familiarity with painted-face was important to increase his interest in this piece. As he stated:

> I had nothing to dislike in this piece ("Zhongkui"), because I get used to the face, the red face…I am familiar with the painted-face because I studied it in a Chinese class. when I

> saw the red face, at least I could connect it to Guan-Gong (关公, a Chinese ancient general and hero), a very loyal person. I saw the face color in this video then I knew he was a good man…but I did not know who he was… I remember very clearly that there were four types of painted-face in the Chinese textbook, red, white…It seemed that the article (in the textbook) introduced "changing face", very impressive to me. I think it is helpful (to appreciate "Zhongkui").

The other participant, the Western style instrumentalist, Lan-Zhi, mentioned her pleasant experience with Xi-Qu painted-face in elementary school. She made painted-face by using peas of different colors in a school contest. Her experience with painted-face in elementary school made her get familiar with it so she was not surprised to see the painted-face in "Zhongkui". As some participants were scared of painted-face in "Zhongkui" and disliked this piece, the researcher asked Lan-Zhi's opinions about the painted-face. Lan-Zhi said, "Is it normal in Xi-Qu? I did not see anything exaggerated". Both the participants gave "Zhongkui" a preference rating of "5" although their familiarity ratings for this piece were "1" and "2" respectively. The two participants talked about the background music, acting, and the singing tone color as the reasons for liking this piece, but as they stated, the familiarity with painted-face was helpful to appreciate "Zhongkui".

Regarding the influence of the university courses, the participants in school A reported that they didn't get any information about Xi-Qu in the university courses while the two participants in school B studied a Xi-Qu style in a university course. The two participants in school B mentioned that they got familiar with a Xi-Qu style, Kun-Qu, in a course named "Introduction to the Arts". The course instructor had the expertise in this style and taught students to sing a piece in class. The participants told the researcher that the university course

influenced their familiarity with Kun-Qu, but their extensive experience with Xi-Qu in community was more important for liking Xi-Qu. Probably the experience with Xi-Qu in community and in the university course together influenced participants' familiarity with and preference for Xi-Qu examples as they gave high preference ratings to all the four Xi-Qu examples (ranged from "5" to "7").

Furthermore, a participant in school A reported the influence of a university course on her preference for an operatic piece. The Western style vocalist Wu-Ji in school A stated that she was familiar with "La donna è mobile" in "Rigoletto" because the instructor in a course, "Introduction to the Arts", introduced this piece. Despite the familiarity, she told the researcher that she didn't like this piece too much because of the unpleasant experience with the lyrics. As she stated:

> I remember we watched ("La donna è mobile" in "Rigoletto") together in class, we female students were not willing to watch it, because the male students talked about the lyrics, they read the lyrics loudly, we (female students) did not want to listen…probably the male students found it interesting, but we female students thought that why he (the male singer in the opera) talked about women that way.

However, Wu-Ji's formal training in Western style singing probably overcame the unpleasant experience in class. She still gave this piece a preference rating of "5". She told the researcher that she did not want to listen to this song because of the lyrics, but to be objective, it was a good song.

Notably, the two institutions offered the same course named "Introduction to the Arts", but the teaching content differed. According to the participants' comments, the teacher in school A mainly focused on the Western music, but the teacher in school B introduced both Chinese

traditional music, including Xi-Qu, and Western music. Furthermore, the teacher in school B also taught Xi-Qu singing in this course while the teacher in school A gave lectures and played videos in class. It indicated that there was a room for the course instructors to decide the teaching content at the university level and the teacher's expertise and music preference might matter in selecting teaching materials. The students therefore had different opportunities to get familiar with Xi-Qu and opera.

Internet. Four voice major participants mentioned that surfing internet was a way of getting familiar with opera, but no participants reported that they watched Xi-Qu online. The four participants tried to find useful materials online to broaden their views and to improve their singing skills. As surfing the internet was the private activity and mainly self-directed, what the participants searched for was usually relevant to their study areas and the preferred music styles. Since no participants said that they ever search for any Xi-Qu works online, probably it was because that Xi-Qu was not the preferred style and also irrelevant to their study.

The Western style vocalist Fang-Yuan told me that he was familiar with "Rigoletto" because he encountered this piece when he was searching for Western style art songs online. As a Western style vocalist, Fang-Yuan often searched for male vocalists' performance online. He liked "Rigoletto" and when the researcher asked him if he wanted to watch this piece again after data collection, his answer was positive. However, he said that he would not buy a recording, but wanted to find it online. Similarly, some participants also tried to find the liked piece online instead of buying audio files or compact discs in music stores.

Despite that internet was not a main source of getting familiar with Xi-Qu and opera for the most of the participants, findings revealed that searching for useful video or audio music materials online was the first option for the majority of the participants. Several participants

pointed out that watching television was no longer a popular way of entertainment among the university students. Some participants told the researcher that cell-phone was the most popular device among the university students to find any useful materials online. Furthermore, during the interviews, the researcher found that all the participants took a cell-phone and sometimes showed the researcher their preferred music they downloaded. A vocalist also used cell-phone to record her voice lessons and frequently reviewed her performance in the voice class using cell-phone.

Peers. Peers' influence seemed not to be the main reason for being familiar with Xi-Qu and opera. Five participants mentioned that their classmates studied Yue-Ju but they never watched or listened to their classmates' performance. They thought that their family members' influence was more important for getting familiar with Xi-Qu. One participant stated that her classmate sang an operatic piece in a concert, but she told the researcher that formal training was a main reason for getting familiar with opera. Peers' influence on the development of familiarity with Xi-Qu and opera was not strong among this group of participants.

Familiarity and the dimensions of appreciation. Based on the participants' responses, the researcher found that familiarity was closely related to the dimensions of appreciation. There were two dimensions of appreciation: perceptual and rational. By perceptual appreciation it meant that participants appreciated the sensory information, both visual and audio, without in-depth analysis, while the rational appreciation meant that the participants analyzed and critiqued the musical example based on the expertise relevant to the musical examples.

The researcher found that if the participants were unfamiliar with the piece or the style, the appreciation process usually stayed at the perceptual dimension as they were not able to analyze and evaluate the musical example in depth without expertise. All the participants were music majors, so they tried to rate the musical examples based on the quality of the video

objectively. However, those who did not have extensive experience with Xi-Qu found it hard to evaluate Xi-Qu examples. The Western vocalist Fang-Yuan had early exposure to Chinese Yue-Ju style and kept neutral to the Yue-Ju piece "Story of Stone". He told the researcher that he just watched and appreciated this piece on surface and did not know if the quality of this piece was good or not. As he stated, "Probably she did not sing well, but I could not evaluate it. If I was a professional (Xi-Qu musician), probably I would look at it from a different perspective." The Western instrumentalist Ming-Hui also commented, "I did not have any professional knowledge of Xi-Qu, so when I was watching (Xi-Qu examples), surely I did not analyze it. I just watched and listened to the elements in the video, but I could not evaluate". The Western style vocalist Wen-Yi had pleasant experience with Yue-Ju style as he often watched Xi-Qu on television with his mother in childhood. But he felt that only watching and listening did not prepared him to evaluate the Yue-Ju piece for this study. As he stated:

> If I were a Xi-Qu musician, I would listen to see if she really sang well… (but) I never studied Yue-Ju, so just now I just listened and watched (the Yue-Ju example). If it sounded good to my ears, I would continue…however, I did not know if she really sang well, I just felt that it sounded good… But I am able to evaluate this one ("Hebrew Slaves Chorus"), I knew they sang very well.

As these participants could not evaluate the unfamiliar musical examples based on the expertise relevant to the style/genre or the example, the feeling of comfort with the sensory information became the dominant criteria for rating the preference for musical examples. As for the Xi-Qu examples, some participants used "piercing" to describe the singing tone color of "Yezhu Woods" and "Peach-Blossom Fan" and felt "uncomfortable" when they heard the high-pitched Xi-Qu singing. Furthermore, they also used the word "exaggerate" to comment on

the facial make-up, costumes, and the stylized acting of Xi-Qu. The situation of opera was different in that although some participants also pointed out that the female opera singers' voice was piercing, they were still satisfied with their good singing skills instead of rejecting them completely.

However, if the participants had extensive experience with certain styles or genres, the appreciation process would gradually transcend the perceptual dimension and then stepped into the rational dimension. The participants not only appreciated the sensory information, but also tried to objectively evaluate the quality of the elements in the video based on the expertise in the relevant areas. They usually rated the preference for the musical examples based on the quality of elements in the video instead of totally on their own music taste. As aforementioned, the vocalist Wu-Ji disliked unpleasant lyrics of "Rigoletto" and felt uncomfortable to listen to this piece, but she still gave a preference rating of "5", because she evaluated this piece based on the quality of this video.

Other participants tried to offer specific reasons for liking/disliking operatic pieces from the professional perspectives. After watching "Flower Duet", the vocalist Wen-Yi first evaluated the quality of the singing:

> I think the singer in red costume sang very well…she sang better (than the other singer). But the voice of the two singers was not balanced, the singer in red was too loud, the volumes (of the two singers) did not match. Their tone colors did not match too.

The vocalist Zhi-Ru was an experienced vocalist and often performed on stage. She liked the acting and singing of "Rigoletto" because of the singer's excellent singing skills and expressive acting and she commented on this piece from a perspective of a vocalist. As she stated, "I liked his singing. It was my mostly liked element in this piece, his singing skills were

very good…His acting was good too. His facial expressions changed properly that could capture your attention. The body movements were appropriate." Zhi-Ru admitted that the fast-tempo might be a reason for liking "Rigoletto", but she liked fast-tempi songs not because they were more entertaining, but mainly because they were easier to sing than the slow-tempi songs.

Similarly, the participants who had extensive experience with some Xi-Qu styles also tried to evaluate the quality of the Xi-Qu examples. The popular style vocalist Ying-Qi liked "Story of Stone" but he critiqued this piece based on his knowledge about Xi-Qu performance. As he stated:

> I am familiar with it (Yue-Ju style), so I tried my best to avoid the influence of familiarity on my judgment… I knew it ("Story of Stone") was Yue-Ju at the very beginning of the video, so I tried my best to be rational and objective, and I tried not to engage in the performance emotionally… I liked her singing… and I think her costumes and the stage scenery were of the Yue-Ju style. But I found that her pronunciations showed too much local accent…Yue-Ju was based on our regional dialect and the pronunciations (of Yue-Ju musicians) might differ slightly, but her accent was just too much.

In fact, the other four participants also complained the pronunciations of the singer in "Story of Stone", but their reason was totally different from that of Ying-Qi. The Western style instrumentalist Meng-Lan was not comfortable with the pronunciations because she did not like the regional dialect. She further explained that her ears could no bear the pronunciations of the dialect because she get used to singing in standard Chinese. She even suggested that Xi-Qu singers should sing in standard Chinese. The instrumentalist Kang-Lan also complained that the pronunciations of the singer in "Story of Stone" made her ears uncomfortable. As the two participants had little exposure to Yue-Ju before, they judged the "Story of Stone" mainly

according to their preference for language while neglected the fact that dialect was fundamental to most of the regional Xi-Qu styles. Their appreciation still stayed at the sensory dimension while Ying-Qi's evaluation was more from the professional's point of view.

Another participant who was familiar with the acting of Xi-Qu also critiqued the acting of "Peach-Blossom Fan". Although she liked this example, she did not completely accept the acting design. She pointed out that the acting of "Peach-Blossom Fan" did not follow the traditional principles of Xi-Qu. Near the end of this video, the male and the female Kun-Qu singers hugged and then looked at the peach-blossom fan in their hands, sobbing. Quite a few of the participants liked the acting of this piece and had no problems about their hugs, but the vocalist Yu-Yang found the problem:

> I liked the acting and dance of this piece. But at the end of this video they hugged…I think it was too exaggerated. In the traditional Xi-Qu works, female and male did not hug. When the female approached, the male usually drew back and bowed (Yu-Yang imitated the gestures and movement), they didn't act in this way (hug)…I didn't know the relationship between the two persons, but I think the acting was too exaggerated…maybe they wanted to look modern.

In addition, Yu-Yang evaluated the suitability of costumes based on the principles of Xi-Qu costumes. The participants held different opinions about the costumes of "Peach-Blossom Fan". A number of participants were not comfortable with the white color costumes in this example because they liked bright colors, while some other participants liked the costumes of this example mainly because the costumes were "pretty". Generally, they judged the costumes mainly out of their taste in color and costumes styles without being aware of the underlying principles of Xi-Qu costumes. When the researcher asked Yu-Yang's opinions about the

costumes in this example, Yu-Yang tried to interpret the costumes within the framework of Xi-Qu:

> I liked the costumes…surely they cannot wear bright color (costumes) when they were crying. It was a tragedy, so if they wore bright-colored costumes, it was contradicted to the context and to the rules of Xi-Qu costumes… The costumes of Xi-Qu were to indicate the emotions and context. If they were in a wedding context, they must be in red costumes… When I saw the color of their costumes I guessed it must be a tragedy, then later I found that they cried (it was a tragedy).

As the findings revealed, familiarity was related to the two dimensions of appreciation. Only those who had extensive experience with some Xi-Qu styles and opera could appreciate the relevant musical examples in the rational dimension. Their preference ratings were not just based on the pleasantness of the visual and audio information, but also on the overall quality of the video, including the quality of sing skills, expressiveness of the singers, appropriateness of the acting and costumes. However, for the participants who were inexperienced with Xi-Qu, they found it hard to offer analytic comments on the Xi-Qu examples.

Religious belief. A few of participants were Christians (n = 3) and the influence of religious belief on their preference for "Hebrew Slaves Chorus" was apparent. The musical example "Hebrew Slaves Chorus" was selected from "Nabucco" which was related to religion. By the time this example was selected, its singing form (chorus music) and composer (Verdi's second example) were the main reasons whereas the religious features of this work was not a variable being taken into consideration. However, during the interviews, the researcher found that three participants were Christians who responded to the religious work quite differently from those non-Christian participants did. The differences were indicated by the curiosity about the

plots and their decisions after knowing the information.

During the interviews, the three Christian participants expressed curiosity about “Hebrew Slaves Chorus”. After watching the video, two Christian participants directly asked about the background information of this piece. The third participant tried to guess the plots and told the researcher that she heard people’s callings for help. The costumes and melody offered clues and provoked their curiosity. As one participant commented, “I am a Christian. I watched many films about the life of Jesus. The costumes in this video looked like that in the films”. The other two participants found that “Hebrew Slaves Chorus” sounded like the songs they sang in church. The three participants reported that the sense of familiarity with the religious features of this work increased their preference for this piece.

Furthermore, after knowing the background information, two participants stated that they would give a higher rating if they had a chance to rate the piece again and would watch “Nabucco” after data collection. Before watching the musical examples for this study, the participants were not informed of the detailed information about the selected examples and “Hebrew Slaves Chorus” video didn’t have Chinese subtitles. So when the Christian participants rated “Hebrew Slaves Chorus”, they actually did not know for sure if this work was related to religion or not. They rated this piece “4,” “5,” “6” respectively which were not the highest preference ratings for this piece. But after knowing the background information, the participants who gave “4” and “6” to this piece said that they would give higher ratings if they knew the story. The reason was simple, just because it was a religious work and they were Christians. The participant who rated “5” for this piece did not mention if it would be rated differently after knowing the background information, but “5” was the highest rating given by this participant among the eight examples.

Some non-Christian participants also gave “Hebrew Slaves Chorus” high ratings and were curious about the background information, but the reasons differed from that of the Christian participants. Two Western style vocalists rated “7” for this piece and the most important reasons for preference were unique scenery, relevance to study (Western singing skills), and familiarity (sang this piece before). A popular vocalist also asked the background information and mentioned that the rating would be higher if the detailed information were given before listening. However, the popular vocalist actually first commended that this piece was boring and the main reason for asking for background information was that putting the song in context would help make sense of the song. On the contrary, the three Christian participants were all instrumentalists and mainly emphasized the influence of religious power on their preference and the only reason for increasing rating was due to religious belief.

Cultural and Environmental Factors

Culture is the “beliefs, behaviors, norms, attitudes, social arrangements, and forms of expressions and production that form a describable pattern in the life of members of a community or institution” (LeCompte & Schensul, 2010, p. 24). In China, there are fifty-six ethnic groups but the Han Chinese people take up over 90% of the Chinese population. As all the participants were of Han ethnicity, the cultural factors refer to that of the Han Chinese culture. Despite that Han Chinese share common traits, people of various geographic regions have developed subcultures that differ from one to another regarding the spoken language, music, customs, and food. Regional dialect and music were the two important components within a subculture that were relevant to this study, because many Xi-Qu styles were closely related to the regional dialect and music.

Findings of this study revealed that Han Chinese culture and the regional subcultures influenced some participants' preference for an operatic example and Xi-Qu examples at different levels. Moreover, the environmental factors led to the diversity of the participants' preference for Xi-Qu and also counterbalanced the influence of cultural background on the participants' preference for opera. This section is pertaining to the cultural and environmental influence on the participants' preference. I first present the findings regarding the influence of Han Chinese culture on the participants' preference for opera and Xi-Qu examples, followed by the influence of regional culture on the participants' preference for various Xi-Qu styles, and the diversity of the participants' preference for Xi-Qu. As the environmental factors, such as education, family, community, and media, functioned mainly as the ways of getting familiar with Xi-Qu and opera, the details of the environmental influence were presented in the "familiarity" section under the title of "personal factors" in this chapter. This section mainly focused on the diversity of the participants' preference for Xi-Qu styles caused by cultural factors. First, I present the influence of Han-Chinese culture, followed by the influence of regional culture, and the diversity of preference for Xi-Qu styles.

Influence of Han-Chinese culture. Han Chinese culture is a rather broad topic. As this study is relevant to the preference for Xi-Qu and opera, I will focus on the aspects of the Han-Chinese culture relevant to this study. The participants for this study were all Han Chinese, so it seemed to be logic to assume that they would overall prefer Xi-Qu to opera if cultural background played a role in music preference. Findings revealed that Han Chinese culture indeed influenced some participants' opinions about the musical examples, but music preference is the complicated phenomenon that could not simply explained by cultural background, as multiple factors would interact to influence the participants' preference decisions.

Some participants' attitudes toward the costumes of "Flower Duet" indicated the influence of Han Chinese culture regarding the virtue of women. The operatic example "Flower Duet" was selected from the French opera "Lakeme". As the story of "Lakeme" took place in India, the singers of "Flower Duet" were in Indian style costumes. In this video, the two singers wore the tight blouses with very low collars that made some participants uncomfortable, as exposing part of the body was not a norm for women and being sexy was not considered a virtue of women in Han Chinese culture. The participants (n = 4) complained that the singers looked somewhat sexy or that their costumes exposed their bodies too much. As mentioned in the section of "attractiveness of singers", a participant stated that she really wanted to pull up the collars a little bit. The participants actually didn't complain about the costumes but the sexy-looking effect the costumes brought about.

Some participants thought that the costumes of "Flower Duet" were acceptable because they perceived that the story was in the context of a different culture. As the vocalist Yu-Yang commented "the costumes exposed too much (of their bodies). But they were foreigners…probably people of the foreign countries were open." The popular style vocalist Luo-Fei also stated, "When the video was in the close-up perspective, their bodies looked too exposing. But it was understandable. I guessed they were Indians." For these participants, exposing part of a woman's body was acceptable in another culture, but from the point of view of a Chinese, it was somewhat problematic.

Moreover, the influence of the cultural background was evident when some the participants commented on the Xi-Qu examples. A number of participants (n=7) were conscious of their identities as Chinese. They referred to Jing-Ju or Xi-Qu as the "national quintessence" and emphasized that Xi-Qu was a component of Chinese culture differentiating China from other

countries. As the vocalist Wu-Ji stated, “Xi-Qu was our national quintessence. The other countries don’t have (Xi-Qu).” Some participants acknowledged Xi-Qu as the root of Chinese culture and were worried about the current situation of Xi-Qu in China. As Wu-Ji stated:

> We should study Xi-Qu in school, or Xi-Qu would gradually disappear. I don’t want that. We should preserve our tradition; otherwise other people (people of other countries) would say that we don’t have our root. I have regretted that I studied piano. I should have studied gu-zheng(古箏) or pipa (琵琶). It doesn’t mean that I am not interested in piano, it is just because I am a Chinese. A Chinese should study a Chinese instrument. I will study a Chinese instrument in future.

In addition to studying a Chinese instrument, Wu-Ji also expressed her interest in learning Xi-Qu in university. Furthermore, she told the researcher that if someday she became a music teacher, she would teach Chinese Xi-Qu to the students because it was her responsibility to pass down the cultural heritage.

The instrumentalist Zhu-Ling also worried about Xi-Qu and suggested that reform should be carried out in order to attract the young people. She was opposed to the current trend that new Xi-Qu works integrated the elements of Western opera and drama, because Xi-Qu was the Chinese cultural heritage. As she stated:

> I actually like Jing-Ju, but if it does not make change, it would disconnect with the modern society. I mean…the old people like it, but it is hard for the young to accept it…I think Xi-Qu should integrate some modern elements, a little bit modern elements but the essence should not be changed, such as costumes and singing. But I don’t like the trend that those people made the Jing-Ju like the Western opera. We should keep the Chinese elements because it (Jing-Ju) is of Chinese. I don’t want people to change it too much and

to integrate elements of the art forms of the other countries. If so, it (Jing-Ju) would be neither Jing-Ju nor opera. It (Jing-Ju) should show the characteristics of Chinese nation. When people of foreign countries watch it, they would quickly recognize it as the Chinese art.

Although the cultural influence on the participants' preference was apparent, findings also revealed that the participants' opinions were not consistent. Despite that some participants had problems with the costumes of "Flower Duet", a number of participants (*n*=5) commented that the costumes of "Flower Duet" were good. They held positive attitudes and used the words such as "beautiful", "well-designed" "unique", "good-looking", and "bright-colored" to describe the costumes of "Flower Duet". The instrumentalist Lan-Lan specifically commented that she liked the bright-colored costumes as they could easily to catch peoples' attention. It indicated that these participants judged the costumes based on the visual effect while disregarded the cultural norm.

Furthermore, the cultural background seemed not to be influential when comparing the participants' preferences for Xi-Qu and opera. According to the participants' comments, the majority of them generally liked Western opera more than Xi-Qu. Even some of the participants who had extensive experience with some Xi-Qu styles and also reported that they liked some Xi-Qu examples very much still felt that the operatic examples overall sounded more comfortable and that they could not watch Xi-Qu for too long time. The vocalist Zhi-Ru exemplified this. Zhi-Ru was not a local resident in this province but was from a province located at the middle region of China. Before entering the college, she studied in an art school which offered both Xi-Qu and Western music programs. The students of the two music systems took lessons separately, but the Xi-Qu students and Western music students still had chances to

interact to each other and to perform on stage together. As she was the Chinese style vocalist, her teacher in the art school urged her to take a few of private lessons with a Lǔ-Ju (吕剧) teacher. She liked "Story of Stone" very much and also found the singing of "Yezhu Woods" sounded good. She informed me that she could not watch Xi-Qu for a long time. As she commented, "I cannot accept Xi-Qu. I could watch if the piece was good, but I cannot watch for a long time."

A number of participants didn't believe that young adults would like Xi-Qu. When the researcher told the participants that some other young students liked Xi-Qu examples for this study, the instrumentalist Si-Qi was surprised, "It that true? Well, probably they like Xi-Qu, but I am quite sure that it is rare. I think my opinions (disliking Xi-Qu) represent the majority." Similarly, the instrumentalists Lan-Lan and Kang-Ning asserted that the majority of the young people around them didn't like to listen to Xi-Qu. The vocalist Wen-Yi also commented that liking Xi-Qu was unbelievable among the young people. As he said, "Someone likes Xi-Qu? I think we are definitely not the same kind of person."

Five participants mentioned that their peers practiced Xi-Qu, either their classmates or the relatives. Four of the participants didn't think that studying Xi-Qu was a norm for the young adults. As the instrumentalist Kang-Ning commented, "I have many classmates, but she (her classmate who studied Xi-Qu) is the only one (in my class) who likes Xi-Qu, isn't she? My opinion (disliking Xi-Qu) is of the majority."

These participants' responses indicated that practicing/watching Xi-Qu was not a mainstream activity among this group of participants. Thus, although Xi-Qu is of Chinese music tradition, most of the participants found it hard to accept Xi-Qu. When the researcher asked some of participants about their favorite music, the answers were usually popular music or the music relevant to their study areas.

Based on the participants' responses, there were two factors might counterbalance the influence of cultural background. First, the participants didn't take Xi-Qu as "their" music but the music of the older generations although they admitted that Xi-Qu was of Chinese tradition. During the interviews, the participants frequently mentioned that Xi-Qu was the music of their grandparents and/or parents and other older people in the community. The vocalist Gui-Zhi exemplified this. She liked Yue-Ju example "Story of Stone" and told the researcher that she wanted to study Yue-Ju if given a chance. However, she referred to Xi-Qu as the music of the older generations and the main purpose of studying Yue-Ju was to sing to her parents/ grandparents and to enjoy in old age. As she stated, "the old people liked Xi-Qu. When I get old I must listen to Xi-Qu too, filling in the time and singing for leisure." Similarly, the instrumentalist Da-Ming stated, "people of my age would not want to watch Xi-Qu." These participants didn't accept Xi-Qu as the young adults' music probably because the fact that almost all participants (n= 26) said that they often witnessed the older adults watching/listening Xi-Qu on television or through community activities. On the contrary, only one participant said that the older generations (parents) practiced Western music, either voice or musical instruments.

Secondly, formal training in voice influenced the participants' preference that they found the operatic examples more comfortable. As mentioned in the previous section, formal training was an important way of getting familiar with opera, but not with Xi-Qu for this group of music major students. The participants reported that operatic examples in general were more acceptable than Xi-Qu because they studied voice in high school and in university. The instrumentalist Lan-Lan exemplified this:

> I think this one ("Flower Duet") is better than the previous one (Kun-Qu example "Peach-Blossom Fan"). I can accept this one, probably because I studied voice, (What I

> sang was) very similar to this piece ("Flower Duet"). I studied voice in high school because singing an art song was one of the audition requirements…I think I was more comfortable with this piece just because I studied voice. People would not like Western art songs if they never studied. My classmates in high school were surprised when they found that I listened to the Western art songs… Generally, only those who studied voice would sing and listen to these songs. I sang the western art songs on stage in high school, but my peers looked like they were not interested in my singing at all. I think formal training is very important. If I studied Xi-Qu (formally), probably it would be easier for me to accept Xi-Qu. Learning experience is important.

Lan-Lan was not the only one holding this opinion. As presented in the "familiarity" section, formal training developed the participants' preference for opera and also developed negative attitudes toward Xi-Qu among some of the participants. Thus, cultural backgrounds didn't work well if the music of another culture became the mainstream in the music education system.

Influence of the regional culture. The majority of the Xi-Qu styles were closely related to the regional dialects and music. In order to explore the influence of regional music culture on the participants' preference for Xi-Qu styles, the Yue-Ju example "Story of Stone" was chosen for this study. There were a number of regional styles within this province, but as Yue-Ju was among the five most influential Xi-Qu styles in China. I assumed that the majority of the residents in this province would be familiar with Yue-Ju and the participants would like the Yue-Ju example more than the other Xi-Qu examples. Findings revealed that some participants recognized this example as the most familiar and liked piece, while others didn't take it as their hometowns' Xi-Qu styles.

A number of participants (n = 8) could quickly recognize that "Story of Stone" was of Yue-Ju style and the other two participants found the tunes of this piece familiar. Some of these participants liked Yue-Ju very much due to the previous experience with this regional style in community activities. The vocalist Yu-Yang exemplified this. She was excited to watch the "Story of Stone" and selected all the elements in this example as the most liked ones on the questionnaire. As she stated:

> This piece was the same as what I watched in my hometown. It is Yue-Ju. It was exactly the same as what I ever watched, and even the costumes were very similar. So I like this piece very much. I heard a lot of it when I was little. Probably just because I heard a lot, it sounds so good to my ears. When I came here, I wondered if you would present me something I was familiar. After you presented some Xi-Qu examples, I increasingly expected to see…if you would let me watch a Yue-Ju piece. I really wanted to watch a Yue-Ju piece. Could you understand such a feeling? Then finally it appeared (Yue-Ju example "Story of Stone"). When I heard her singing… wow! I immediately (laughed)… I had been wondering why the previous several Xi-Qu pieces sounded differently from what I heard before, until I saw this one ("Story of Stone"). I immediately recognized that it was what I heard before. I have nothing disliked in this piece. I liked all of the elements in this piece.

Despite that these participants considered Yue-Ju "Story of stone" as the most familiar example and preferred this piece to the other Xi-Qi examples, some other participants (n =4) told the researcher that Yue-Ju was not a regional Xi-Qu style of their hometowns although they were also native residents of this province. They listed to some other Xi-Qu styles, including Yong-Ju (甬剧) and Ou-Ju (瓯剧), and found that "Story of Stone" sounded quite different from the

Xi-Qu styles in their hometowns. Moreover, the vocalist Fang-Yuan was familiar with Yue-Ju but he preferred a traditional talking-singing (说唱) music style in his hometown named LianhuaLao (莲花落). He emphasized that LianhuaLao used exactly the same dialect in his hometown so he could understand the lyrics when he listened to it. Fang-Yuan offered the name of a well-known LianhuaLao musician and recommended that the researcher should listen to this style. These participants' responses indicated that there were multiple sub-regional music cultures within this province. The dialects of different areas varied although they were of the same spoken language system and the music also differed. These participants preferred the style that originated from their hometowns instead of Yue-Ju style.

Diversity of the preference for Xi-Qu styles. Findings indicated that the participants liked the familiar or unfamiliar non-regional Xi-Qu styles. By non-regional it means that the Xi-Qu styles didn't originated from this southern province and these styles were based on the dialects and music styles from other province. The diversity in the participants' preference for the non-regional Xi-Qu styles was mainly due to the environmental factors, including the family members' preference for Xi-Qu styles and media. As aforementioned, the majority of the participants stated that they accompanied their grandparents or parents to watch or listen to Xi-Qu on television in childhood. Thus, the participants' experience with Xi-Qu styles depended much on which Xi-Qu styles their family members watched or listened on television.

As for the television programs, there is a CCTV Xi-Qu channel in China broadcasting Xi-Qu performance of various styles nationwide. Thus, the participants and their family members would have chances to access to the non-regional styles. Nine participants told the researcher that in their childhoods, their grandparents or parents watched the non-regional Xi-Qu styles on television. These participants were more familiar with these styles and found these

styles sounding more comfortable. These non-regional styles included Huangmei-Xi (黄梅戏) (*n* = 6), Jing-Ju (*n* = 4), Chuan-Ju (川剧) (*n* = 3), and Yu-Ju (豫剧) (*n* = 2). Even if the participants were the residents in this southern province, they might prefer the non-regional styles to the regional style due to the early exposure to the styles with the influence of family members. The vocalist Kong-Xiang exemplified this. He was sleepy when he watched Yue-Ju example "Story of Stone" although he was a native resident in this province. He told the researcher that he was totally unfamiliar with Yue-Ju style. However, he liked the singing of the Jing-Ju piece "Yezhu Woods" because his grandfather usually watched Jing-Ju with him in his childhood. Kong-Xiang's family members were native to this province, but they liked Jing-Ju instead of the regional Xi-Qu style Yue-Ju.

A number of participants told the researcher that their grandparents were interested in more than one Xi-Qu styles so they were exposed to both regional and non-regional styles with the family members. As the instrumentalist Xiao-Fan stated, "My grandparents watched a lot of Xi-Qu styles on television. My grandmother liked Yue-Ju, but my grandfather liked Jing-Ju. They would fight if there were two television channels broadcasting Jing-Ju and Yue-Ju simultaneously." Xiao-Fan's grandparents' preference influenced her preference for a number of Xi-Qu styles as she often watched television with them. She liked Yue-Ju more than Jing-Ju, but her favorite style was Huangmei-Xi which was originated from the Anhui(安徽) province. Similarly, the vocalist Wu-Ji said that her grandparents watched Hunagmei-Xi a lot and they also watched various styles on television. As she stated, "it seemed that if you like one style, you would be more likely to like other styles. My grandparents watched many styles on television." Wu-Ji also preferred Huangmei-Xi more to other styles although it was not the regional style in this province.

Some participants liked the Xi-Qu styles that they never watched or listened before. The vocalist Zhi-Ru exemplified this. As aforementioned, Zhu-Ru came from the middle region of China where the regional Xi-Qu style was Lǔ-Ju (吕剧). She liked Yue-Ju "Story of Stone" very much although she never listened to this style. As she stated:

> I like this one. I have nothing to dislike, no matter the facial make-up or singing. She sang fluently and her voice was so sweet. The accompanying music and stage scenery were all very good. But it is an unfamiliar style. I never heard this style and this piece before.

Furthermore, a number of participants (n = 6) who were native residents of this southern province said that they liked the Hebei-Bangzi example "Zhongkui" although they were unfamiliar with this style and piece. They liked this example mainly due to the characteristics of this piece, including the humorous acting (n = 4), singing (n = 4), fast tempo (n = 3), melody (n = 3), dance (n = 2), and facial make-up (n = 1). The instrumentalist Qian-Mo exemplified this. She listed multiple reasons for liking this piece but singing and dance were the top two liked elements. She disagreed with the idea that people in the South would not like Northern Xi-Qu styles. As she stated:

> I think the singing tone color sounded very pleasing and the dance was very good. I studied dance, so I knew it would take years of hard training to dance like this. I live in the South, but I don't think that Southern people would dislike the Northern Xi-Qu styles. There is no huge difference between the Northern and Southern Xi-Qu styles.

Similarly, the popular vocalist Hua-Liang told the researcher that he disliked Xi-Qu, but among the four Xi-Qu examples, he liked "Zhongkui" the most. As he stated, "This one made my eyes light up, I mean the singing was more comfortable than the previous two Xi-Qu pieces.

I felt so tired when I watched the previous two, but I didn't have such feelings when I watched this one ("Zhongkui")."

Visual Factors

The musical examples for this study contained visual information that influenced the participants' preference for the musical examples. The visual information included acting, attractiveness of the singers, costumes, facial make-up, scenery, the color of the video, and changes of the perspectives. The participants' opinions about the attractiveness of the singers were comparatively consistent while their attitudes toward the rest of the visual information varied. Familiarity with the piece or style influenced the participants' judgment on the appropriateness of the visual elements, such as acting, costumes, and colors of the video. This section was related to the influence of visual information on music preference. I first present the findings pertaining to acting, followed by the attractiveness of the singers, facial make-up, costumes, the color of the video, changes of perspectives, and stage scenery.

Acting. Acting in this study refers to the singers' facial expressions, body movements, gestures, Xi-Qu performance skills or dance, and interactions among the singers that indicated the emotional states of the singers and the context. Findings revealed that acting was important when the participants were watching the Xi-Qu and operatic works because these works were not just related to music, but also the dramas telling stories. Thus, acting became the important visual cues to help the participants understand the context. According to the participants' comments, the following characteristics of the acting could attract some participants' attention and increase their preference for the video, including humorous acting, body movement, interactions among the singers, and showing the emotional states explicitly. However, the participants' opinions

regarding the preference for these characteristics were not consistent.

Humorous acting. Humorous facial expressions and body movements were attractive to some of the participants (n = 8, 29%) and increased their preference for the humorous musical examples. Furthermore, a number of participants (n = 11, 39%) reported that they preferred comedic Xi-Qu and operatic works to the tragedies. However, some other participants were willing to enrich their experience through watching Xi-Qu and operatic works of various themes and topics.

Eight participants reported that they liked the operatic example "Rigoletto" due to the singer's humorous acting. Some participants used "humorous", "funny", "interesting", and "amusing" to describe the acting of "Rigoletto" and told the researcher that they were amused to see the singer's raising eyebrows and expressive smile which made this piece very entertaining. As the instrumentalist Lan-Lan commented, "When he was singing, his facial expressions were so amusing. I mean it really attracted your attention easily. " Similarly, the popular style vocalist Luo-Fei and Western style vocalist Zhi-Ru used "humorous" and "interesting" to describe the acting of "Rigoletto" and found this piece very impressive. Moreover, the vocalist Yu-Yang and the instrumentalist Xiao-Fan said that this piece made them smile because the singer's facial expressions were so interesting. When the researcher asked the participants how this singer looked humorous, the participants usually said that the movement of the eyebrows produced such an effect. As the instrumentalist Zhu-Ling stated, "He amused me. His eyebrows jumped and that was so funny." These participants told the researcher that the singer's humorous facial expressions attracted them and that they wanted to know more about this operatic work.

Another musical example that was judged as humorous was the Xi-Qu example "Zhongkui". Unlike the operatic example "Rigoletto" that the singer's facial expressions had

humorous effect, the dance movement, facial make-up, and costumes in "Zhongkui" produced the humorous effect. The instrumentalist Kang-Ning mentioned that the singer's big bottom and the dance movement were very interesting and "cute". Similarly, the vocalist Wen-Yi also found this piece amusing. As he stated:

> I really wanted to laugh. As soon as I saw his face I wanted to laugh. I don't know why his body movements were super funny, and the costumes made his bottom so big. I laughed throughout the watching…His acting and movements really humorous that definitely made me give this piece a higher preference rating.

In fact, Wen-Yi told the researcher that he disliked the painted-face of the singer and didn't like the costumes of "Zhongkui", but the humorous acting made him happy that increased his preference for this piece. He told the researcher, "If it was tedious plus the painted face, I would not like it. But it made me happy, so I liked it."

Some participants not only liked the humorous acting, but also preferred comedy to tragedy in general. Eleven participants commented that they didn't want to watch a tragic Xi-Qu or operatic work because they would be too deeply involved in the plots and could not bear to live in sadness after watching a story with a sad ending. The vocalist Yu-Yang exemplified this. At first Yu-Yang liked "Rigoletto" because of humorous acting and the singer's good singing skills. But after knowing that the operatic work "Rigoletto" actually was a tragedy, she said she didn't like the story and would not try to watch this work any more. The reason was that the story was too sad that would affect her mood. As she stated:

> I still like the singer's singing, but I no longer like this work, probably because it is a tragedy. After you told me the story I no longer like this piece. I am a kind of person that if I watched an excerpt and got to know that it turned out to be a tragedy, I didn't want to

watch it any more. I like to see happy and beautiful things. How happy it would be if finally the lovers could be together. If they could not (be together), it would affect my mood. I would be frustrated and sad. I would continuously thought about it for several days and thought over why they couldn't be together, or why the person died. I felt so sad. I would keep talking about it and then people around me would also be influenced by my bad mood. Then they felt bad too (Yu-Yang laughed).

Furthermore, other participants who avoid watching tragedies also mentioned that they were afraid of the sadness after watching an unhappy story. As the vocalist Wen-Yi stated, "If you watch a tragedy you would feel unhappy. Is it a good thing that you feel happy all the time? So why should I watch a tragedy?" The popular style vocalist Hua-Liang expressed the similar opinions:

I liked it not because I was familiar with it ("Rigoletto"), but because it was a happy music. In my opinion, music should make people happy; it should not make people feel unhappy or sad. I am not saying that the sad music is not good, but for me, if the music was too sad I would not listen, because it would bring me the negative mood that I don't want. If today the musical examples were all happy music, I am sure that I would give the higher preference ratings.

It indicated that these participants deliberately chose to watch comedies in order to protect themselves from the suffering of the bad mood.

Despite that the humorous acting could attract some participants, the preference for humorous acting and comedy was not consistent among this group of participants. For the instrumentalist Li-Ying, the preference for "Rigoletto" increased after knowing the tragic ending of this work. Li-Ying at first just kept neutral about "Rigoletto" and admitted that the acting of

"Rigoletto" was indeed amusing. However, she liked the peaceful or powerful and "splendid" music more than the humorous works. As she stated:

> I cannot say that I dislike it ("Rigoletto"). It really has dramatic effect… I mean it is very amusing and humorous. But probably people like differently things. I personally prefer the previous one ("Hebrew Slaves Chorus") to this one. I am neutral about this piece ("Rigoletto")…I didn't want to laugh when I was watching his humorous acting, because I didn't like such kind of acting.

Later Li-Ying asked the researcher about the background information of "Rigoletto" and she started to like this work after knowing the story. As she commented:

> If just watching this excerpt, I definitely didn't know that it (the opera "Rigoletto") was a tragedy… I didn't know the story, so I thought it was a comedy. Now that I know the story, I am quite interested in it. Now I somewhat want to watch it.

Furthermore, one participant who preferred comedies and humorous videos said that she sometimes accepted the tragedies due to the attractive plots and her willingness to experience multi-faceted life. The instrumentalist Zhu-Ling said that she generally liked comedies, but she liked "Rigoletto" and "Peach-Blossom Fan" after knowing the detailed background information of the two pieces. The main reason was that the two works told good stories. As she stated, "tragic works were different. Some works were better than the others. I think the two main characters' story ("Peach-Blossom Fan") could attract me. So I want to watch the complete work later." Furthermore, Zhu-Ling felt sorry for the misfortune of main characters in "Rigoletto" and told the researcher that she would try to watch the complete work after data collection. She assumed that she might be in bad mood after watching, but it would be a chance to experience a different life.

Body movement. Body movements referred to the singers' gestures, walking, or dance on stage. Findings revealed that the absence of body movement had negative influence on the music appreciation and decreased the preference of some participants for the operatic example "Hebrew Slaves Chorus". These participants hoped that the singers would use more body movements to express the singers' emotions and to indicate the plots in addition to good facial expressions. Body movement, dance, and gesture were desirable as it would attract attention and help make sense of the context. However, some other participants were less affected by the static acting due to the familiarity with choral music.

"Hebrew Slaves Chorus" was the only musical example in which the singers didn't show any body movement on the stage and it received criticisms from five participants because of the static acting. Notably, some of these participants actually liked the singing of "Hebrew Slaves Chorus", but they didn't like the motionless singing as it looked not like an excerpt selected from opera, but like a chorus work. The instrumentalist Meng-Lan exemplified this. She told the researcher that she could not keep focus on "Hebrew Slave Chorus" near the end of the video and the distraction was due to the absence of body movement. As she stated:

> They sang and sang, no movement, no plots, just a group of people. I had to watch their faces one by one and then I could not watch any more. I think the length of the video is quite appropriate, but…it didn't have any changes. The music was good to my ears… they sang beautifully, the melody and singing tone color were all very good. And there were many people with different images, very good…But I felt that they were just singing a song, like a choir sang a song… It was boring.

Similarly, the vocalist Wu-Ji suggested that the singers in "Hebrew Slaves Chorus" should have body movement to catch the audience's attention. Wu-Ji liked "Hebrew Slaves

Chorus" and used the words such as "superior", "powerful", "high quality" to describe this piece and liked its singing, harmony, instrumental music and stage scenery. But she said it was a bit boring because the singers didn't move at all. As she stated, "The most disliked thing should be the acting. They (the singers) didn't have any body movements, I hope they would move or add something like dance, anything that moved. The static acting would made people get bored."

However, some other participants (*n*=5) reported that the absence of body movement didn't affect music appreciation and that the singers' facial expressions and body postures in "Hebrew Slaves Chorus" were enough to help make sense of the context. The vocalist Kong-Xiang exemplified this:

> Some people lay on the floor, some people held others, en… some of them were very sad, their faces looked like crying. I knew what they wanted to expressed. Probably, it was…kind of complaining…kind of …they were preying, probably. Their body postures were very impressive…Their facial expressions were enough, so they didn't need to move a lot.

The familiarity with choral music probably mattered in evaluating the appropriateness of the acting. Out of the five participants who were satisfied with static acting, four of them were either the members of the local choirs or sang in choir in senior high school or during their university years. The vocalist Zhi-Ru was still active in choir and ever sang the Chinese version of "Hebrew Slaves Chorus" and the vocalists Kong-Xiang and Fung-Yuan reported that they listened to chorus music often. Thus, familiarity with choral music and with this piece might influence these participants' judgment. But the instrumentalist Qian-Mo didn't have experience of singing in choir which indicated the diversity in the participants' opinions about the acting in Xi-Qu and opera.

Interactions among the singers. Interactions among the singers refers to the acting that two or more singers performed on stage and had gestures and body movement to indicate the plots. As aforementioned, the participants tried to make sense of the context, so more people on stage and more interactions among the singers would make the example more interesting and look like a drama.

Some participants expressed the desire for more interactions among several singers in the video to show the dramatic effect. The vocalist Gui-Zhi exemplified this. Gui-Zhi said that she liked the Yue-Ju example "Story of Stone", but she was not satisfied with the fact that this musical example only showed one singer. She told the researcher that she would like to watch the video that showed more people interacted to each other. As she suggested:

> It is better to let more people appear in the video, show a context that several people interacted to each other. It would be more interesting. If only one person singing on stage, the audience would not watch for too long time.

Similarly, the instrumentalist Zhu-Ling suggested that the selected excerpts should include more people in it to attract the audience. After watching "Flower Duet", Zhu-Ling commented, "The singing was good, but the singing was not well integrated with acting…more people should appear on stage, it would be better". The popular style singer Luo-Fei also hoped that the video "Flower Duet" would include more people on stage. He commented that more people would bring more information to the audience and make the video more interesting. Furthermore, the vocalist Fang-Yuan hoped that some more singers would come to the stage in the video "Flower Duet." As he stated, "I had been hoping that someone would come to the stage to join the two singers, probably a male singer, but I waited and waited, no one came."

However, familiarity might influence the perception of the importance of interactions on

stage. The vocalists Ying-Qi and Yu-Yang liked "Story of Stone" very much and didn't raise the questions about the lack of interactions among more singers.

Showing emotional states explicitly. The singers in the Xi-Qu and operatic examples used various acting skills to demonstrate the emotional states of the character(s). As the participants tried to put the music example in context, the acting that explicitly showed the singers' emotional stages would help the participants make sense of the context and were more likely to receive positive comments.

The singers in three musical examples were considered doing a good job to express their emotions, including "Rigoletto", "Peach-Blossom Fan", and "Summertime". The participants perceived the expressed emotions of the three videos easily and appreciated the music in their imagined contexts. As mentioned in the previous section, the participants perceived happy and humorous atmosphere in the "Rigoletto" video through the singer's big smile and raising eyebrows while felt the sadness of "Peach-Blossom Fan" as the singers sobbed on stage. The singers in "Summertime" smiled and the interactions between the mom and the baby expressed the love and happy. Due to the singers' explicit acting, the participants perceived the expressed emotions quickly although they didn't know the detailed contexts. Therefore, it was easier for them to get engaged in the video and feel relevant to the acting. The instrumentalist Qian-Mo exemplified this:

> I felt that she (the singer in "Summertime") loved her child so much. She acted very well. It was to express a mother's love to her baby and the mother had very good wishes to her child…I assumed that the woman lived in the slum, but she was not in despair. It gave me a feeling of warmth…She always smiled and it was a warm feeling. Other people in the video also acted well, I love their facial expressions so much. Actually I like the acting of

the example first, and the singing is of the second place. I think I would not forget this piece.

The vocalist Kong-Xiang also told the researcher that the acting of "Summertime" clearly expressed the emotions and helped him make sense of the context quickly. As he stated:

> First, let me guess what she wanted to express. I saw many women in the video and this woman (the singer) held a baby. I guess that her husband was fighting in the war. She had a little baby, then she hoped that her husband would go home soon and that the child would grow up quickly…I like this piece more…it was not like the acting on stage, I feel that the acting was very natural just like mother in daily life, it expressed emotions clearer (than that of "Flower duet"). Although it didn't have subtitles, I comparatively knew what it was talking about…I like the acting, I mean their facial expressions.

On the contrary, the implicit expressed emotions made the participants frustrated. Some participants (n = 5) complained about the operatic example "Flower Duet" due to the confusion about the singers' dubious smile. As the instrumentalist Da Ming commented, "The disliked element was that the two persons looked angry-looking. Sometimes they looked like bad persons but sometimes they were not like bad. I think probably it was the problem of their facial make-up." The vocalist Kang-Jing attributed the bad-looking effect of the singers' face to the poor acting, "I dislike their acting because they looked strange. When they were singing I saw their faces. Their facial expressions made them look bad and angry, but their singing was very beautiful. I was confused. The singing didn't match their faces." It indicated the singers in "Flower Duet" failed to show explicit emotions and the participants found it hard to associate the acting to singing.

In sum, the participants discussed the effect of the acting on their perception of and

preference for the relevant music examples. Humorous acting, body movement, more singers' interactions, and the explicitly expressed emotions were the topics that the participants concerned. As Xi-Qu and opera works were dramas, the desire for the good acting was apparent among this group of participants. However, the participants held different opinions about the characteristics of the acting which indicated the complexity of music preference.

Attractiveness of the singers. The participants usually didn't comment on the attractiveness of the singers unless some features of the singers induced very pleasant or unpleasant feelings. Since the singers in opera and Xi-Qu played certain roles, the participants considered them not just as the singers but as the actors/actresses as well. The singers' physical attractiveness mattered during the music appreciation process and the preference decision. As the instrumentalist Jun-Qing commented, "When you watched television series or films you would like to see the pretty girls and hansom men as the main characters. So of course you would like to watch the video with good-looking singers." However, the standards for judging the attractiveness of the male singer differed from that for female singers. Showing manhood was important for male singers while good facial appearance and being slim was important for the female singers. Moreover, the female singers who looked sexy decreased some participants' preference for the musical example.

Attractiveness of the male singers. Only the male singer "Rigoletto" received positive comments on his attractiveness. Several female participants found the male singer of "Rigoletto" handsome. The instrumentalist Kang-Ning commented that a handsome man was not related too much to his facial appearance and good shape, but was due to the expressed good personality and manhood. As she stated:

I like this piece ("Rigoletto"), because he is handsome. And then…he was so happy and

he made people happy with him. Handsome does not mean that he has good facial appearance. He gave me a feeling that he was very confident…a man who gives people a feeling of safety.

The good singing skills also made the singer attractive. Some participants (n = 9) admitted that this male singer in "Rigoletto" looked too stout, but as they liked his singing and acting, the shortcomings of his body shape were acceptable. The male instrumentalist Li-Wen stated, "I liked this piece, so probably the overall good effect of this example made me like him". The female vocalist Gui-Zhi also stated she found this singer attractive because of his singing and expressiveness, "He sang so expressively, and his singing was very good." Furthermore, the stereotyped ideas also influenced some participants' perceptions of the Western opera singers. The vocalist Fang-Yuan posited that it was normal for a singer to be big-sized. As he stated, "well, he looks strong (laughed). It seems like the vocalists are all fat and strong, especially foreign vocalists (laughed). I got used to them. Vocalists need to be like that, I think it is quite normal."

Attractiveness of the female singers. Findings of this study revealed that being thin and having good facial appearance was important for female singers to attract some of the participants. The participants (n = 5) told the researcher that they found the female singer in "Story of Stone" very pretty and attracted their attention to watch this video. "Good-looking" and "pretty" were the words that these participants used to describe this singer. The main features of the female singer were that she was slim and had moderate facial make-up. As the instrumentalist Kang-Ning commented, "I think her facial make-up looked natural, and she was very pretty."

The attractiveness of the singer in "Story of Stone" increased the preference of some participants for this musical example. As the instrumentalist Si-Qi stated, "The most liked

element was that this female singer was quite pretty. She was really good-looking, so I gave this piece a higher preference rating."

On the contrary, the participants would decrease their preference for some musical examples if they were not comfortable with the singers. Thirteen participants reported that the singers in "Flower Duet" decreased their preference for this piece although the singers sang very well. The main reasons were that the two singers looked too big-sized and too sexy. The male vocalist Wen-Yi commented that the big-sized male singer in "Rigoletto" was normal, but he could not accept the female singers with too big body size. As he stated:

> They were too fat, both of them. Their shapes made me dislike this piece a little bit. They made me uncomfortable. Western singers were usually stout, but they also had thinner singers. I wonder why they didn't select thinner and good-looking singers for this opera. Well, probably the pretty singers didn't sing as well as these two persons.

When the researcher pointed out that the size of the male singer in "Rigoletto" was much bigger than these two female singers, Wen-Yi answered, "well, that is different. Women were women, but men were different. The male singer ("Rigoletto") was also fat, but his shape could show the status of the role he played."

Some participants thought that the costumes of the two singers in "Flower Duet" exposed the shortcomings of their body shape. As the female instrumentalist Zhu-Ling commented:

> Their costumes were not good… The costumes exposed their fatties. It would be better if they could be younger and slim. If they could not change their shapes, they should wear well to hide the shortcomings of the body, but they didn't. After all they were performers, they should pay attention to it (to make them look prettier).

Five participants were uncomfortable with the two singers in "Flower Duet" because their

costumes exposed part of their bodies and made the singers look sexy. As the two singers were in Indian style costume, the collar of the blouse was low which made some participants embarrassed. The female instrumentalist exemplified this, "I felt that the costumes (were not appropriate)…The singer in red costumes…She was a little bit sexy. The person in yellow looked better, but the person in red…I really wanted to pull up her collar."

As the findings revealed, the participants' comments about the attractiveness of the singers focused on the three examples, including "Rigoletto," "Story of Stone," and "Flower Duet." The participants held different criteria for judging the attractiveness of the male and female singers. Outer appearance mattered a lot for the female singers while the participants were quite tolerant to the male singers' body size. Singing and acting skills could also increase the attractiveness of the male singer in "Rigoletto".

Facial make-up. Facial make-up was a way of beautifying the singers' facial appearance and let the audience see the singers' faces from the distance clearly. In addition, the function of Xi-Qu facial make-up is to imply the personalities and characters. Taking painted-face as an example, white-colored painted-face implies the bad or evil persons while the red and black colors implied the loyal or righteous persons. When the Xi-Qu musicians appeared on the stage, the facial make-up would directly convey the information to the audience regarding which kind of persons the singers try to act. Findings suggested that the heavy facial makeup featured bright colors on faces were more easily receive negative comments. Furthermore, the participants held different opinions about the Xi-Qu painted-face. The facial make-up of "Story of Stone" was preferred by the participants.

The facial make-up in "Flower Duet" received negative comments as it looked too "heavy" while the participants' opinions about the heavy Xi-Qu facial make-up as that in

"Zhongkui", "Peach-Blossom Fan", and "Yezhu Woods" differed. The participants' (n = 9) found the singers' facial make-up in "Flower Duet" was "too heavy", "exaggerated" and uncomfortable. Some participants attributed the uncomfortable effect of the heavy facial make-up to the close-up perspective. As the vocalist Fang-Yuan commented:

> The facial make-up was too heavy and the singers' faces looked strange. I think their faces might look better if we watched from the distance. So I suggest that next time when you select excerpts, you should avoid the close-up perspective if the singer's facial make-up was heavy because it would look too exaggerated …The heavy facial make-up influenced my preference for this piece (negatively).

Furthermore, "too heavy" or "too exaggerated" was the mostly cited the reasons for disliking facial make-up in some Xi-Qu examples, but the participants' attitudes toward heavy Xi-Qu facial make-up were not consistent. Some participants disliked the facial make-up in "Yezhu Woods" and "Peach Blossom Fan" but some other participants preferred the Xi-Qu facial make-up and wanted to learn the facial make-up skills in school. The instrumentalist Meng-Lan and vocalist Fang-Yuan exemplified the former and considered the facial make-up of "Peach-Blossom Fan" too "exaggerated". The vocalist Mei-Yuan exemplified the latter. As she said, "I liked Xi-Qu facial make-up. If the university offered a course to teach us Xi-Qu facial make-up, it would be wonderful."

The vocalist Luo-Fei disliked the painted-face in "Zhongkui" and the facial make-up in "Peach-Blossom Fan" because the singers' faces looked dirty or too white, but he liked the facial make-up in "Yezhu Woods". As he stated, "I liked their facial make-up ("Yezhu Woods"), their faces showed a little bit red, not like that those persons (singers in "Peach-Blossom Fan") whose faces were too white."

Painted-face received both positive and negative comments. Some participants used "horrible," "greasy," or "ugly" to describe their feelings of seeing the face of the singer in "Zhongkui." As the instrumentalist Da-Ming commented, "I didn't like painted-face. It was horrible. It was frightening if I watched it alone." The vocalist Yu-Yang liked the singing of "Zhongkui" but disliked the facial make-up. As she stated, "his face looked uncomfortable. I didn't see such kind of facial make-up often, so it is not of my taste." However, as mentioned in the "Familiarity section," the instrumentalists Mei-Yuan and Li-Wen liked the painted-face due to their previous experience with painted-face in elementary and middle school. The different attitudes toward painted-face indicated that familiarity might influence the participants' perceptions of the Xi-Qu painted-face.

The facial make-up that looked natural seemed to be more attractive to the participants. The participants liked facial make-up of the singer in "Story of Stone" and commented that the singer's face looked "natural" and "clean." The instrumentalist Ming-Hui exemplified this, "I liked her facial make-up. It looked natural. I mean her face looked still like her own face. I feel that the (heavy) Jing-Ju facial make-up made the singers' faces look all the same." The instrumentalist Meng-Lan also liked the facial make-up of "Story of Stone" and disliked the "heavy" facial make-up. As she stated:

> I liked the costumes and facial make-up of this piece ("Story of Stone"). The facial make-up of "Flower Duet" was too heavy…the eye brows and eyes looked too exaggerated. But this one looked very clean that you could hardly see the facial make-up. Her face matched with the costumes and looked so pleasant.

Notably, the participants rarely commented on the facial make-up of "Rigoletto," "Summertime," and "Hebrew Slaves Chorus." The singers in these three examples showed

minimal facial make-up and looked like people in daily life. Such kind of facial make-up seemed not to catch the participants' attention too much.

Costumes. Costumes could influence the participants' preference for the music examples, but the participants judged the Xi-Qu costumes and Western opera costumes differently. For the Xi-Qu examples, the participants usually marveled at the delicate and refined Xi-Qu costumes and sometimes also tried to judge the appropriateness of the costumes based on the character's personality and social status. For the operatic examples, the participants preferred the costumes mainly because of the "contextual fit."

Some participants liked the costumes of the Xi-Qu examples because of the graceful style and refined embroideries. As the popular style vocalist Mei-Yuan commented, "I think all the Xi-Qu costumes were beautiful. The costumes of the opera looked common but Xi-Qu costumes were so delicately made. If I had a chance, I would like to wear the Xi-Qu costumes and take some pictures." The researcher reminded Mei-Yuan that the opera costumes could be refined and graceful too, but Mei-Yuan insisted that the costumes in the Western opera were not as good as Xi-Qu costumes, "I know that some operas also had good costumes, but we still can see the styles of the costumes in daily life, such as the men's formal suit, but Xi-Qu costumes were unique."

Similarly, the vocalist Yu-Yang also liked the costumes of Xi-Qu examples and thought that Xi-Qu costumes were better than the modern dresses:

> I liked the costumes and their hairpins were classical. We also perform on stage frequently, but those modern gowns that we rented were not as good as the Xi-Qu costumes. Every detail of the Xi-Qu costumes was so delicately made. The patterns of the modern gowns and the hair accessories were not as good as that of Xi-Qu.

Although some participants liked the Xi-Qu costumes, they would decrease the preference for the Xi-Qu examples if they found the costumes not fit the social status or the personality of the characters. The popular style vocalist Luo-Fei asked the researcher about the context of "Yezhu Woods" and stated that he would give a lower preference rating if he could rate it again, because the costumes were not appropriate. In fact, he liked the costumes but he thought that the color and style of the costumes didn't fit the social status of the characters. The male character in "Yezhu Woods" was the commander of the Royal Army so Luo-Fei considered them as people of very high social status. However, the costumes looked too plain to fit their identities. As he stated:

> I would give a lower preference rating because of the costumes. The costumes didn't fit the characters. Actually I think the costumes looked good, but they didn't fit their status. When I didn't know the story I thought that the young man and young girl (the singers in "Yezhu Woods") were chatting. But after knowing the story, I found that the female singer's costumes were too plain that didn't show the high status of a wife of a royal commander. Her costumes looked even like that for a servant. The costumes should differentiate the couple from the common people.

The other three participants questioned the appropriateness of the costumes in "Story of Stone" despite that they liked this example. The novel "Story of Stone" was a classical work that many Chinese people were familiar with the plots and the characters of the novel. Dai-Yu (黛玉) was a main character in "Story of Stone" whose parents passed away when she was little and she was sensitive and always sad. In the music example for this study, she was in green costume and was burying flower petals in late spring. The participants at first didn't know the identity of the character so they didn't have problems with the costumes. After knowing the background

information, they commented that the green-colored costumes were too bright to fit the personality of Dai-Yu. Two participants suggested that Dai-Yu should wear white costumes while one participant thought that she should in blue instead of green. The vocalist Mei-Yuan selected "costumes" as the liked element of "Story of Stone," but after knowing the background information, she said she would not select the "costumes" as the liked element in this video if she had a chance to select again, because Dai-Yu should not wear such bright-colored clothes.

For the operatic examples, the participants liked the costumes of some operatic examples mainly because the costumes fitted in the supposed context of the example. The majority of the participants perceived that the singers in "Hebrew Slaves Chorus" and "Summertime" acted as the people of low social status or in undesirable environment. Thus, although the costumes of the singers in these two videos looked common, some of the participants still liked the costumes because the costumes well reflected the reality. As the instrumentalist Zhu-Ling commented, "In such an environment ("Hebrew Slaves Chorus"), their costumes were appropriate."

In general, the participants not only paid attention to the quality of the costumes, but also tried to judge the appropriateness of the costumes based on the characters' personality and social status. It indicated that they were aware of the dramatic characteristics of Xi-Qu and opera and appreciated the musical examples in context.

The color of the musical examples. Color of the musical examples refers to the colors that were presented in the audiovisual examples, including the colors of the costumes, sceneries and the items on stage, or the combination of these colors that appeared in the video. Findings suggested that the color of the musical examples influenced the participants' perceptions of and preference for the musical examples and cultural background might play a role in perceptions of colors. However, the participants' preference for color was not consistent.

The participants loved to see the bright or "agreeable" colors in the video, such as green, pink, red, and yellow or the combinations of these colors. Two videos received positive comments from the participants, including "Story of Stone" and "Flower Duet." The colors of "Story of Stone" were green and pink as the context was in a garden in spring and the colors of spring were considered agreeable and pleasant by the participants (n = 8). A participant even suggested that the researcher should select videos with "happy" colors for this study, just like the colors in "Story of Stone."

Furthermore, three participants commented that they liked the overall color of the video "Flower Duet" which also contained green and pink colors as the stage was decorated with water-lilies to indicate the context of the river bank. The two singers were in red and yellow costumes which were very bright. The participants used the word "pleasant" to describe the effect of the colors on the stage.

Colors could also decrease the participants' preference for the music example. A few of participants (n = 5) mentioned that the color of "Peach-Blossom Fan" decreased their preference for this example. The major color in "Peach-Blossom Fan" was white so the participants associated the color with funeral or unhappy events. The association between white color and funeral was due to the fact that, in Han Chinese culture, people wear white clothes when attending a funeral. The vocalist Zhi-Ru exemplified this:

> I felt bad at the first glance of the stage, it was too grey, the color was not bright, it gave me an impression that they were dying or they departed soon, it was frightening…the overall color of this video was like the color of a tombstone. The color was the most disliked thing in this video.

The vocalist Wen-Yi also found the color of the video "Peach-Blossom Fan" unpleasant.

He first asked the researcher if someone died in this example and guessed that it must be an unhappy story. As he stated:

> Did someone die? The overall color was so white. The costumes of the two persons were white, and the background color was also white. I thought someone died in this video. It probably was a heart-breaking story, an unhappy story.

These two participants both reported that they didn't like tragedies, so the connection between white color and tragic event (funeral) probably was a reason for disliking white color on stage.

However, a few of participants didn't take the white color as a problem although they didn't like tragedies. Yu-Yang and Zhu-Ling, who were afraid of sad stories considered the white color in "Peach-Blossom Fan" acceptable because this video was telling a sad story which matched with unhappy color. As mentioned in the "familiarity" section, Yu-Yang insisted that it was the principle of Xi-Qu costumes that color should fit the context. Moreover, Zhu-Ling gave the highest preference rating to "Peach-Blossom Fan" because she thought that all the elements in this video were perfectly integrated to tell a story, including the color.

Furthermore, preference for colors sometimes was just a personal issue. The vocalist Luo-Fei liked the white color in "Peach-Blossom Fan" simply because he liked white in general. As he stated, "I like the color of this video. White color looks clean. I personally don't like the colorful things." The instrumentalist Da-Ming disliked the yellow costumes in "Flower Duet" because she disliked yellow color.

As the findings revealed, the colors of the musical examples influenced the participants' perceptions of the musical examples and there was diversity in the participants' preference for colors of the videos. The videos with bright colors received more positive comments but the

preference for colorfulness was not consistent among this group of participants. Cultural background played a role in preference for color that the participants disliked white color due to the association between the white color and unhappy events. Furthermore, personal preference for color also mattered in music preference.

Perspectives. The musical examples for this study were recorded Xi-Qu and opera live performance or films that various perspectives were used in the videos. Findings revealed that the changes of perspective were important to help offer comprehensive information regarding the context and the emotional states of the singers while the lack of changes in perspective decreased the participants' preference for the musical examples.

The complaints about the lack of changes in perspective were mainly caused by the operatic example "Flower Duet". In this video, only two static perspectives were used that during the first fifteen seconds a close-up was used to show the head-to-waist images of the two singers, then the perspective changed to a long shot that showing the full stage and didn't change ever since. As the stage was large, the two singers looked small and their facial expressions were not clearly seen. The participants (n = 7) complained about the lack of change in perspective because they wanted to see the facial expressions of the singers in order to make sense of the context. The instrumentalist Meng-Lan exemplified this:

> This piece ("Flower Duet") was not attractive to me. At first it was close-up perspective but later it changed to the full view of stage, so I could only observe the scenery, actually I hoped that it would be zoomed up and let me see the singers' facial expressions. They should not just keep using one perspective for too long time.

The vocalist Luo-Fei held similar opinions. As he commented:

> This piece was very boring, the perspective didn't change. I didn't know what the singers

were doing. It was a so large stage but it mainly used a long shot that the two singers looked so small. They sang and moved, but I didn't know what they were doing. The long shot stayed for too long time that made me frustrated. The stage was quite beautiful, but on such a large stage the singers were hardly visible. The perspective should change so that I could see their facial expressions.

The instrumentalist Ming-Hui disliked the perspectives of "Flower Duet" mainly because the static perspective made her bored. As she stated, "I found the stage scenery very beautiful. At first I felt that it was good, but later I found that it didn't change so I got bored." The participants' comments indicated that changes of perspective were important when presenting the music videos, as more detailed information could be observed such as the singers' facial expressions, and changes of perspectives could also help the participants stay focus on the video.

Scenery. Xi-Qu and opera were dramas that the singers acted in certain context and the scenery indicated the environment in which the story developed. There were two types of sceneries in the musical examples for this study, stage scenery (n = 3) and natural scenery (n = 5). Stage scenery refers to the sceneries of recorded live Xi-Qu/opera performance while natural scenery referred to the sceneries of the Xi-Qu/opera films. Xi-Qu and opera differed regarding the principles of stage scenery. Traditionally, the scenery of Chinese Xi-Qu was simple, usually one table plus two chairs, and the Xi-Qu musicians' acting skills were important to create the environment, such as in a boat, riding a horse, going up/downstairs or walking from one room/place to another without changing the stage scenery. The items on stage usually didn't have fixed function but mainly help the Xi-Qu musicians create the imagined context. For example, the table could be used as a bed, a mountain, or a wall. Thus, the simple scenery allowed the Xi-Qu musicians to transcend the space and time by acting. On the contrary, the stage scenery of

opera usually resembled the real environment and if the context changed, the scenery would change accordingly. However, the principles of stage sceneries of opera and Xi-Qu were not absolute as nowadays many Xi-Qu works tried to borrow the scenery design of the Western drama while the sceneries of some opera looked simple and abstract. As for the Xi-Qu/opera films, the sceneries were more like the natural environment and the singers could act in different contexts. The sceneries of Xi-Qu films for this study were still mainly based on the Xi-Qu principles that few items were presented. Findings of this study revealed that sceneries that offer "unique" or colorful visual effect were more likely to attract the participants' attention and being relevant to the context was considered helpful and preferred. Familiarity was also related to preference for scenery. Moreover, the participants held quite different opinions about the simple Xi-Qu sceneries and their preference for the sceneries of the operatic examples were not consistent.

Uniqueness was the main reason for liking the sceneries of "Hebrew Slaves Chorus". As aforementioned, the scenery of "Hebrew Slaves Chorus" was a cliff-like stairs on which all choral singers stood, sit, or lay on the floor in small groups. The participants (n =18) were positive about the scenery as it didn't follow the routine of chorus singing. As the vocalist Zhi-Ru commented:

> It was a thrilling piece, especially the last moment it showed the full stage. The stage scenery could capture your attention at the first glimpse of it. We usually just stood on the stairs in choir, but in this video the singers could freely make poses that was unique.

The vocalist Fang-Yuan also liked the visual effect of the scenery of "Hebrew Slaves Chorus" and posited that scenery was important for operatic works. As he stated:

> I like chorus music, and the scenery was quite good…it was like a painting. Actually at

> the first glance I thought it was a painting. Later it zoomed up and I found that many people were on it. It felt that … it was awesome…it was thrilling. The scenery influenced my preference rating for this piece… I think scenery was very important. If they sang well but the scenery was not good, it should not be considered a good piece.

Being "beautiful" was another reason for liking the scenery. The majority of the participants (n = 18) mentioned that they found the stage of "Flower Duet" was beautiful. As the instrumentalist Tian-Hao stated, "When the perspective changed to the long shot, I found that the stage scenery was so beautiful." Interestingly, although many participants found the stage scenery of "Flower Duet" beautiful, they hoped that they could see the singers' faces and acting instead of gazing at the scenery for a long time. From these participants' point of view, the function of scenery was to serve the acting and singing.

In addition to the visual effect, findings revealed that being relevant to the music was another reason for liking the scenery. The instrumentalist Kang-Ning liked the scenery of "Hebrew Slaves Chorus" due to the good match between the music and the scenery. As she commented:

> The stage scenery was so good. It looked shabby that matched with the expressed emotions in music. I found that it was like a cliff, so I assumed that they were in a very lonely place, very sad place. The stage gave people a feeling of isolation, made people feel the danger and coercion. So I think the stage scenery was very good.

The participants' opinions about the Xi-Qu sceneries were less consistent than operatic examples as the participants held quite opposite ideas about the same Xi-Qu scenery. Two participants reported that they liked the scenery of "Peach Blossom Fan" because the scenery was "simple" but "gorgeous." The vocalist Luo-Fei was the only participant who recognized that

the backdrop of "Peach-Blossom Fan" was a Chinese painting and he liked the scenery. As he stated, "I think the scenery was good, the backdrop looked like a paining around the stage and there were pillars in the middle of the stage. It was simple but gorgeous." Moreover, the instrumentalist Zhu-Ling also used the word "gorgeous" to describe the scenery of "Peach-Blossom Fan" and considered it as a fine example of the combination of traditional and modern scenery design.

On the contrary, some participants held that the scenery of "Peach-Blossom Fan" was too simple. The vocalist Yu-Yang exemplified this. She said that the most disliked element in "Peach-Blossom Fan" was scenery because the scenery too simple and not relevant to the context:

> I would like to talk about the most disliked thing in this video ("Peach-Blossom Fan"). I particularly disliked the scenery, it was just too simple…the two singers acted on the stage and there were four pillars on the back of them. It looked not like a pavilion and I wonder why they put such a thing on stage. Actually I liked their acting and dance, but I disliked the scenery.

The scenery of "Story of Stone" also received both positive and negative comments. The participants who liked the scenery commented that it was the typical scenery of Yue-Ju style and that they liked the scenery very much. Familiarity with the scenery design of "Story of Stone" might matter as some participants liked the scenery of this example and mentioned that they found the scenery comfortable and familiar. The vocalists Yu-Yang exemplified this, "The scenery looked very familiar, flower and bridge, just like what I saw before." The vocalist Ying-Qi whose parents were Yue-Ju musicians also commented that the scenery of "Story of Stone" was of the typical Yue-Ju style and he liked it. But those who disliked the scenery of this

example commented that the items on stage looked not authentic. As the instrumentalist Hui-Xin stated, “I dislike the scenery, it looked like the fake things, not real at all.” She told the researcher that she liked the scenery of “Rigoletto” and “Summertime” because the sceneries of these two pieces looked real.

In fact, looking natural and real seemed to be the mostly cited reason for liking the sceneries of “Rigoletto” and “Summertime” although the overall colors of the two pieces were not bright and the sceneries looked not luxury. As the vocalist Mei-Yuan stated, “I liked the environment of this video (“Rigoletto”). I saw the fire in the fireplace and I liked such an atmosphere. I like the scenery of this type, the natural living environment.” Preference for the natural living environment seemed to be practical that some participants pointed out that the natural scenery could help them make sense of the context.

As the findings revealed, the participants’ preference for scenery was not consistent. A number of factors could influence the perceptions of and preference for the sceneries of the musical examples, such as uniqueness, colorfulness, relevancy to the music and context, familiarity, and the participants’ own taste in the scenery design.

Musical Factors

Xi-Qu and opera music contains two parts, singing and accompanying instrumental music. Music characteristics influenced the participants’ preference for the music examples, including the quality of singing skills, singing tone color, and accompanying instrumental music. The participants held various opinions about the influence of musical characteristics on music preference. I first present the findings relating to singing, followed by accompanying instrumental music.

Singing. There were three aspects of singing that influenced the participants' preference for the given musical example, quality of the singing skills, harmonic singing effect, and singing tone color. The participants

Quality of the singing skills. As aforementioned, all the participants studied Western vocal skills but no participant studied Xi-Qu professionally. Thus, the participants were more confident to judge the quality of the Western operatic examples than that of the Xi-Qu examples. Findings revealed that the singing skills of the singers in operatic examples were highly regarded as no participant ever raised questions about the quality of singing in the operatic examples. Some participants commented that good singing was the most important factor for preference for the musical examples. The vocalist Fang-Yuan exemplified this. He liked "Rigoletto" because of the good singing skills and reported that singing was the most important reason for liking this example. As Fang-Yuan stated, "He (the singer in "Rigoletto") sang so well, so I liked this piece… I think singing was more important than acting for me."

However, high-quality singing skills sometimes could not guarantee preference as some visual factors could seriously affect music preference. "Flower Duet" was a typical example that some participants acknowledged the singers' good singing skills, but didn't like this example. The vocalist Yu-Yang exemplified this. She admitted that the singing skills of the singers in the "Flower Duet" were good, but she only gave a preference rating of "3" for this piece due to lack of context, the static perspective, and the Indian costumes. As she stated:

> I found that I didn't like this piece too much, first I didn't know what they were doing, and the costumes looked uncomfortable (exposed the singer's body)… Actually at the very beginning of this video as soon as I heard their singing, I knew they sang very well… but I just don't like this example, I don't know why.

In comparison to the operatic examples, the participants found it hard to judge the singing quality of the Xi-Qu examples. Those who talked about the singing of the Xi-Qu examples sometimes assumed that the Xi-Qu singing must be good as the videos could be chosen for a research. The vocalist Wu-Ji exemplified this, "Singing ("Peach-Blossom Fan")…I suppose the singing must be good. If they were not good then how these video could be chosen for this study." Moreover, some participants judged the quality of Xi-Qu singing by their experience with Western singing skills. The vocalist Ying-Qi was not familiar with Jing-Ju singing, but after watching the Jing-Ju example "Yezhu Woods," he commented that the singing was good. As he stated:

> First of all, I never heard Jing-Ju before, but when I heard her singing (the female singer in "Yezhu Woods"), I found…she sang quite well. I don't know about Jing-Ju singing skills, but I felt that her voice sounded very good. If she could make her voice sound like this, she must practice a lot. I assume that she probably was a very good Jing-Ju singer.

Furthermore, the participants could comment the quality of the singing in operatic examples from the professional point of views and used the professional terminologies. They could hear that the singer's "singing organs were open" and that "the air goes fluently." On the contrary, they could only use the words such as "good," "sounds comfortable," "uncomfortable" to judge the Xi-Qu singing. It indicated that it was difficult for the participants to evaluate the singing quality of Xi-Qu examples without professional knowledge about Xi-Qu singing skills.

Harmonic singing effect. Harmony seemed to be more related to music composition than singing, but as the harmony was produced by human voice in the operatic examples, I presented the findings of singing harmony separately in this section. The operatic examples for this study contained choral and duet works that attracted the participants. The vocalist Mei-Yuan found the

choral part at the end of the "Summertime" pleasant and liked the singing very much. As she stated:

> At the end of this piece I heard the accompanying chorus part. The singing harmony was a big surprise to me. It sounded so good to my ears. The melody suddenly went up and the harmony appeared at that point… it was very, very good and I like it (singing harmony).

Similarly, the vocalist Hua-Liang also liked the harmony of "Summertime" and commented that the singing harmony increased his preference for this song. As he stated:

> The ending of this song really lit up, because of that harmony. The harmony really sounded very good. I especially liked this part. If I didn't heard the choral part of this song I might not like it so much, but hearing that (harmony) really made me give a higher preference rating for this example.

"Hebrew Slaves Chorus" was a chorus work that attracted the participants due to the good singing effect. The instrumentalist Jun-Qing was an experienced choral member in a local choir and found the singing harmony was "thrilling." As she stated:

> I like this example. They sang very well. I know that every singer in this choir sang very well then they could be together to produce such a thrilling effect. The harmony of this piece was very good and the singers sang well.

As the finding revealed, singing harmony of the operatic examples was especially attractive to some of the participants and increased their preference for the given examples. It is important to mention that Xi-Qu singing usually doesn't have harmony that is very different from that of opera. The modern Xi-Qu works start to use the Western composition skills and adopt choral music and duet, but so far singing harmony is still not a mainstream for Xi-Qu

works.

Singing tone color. Singing tone color was one of the important aspects of singing that influenced the participants' preference for the music examples. Singing tone color was the features of the singer's voice that differentiate one singer from another and from one singing style from another style. The tenor's tone color was different from that of a bass singer and even if the singers of the same category might sound different. For example, Pavarotti and Domingo were tenors but their voice sounded not the same even if they sang the same song. Furthermore, singing tone color was also related to gender, such as male's voice and female voice.

Xi-Qu musicians' singing tone color has special features that female singers can act the male roles while the male singers played female roles. Moreover, in some Xi-Qu styles, the young male roles adopt the female-like singing tone color to indicate the age of the character. Among the four Xi-Qu examples, "Zhongkui" was an example of female acting a male role while "Peach-Blossom Fan" involved a young male role that the singing tone color was close to the female's voice. Findings revealed that the voice of opera male singers was more likely to attract the participants than the female singers' voice. Furthermore, the participants' opinions about the singing tone colors of the Xi-Qu examples varied and familiarity might influence the perception of the Xi-Qu vocal tone color. Notably, the majority of the participants were familiar with the young male role's tone color.

The preference for male singer's singing mainly because the male singer's voice sounded more "comfortable." The male vocalists Fang-Yuan, Wen-Yi, and Hua-Liang were less interested in the operatic example "Flower Duet," because they preferred male singers' voice. They admitted that the singing of "Flower Duet" was good, but the female singer's singing sounded too "piecing," while the male singer's tone color, such as the singer in "Rigoletto," sounded more

natural. As Hua-Liang commented:

> I don't like the female's vocal works because it sounds too piecing. When I heard the female singing it sounded like a chalk scratching the blackboard and that feeling made me so uncomfortable. I like the male singers because their voice sounded more natural.

Furthermore, the female vocalist Yu-Yang also liked the male singer's tone color more than the female singers but she couldn't tell the reason why, "Although I am a female vocalist, I like the male's voice more, but I don't know why. I like the female voice of Chinese style but don't like that of the Western style singing." However, other participants didn't orally report that they liked the male voice than female voice.

For the Xi-Qu examples, the preference for the tone colors of the different Xi-Qu styles and gender varied. Among the four Xi-Qu examples, the singing skills and singing tone colors differed. The Yue-Ju style singing adopted the natural voice tone color while the rest of the three Xi-Qu styles featured narrow or high-pitched singing tone color, especially Jing-Ju and Hebei-Bangzi. Findings revealed that the participants generally preferred the natural voice tone color in "Story of Stone" while their opinions about the other three examples varied.

Some participants specifically commented that the singing tone color of the singer in "Story of Stone" sounded more comfortable than that of the other Xi-Qu examples. The vocalist Mei-Yuan disliked the singing of "Peach-Blossom Fan" and "Yezhu Woods" because the singing tone color of the singers was too "piercing." As she commented, "Her singing made me so frustrated, it was too piercing. My heart felt so tight when I heard their voices." But Mei-Yuan found the singing of "Story of Stone" was "familiar and comfortable." As aforementioned, the vocalist Zhi-Ru also liked the singing of "Story of Stone" because the voice sounded "so sweet."

The participants preference for the singing tone color was not consistent in that some

participants reported that they liked the singing of some examples which considered by some participants as “piercing.” Three participants liked the singing of the Jing-Ju example “Yezhu Woods” and didn’t consider the singing tone color as a problem. Furthermore, the instrumentalist Hui-Xin and Li-Wen told the researcher that they liked the singing of “Zhongkui” and didn’t think the singing tone color strange. Familiarity might influenced their perceptions of singing tone color as most of these participants (n = 4) reported that they ever heard the Jing-Ju or the similar Xi-Qu styles with family members in childhood.

Furthermore, the participants held different opinions about the young male role’s (小生) singing tone color. Traditionally, the young male roles in many Xi-Qu styles featured the female-like voice and it was common to see the female acted as the male roles in some Xi-Qu styles. The main purpose of selecting a young male role’s work “Peach-Blossom Fan” for this study was to cover more Xi-Qu roles, but the researcher was not sure if the participants would like the young male role’s tone color or not. Findings revealed that some participants indeed found the young male role’s singing in “Peach-Blossom Fan” uncomfortable because they dislike the “piercing” singing in general. However, out of the ten participants who commented on the young male role’s tone color in “Peach-Blossom Fan”, the majority of them (n = 7) found it normal and acceptable. The vocalist Zhi-Ru said that the voice was quite “normal” and the instrumentalist Hui-Xin thought that all the voices of Xi-Qu styles were acceptable. As she stated, “I can accept the young male role’s voice. The voice of the young male role sounds high while the voice of the old male role (老生) was low, but both were the art of singing, so I could accept both of them.” The vocalist Kong-Xiang also accepted the singing tone color of the male singer in “Peach-Blossom Fan.” As he commented, “I think the young male role’s voice was normal, I am quite comfortable with it.”

As the findings revealed, the participants' perceptions of singing was multi-faceted. The singers' singing quality and the participants' preference for the singing tone colors of different gender, roles, and styles could influence the participants' preference for the music examples.

Instrumental music. Although instrumental music was important for Xi-Qu and opera, the participants didn't comment on the instrumental music of the musical examples frequently in comparison to their comments on singing. Fourteen participants commented on the instrumental music and out of the total twenty-six comments, the majority of the comments (n = 19) were related to Xi-Qu examples. Some of the participants used simple words such as "like it", "comfortable", or "noisy" to describe the instrumental music while others specifically commented on the effect of the instrumental music on preference. Findings revealed that the preference for the instrumental music might be related to the participants' primary instrument and might be influenced by familiarity. Furthermore, some participants concerned about the volume balance between singing and accompaniment and the match between the expressed emotions between acting and accompanying music.

Influence of primary instrument. The influence of primary instrument could be put into the influence of familiarity category as training was an important way of getting familiar with music. As I tried to discuss the influence of training on the preference for a Chinese instrument guzheng (古箏), I report the findings separately in this section. Findings revealed that the training in guzheng might influence the participants' preference for the instrumental music as the two guzheng majors and a participant who studied guzheng liked the accompanying music of the Ku-Qu example "Peach-Blossom Fan."

The musical example "Peach-Blossom Fan" contained two parts that the first part was singing while the second part focused on the acting accompanied by the Southern style music.

Two participants' primary instrument was guzheng (古箏) that was used in the accompanying music of "Peach-Blossom Fan". They found the accompanying music of this example appealing. As the instrumentalist Chang-Feng commented, "The singing part was boring, but the instrumental music part was very good. Probably because I am Guzheng major, I found the music very appealing."

Similarly, Da-Ming was also a Guzheng major and she attributed her preference for the accompanying music of "Peach-Blossom Fan" to her training background. As she stated: "Probably because I study guzheng, I found the accompanying music was particularly attractive to me. It sounded comparatively simple that if I listened for several times I could play it." Although Da-Ming liked the accompanying music, she reported that the music didn't increase her preference for "Peach-Blossom Fan". She commented that the main problem was that she didn't make sense of the context of this piece, and the accompanying music didn't help her understand the plots. So she just kept neutral about "Peach-Blossom Fan" and could not like it more just because of the instrumental music.

Despite that the participants' training background influenced their perceptions of instrumental music of "Peach-Blossom Fan", some other participants also liked the music of this piece but didn't have learning experience with Chinese instruments. Thus, training in musical instruments was just one of the many factors influencing preference for instrumental music.

Influence of familiarity. Familiarity might be one of the factors influencing the participants' preference for the instrumental music as the participants frequently cited "familiar" as a reason for liking the accompanying music of some Xi-Qu examples. These participants mentioned that the accompanying music of Yue-Ju "Story of Stone" (n = 4) and Kun-Qu "Peach-Blossom Fan" (n = 8) sounded familiar and comfortable. These two Xi-Qu styles were

originated from the two adjacent Southern provinces, and the majority of the instruments that played in the accompanying music of the two Xi-Qu styles were the same, such as bamboo flute (竹笛/萧), huqin (胡琴), pipa (琵琶), guzheng (古箏), and percussion instruments (鼓板). These instruments were commonly used in the Southern style traditional music and the accompanying music of the two Xi-Qu styles shared some common features, such as melody and instrumentation. The vocalist Ying-Qi's parents were Yue-Ju musicians and Ying-Qi liked the instrumental music of the Yue-Ju "Story of Stone", because it sounded so familiar and comfortable.

Moreover, Ying-Qi mentioned that he liked its accompanying instrumental music of "Peach-Blossom Fan" that was very similar to that of the Yue-Ju example "Story of Stone". As he stated, "I heard that the accompanying instrumental music was quite similar to that of the Yue-Ju piece. It (familiarity) influenced me and I liked this piece more, familiarity really influenced me."

Moreover, the vocalist Fang-Yuan was familiar with the musical instruments of "Peach-Blossom Fan" and he liked the music. As he stated:

> I liked the background music (of "Peach-Blossom Fan") very much. I listened to it carefully and I was sure that guzheng was used. It sounded so good to the ear. I also heard erhu (二胡). I am not interested in the singing too much but I liked the instrumental music very much.

Interestingly, all the participants (n = 8) who orally reported that they liked the instrumental music of "Peach-Blossom Fan" didn't like the singing of this piece. The instrumentalist Li-Wen even said that he would like to just listen to the instrumental music if possible because the singing of this piece sounded uncomfortable. The participants had a sense of

familiarity with the instrumental music of "Peach-Blossom Fan" but they reported that the singing of this piece was unfamiliar. As Ying-Qi stated, "I am not familiar with the singing (of "Peach-Blossom Fan"), but the instrumental music part was similar to Yue-Ju." It was probably because of the fact that Yue-Ju and Kun-Qu use different singing skills and adopt different spoken languages. Kun-Qu uses ancient Chinese official spoken language (官话) while Yue-Ju uses the regional dialect. Thus, although the participants found the instrumental music of these two pieces similar and familiar, the singing differentiated the two styles. It indicated that familiarity was an important factor for preference for the Xi-Qu instrumental music, but preference for instrumental music was not always positively related the preference for the Xi-Qu examples.

Instrumental music and other elements. Findings revealed that some participants tried to evaluate the instrumental music based on the balance between singing and instrumental music and on the relationship between instrumentation and expressed emotions in the song and acting. Two participants cared about the balance of volumes between singing and accompanying instrumental music and suggested that the instrumental music should serve singing well. The vocalist Yu-Yang exemplified this. She told the researcher that when she watched the example, she first listened to the singer's singing and then examined the accompanying music. She found that the volumes of the singing and instrumental accompaniment was not balanced in "Flower Duet" and commented that it would be a problem for the singer. As she commented:

> I tried to listen to the instrumental accompaniment, but when they (the singers in "Flower Duet") sang the high-pitched tunes I could not hear the accompaniment clearly. In my case, when I sang a song with the piano accompaniment, I hoped that the piano would help me to express the song well. For example, if I sang the very high notes, I hoped that

> the piano would be louder then we worked together to express the song. If my singing volume reached forty but I could not hear the accompaniment, I would loss the confidence even if I could sing well, because my voice didn't match the sound of piano. Just now I could not hear the accompaniment (of "Flower Duet"), so it was something that really bothered me. If I were the singer, I would not like that (faint accompaniment).

The vocalist Gui-Zhi also pointed out that the balance of volume between instrumental accompaniment and singing was important. However, she found the "Flower Duet" acceptable but was not satisfied with "Story of Stone" as she felt that the accompanying music was too loud. As she commented:

> I like this piece and the accompaniment ("Story of Stone"), but the accompanying music was too noisy. It would be better if the volume of the instrumental music decreased a little bit so that the singer's voice could stand out. The accompaniment distracted people's attention from singing. I like the instrumental music of this piece, but it was too loud.

In addition to the concern about the balance between the volume of singing and accompaniment, the participants (n = 3) also raised questions about the contradiction between the accompanying music and the expressed emotions of the song and acting. The vocalist Zhu-Ling liked the acting and singing of "Summertime" but she found the perceived sadness in the instrumental music didn't match the worm and loving acting. As she stated:

> The most disliked thing in this video was that the accompanying music gave people an impression that under the calm surface, the thunderstorm would come soon. The instrumentation didn't match such a warm song and the acting. I heard the bass part went down, like some unfortunate things would happen. The accompanying music made me

feel the tragic and dark things, but the mom and baby looked so happy.

The vocalist Yu-Yang also pointed out that the accompanying music of "Summertime" seemed to indicate that the unfortunate things would happen soon. As she commented:

> Later the accompanying music sounded increasingly grave and sad. I saw the woman smiled and held her baby, I didn't understand why the music sounded more and more sad. The mother's face looked more and more happy, but the accompanying music was sad. I was confused.

Moreover, the vocalist Mei-Yuan mentioned that the instrumentation should match the expressed emotions of the song. Mei-Yuan felt that the instrumental music of "Story of Stone" sounded relaxed and happy, but the lyrics were talking about the sad things. As she stated, "The accompanying music sounded so happy, but actually it was a sad piece. The instrumentation of the accompanying music should be revised to match the context."

Notably, the participants made few comments on the instrumental music of the operatic examples. In addition to the aforementioned comments on "Summertime" and "Flower Duet", Only one participant shortly mentioned that the music of "Rigoletto" was good and three participants liked the accompanying music of "Hebrew Slaves Chorus."

In sum, the findings relating to the influence of the music factors on the participants' preference for the musical examples were presented in this section, including the influence of singing and instrumental music. Findings indicated that the quality of singing was an important factor for liking the operatic examples but it was not a decisive factor for preference as the visual factor could affect music perceptions. The operatic male singer were more welcome than the female singers due to the perceptions of "comfortable" singing tone colors, but as many participants didn't specifically comment on the singing tone colors of the operatic singers, the

preference for male singers might not be consistent. Furthermore, the high-pitched singing tone color was less popular among this group of participants in comparison to the examples with "natural" sounding tone color, but familiarity with high-pitched singing positively influenced the participants' preference for some Xi-Qu examples.

The participants' preference for the instrumental music was related to the training in music instrument and familiarity with the music styles of the Xi-Qu examples. Furthermore, the balance between the volumes of the singing and instrumental music and between the instrumentation and the expressed emotions also mattered in the preference decisions.

Musical Response

The interview protocol contained a question regarding the participants' emotional response to the musical examples. In addition to the emotional response, participants' also expressed preference decisions after watching. The findings also showed the evidence of cognitive responses to the musical examples, namely, making sense of the context. Some of the participants also reported psychophysiological responses to the music. I presented the findings relating to the efforts of making sense of context and its influence on music preference, followed by the affect responses, including emotional response and preference, and psychophysiological responses.

Making sense of the context. Making sense of the context was the process during which the participants comprehended, analyzed and evaluated the information in the video. During the interviews, the participants frequently expressed the confusion about the context of the musical examples. They tried to figure out the identities of the characters and the story line so that they could understand why the singers performed and sang in certain ways. "Don't make sense" or

"don't understand" were the frequently mentioned phrases after watching each video. Making sense of the context became the major challenge for the participants and influenced the participants' perceptions of, response to, and preference for the musical examples. Guessing the context of the musical examples was common for this group of participants. The majority of the participants (n = 19) asked the researcher about some of the stories of the Xi-Qu or operatic works and the identities of the characters. The participants posited that it was hard to engage in the musical examples without the context. On the contrary, making sense of the context could enhance the participants' musical experience and also be related to the preference for the musical examples at the different levels.

The participants found it hard to concentrate on some of the musical examples without the context. After watching the Jing-Ju example "Yezhu Woods", the instrumentalist Hui-Xin commented, "I didn't understand at all. I didn't know what the singers were talking about, so it was so boring. If I didn't know the plots of the story, I really was not interested in watching it at all." In fact, the video "Yezhu Woods" contained Chinese subtitles that indicated the relationships between the two characters (young couples) and the context (on the way to a temple), but the participants were not satisfied. As Hui-Xin stated, "The woman (the female singer in "Yezhu Woods") only talked about her husband's career, but I could not see what happened before and what would happen. The lyrics didn't help a lot." The instrumentalist Kang-Ning held the similar opinions, "This woman talked about her husband, but the lyrics were just the repetitions of a few sentences. The lyrics didn't push the plots forward."

Without the context, it was difficult for the participants to engage in the musical example emotionally and to judge the appropriateness of the elements in the video. The instrumentalist Tian-Hao exemplified this. He watched "Flower Duet" which didn't contain Chinese subtitles

and found that this video did not offer adequate information to help him appreciate it. As he stated:

> Actually I was about to select costumes as the mostly liked element, because I found the scenery and the costumes matched well. But I really didn't know what they were singing about, so I was not sure if the costumes were appropriate or not. If you just let me rate the costumes without context, I would say the costumes were quite good… This video didn't have subtitles, I think for such a short video, it is very hard to make sense of the context without lyrics…I didn't have any emotional responses to this piece. The main problem was that I didn't know what they were singing, and didn't know what their emotions were. So I just focused on the costumes and scenery. It is really hard to engage in the piece emotionally.

The failure in making sense of the context sometimes resulted in the state of mind blocking among the participants (The details were discussed in the "responses to the musical example" section) and affected the music appreciation. According to the participants' comments, they could not concentrate on the musical example due to the failure in understanding the context and their minds were "blank" for a while during the watching process. The musical examples that frequently caused the "blank mind" among the participants were "Yezhu Woods" (n = 12) and "Flower Duet" (n = 6). Some participants said that there were multiple reasons for "blank mind", but the main reason for having a "blank mind" was due to the lack of information to indicate the context of the songs that made the watching process boring.

According to the participants' comments, three videos contained comparatively explicit information to indicate the context of the song, including "Peach-Blossom Fan," "Rigoletto," and

"Summertime." The common feature among these examples were that the facial expressions and acting explicitly showed the singer emotional states and that the living environment offered some clues of the context. The participants associated "Peach-Blossom Fan" with sad things between the two lovers as indicated by their hugs and sad facial expressions, "Summertime" with mother's love in the undesirable living environment as indicated by a baby held by the singer with smile and the shabby scenery, "Rigoletto" with happiness and humor as indicated by the singer's smile. Although the details of the participant's imagined stories varied, they agreed upon the overall expressed emotions and appreciated the musical examples accordingly.

The researcher found that the explicit information that could indicate the context of the song helped draw the participants' attention and guide the participants to engage in the musical examples. The vocalist Fang-Yuan exemplified this. Fang-Yuan didn't like "Peach-Blossom Fan" at the beginning of the video, but he soon perceived the sad emotions of the song based on the singers' singing and acting. He guessed the identities and the relationship of the two characters and appreciated it in the proposed context. The understanding of the context led to the deeper engagement in the singers' acting. As Fang-Yuan stated:

> At first I didn't like it…because it was Xi-Qu (Fang-Yuan laughed). But I listened and listened, and then I felt that it was not bad, en…very sad. They were very, very sad. The two persons… they should be two lovers, and they departed and then reunited finally. Feel like, I knew what was happening even without the subtitles. Their expressed emotions were very accurate. I was somewhat getting sad with them. The vibrato in their singing (indicated the sad emotions)…They held a fan, and I guessed that the third person appeared at the end of the video was the girl's father. It ("Peach-Blossom Fan") was more interesting than the Yue-Ju example ("Story of Stone").

Knowing the background information sometimes could increase the preference for the given piece. When the participants were watching the unfamiliar musical examples, they tried to know why the singers acted and sang in some ways. If they could not make sense of the visual and audio information, some elements in the video might appear confusing and strange to them. However, after knowing the background information, the strange information was probably well explained and became acceptable. Some participants asked the researcher about the background information of some examples and told the researcher that their preference ratings would be higher if they could rate the example again. The instrumentalist Kang-Ning exemplified this. She first gave a low preference rating to the Xi-Qu example "Zhongkui" as she was not comfortable with the singer's painted-face and dance. She asked the researcher about the background information and later found that the acting and facial make-up of the singer were understandable and interesting. She was touched by the story of "Zhongkui" and told the researcher that she wanted to watch the complete version of "Zhongkui" after data collection. As she stated:

> When he (the singer of "Zhongkui") turned round I felt horrible. I frowned when I saw his face. But I found his movements and costumes were cute, and I assumed that he was very happy. I didn't know what was going on, so I imagined that he probably was a god, because the scenery looked like a god's place. Then you told me the story, I felt better, I mean after your introduction it makes sense to me. It (knowing the story) really makes me feel better. Just now I rated this example immediately after watching. As it didn't make sense to me, I would not give a high preference rating. But now if you let me rate it again, I would give a higher rating, because now I understand it.

However, knowing the background information was not always positively related to the preference. The instrumentalist Lan-Lan also asked the background information about

"Zhongkui." She admitted that knowing the plots would make the music appreciation more interesting and relevant, but she frankly said that she wished she would never watch Xi-Qu examples again, because she was not interested in Xi-Qu at all. As Lan-Lan had little exposure to Xi-Qu before data collection, she told the researcher that she was totally unfamiliar with Xi-Qu and found that Xi-Qu were very different from the music that she studied in university. Making sense of the context would make the music appreciation less difficult, but she still could not accept Xi-Qu in general. For Lan-Lan, making sense of the context was desirable in the process of music appreciation, but making sense alone could not guarantee preference.

Affective response. The participants' affective responses were mainly related to the preference for the examples and behavioral predictions relevant to the examples and emotional response. First, I present the findings of the preference decisions and behavioral prediction, followed by the findings of emotional response.

Preference decision and behavioral prediction. After filling out the questionnaire, the participants would respond to an interview question regarding their general opinions about the example. The participants usually told the researcher whether they liked the piece or not. They usually used words such as "like very much," "like," "neutral," "don't like," "hate," or "disgusted" to show their preference. Furthermore, they would tell the researcher the actions they would take relevant to the given example after data collection.

Findings revealed that if the participants liked the piece, they sometimes expressed the willingness to watch the complete version of the Xi-Qu or opera works after data collection. Some of them asked the researcher to write down the names of the Xi-Qu and/or opera works on their notebooks so that they could find the videos online. The examples that provoked the participants' interest in watching the complete works included "Hebrew Slaves Chorus" (n = 3),

"Rigoletto" (*n* = 3), "Summertime" (*n* = 2), "Zhongkui" (*n* = 1), "Story of Stone" (*n* = 1), and "Peach-Blossom Fan" (*n* = 1). Some participants were positive or neutral to some of the examples, and they said that they would not actively find the videos to watch repeatedly, but if they encountered these examples in future, they would not refuse to watch them again.

The participants who disliked some of the examples told the researcher that they wished never watching these videos again. Xi-Qu examples were more likely to receive such negative comments, especially "Yezhu Woods," "Peach-Blossom Fan," and "Zhongkui."

Emotional response. When the researcher asked the participants' emotional response to the musical examples, some participants could describe the emotions encompassing during the watching process while others could not find appropriate words to describe their emotions to some examples. Furthermore, some participants asserted they didn't have any emotions when watching some examples. Findings revealed that the participants (*N* = 27) made a total of 216 comments relating their emotional responses to the musical examples. Except for "cannot describe" (*n* = 32) and "no emotion" (*n* = 80), the participants' answers included "happy" (*n* = 29), "bored" (*n* = 21), "sad" (*n* = 17), "pity" (*n* = 5), "love" (*n* = 4), "amused" (*n* = 4), "relaxed" (*n* = 4), "disgusted" (*n* = 3), "tender" (*n* = 2), "admired" (*n* = 1), "contempt" (*n* = 1), and "frustrated" (*n* = 2). Notably, the majority of the participants reported that their emotional response was very weak and short, and the mostly used phrase was "just a little bit."

The emotions induced by the examples varied and were relating to the features of the musical examples. As shown in Table 18, the emotions induced by "Rigoletto" were "happy" (*n* = 16) and "amused" (*n* = 2); by "Summertime" were "love" (*n* = 4), "pity" (*n* = 3), "happy" (*n* = 2), "tender" (*n* = 2), and "admired" (*n* = 1); by "Hebrew Slaves Chorus" were "sad" (*n* = 3), "bored" (*n* = 2), and "pity" (*n* = 1); by "Flower Duet" were "bored" (*n* = 5), "relaxed" (*n* = 1),

and “happy” (*n* = 1); by “Story of Stone” were “sad” (*n* = 5), “happy” (*n* = 4), and “bored” (*n* = 2); by “Peach Blossom Fan” were “sad” (*n* = 9), “bored” (*n* = 4), “pity” (*n* = 1), “frustrated” (*n* = 1), and “disgusted” (*n* = 1); by “Zhongkui” were “happy” (*n* = 6), “relaxed” (*n* = 2), “amused” (*n* = 2), “disgusted” (*n* = 1), “frustrated” (*n* = 1), and “bored” (*n* = 1); by “Yezhu Woods” were “bored” (*n* = 7), “contempt” (*n* = 1), “disgusted” (*n* = 1), and “relaxed” (*n* = 1).

The majority of the participants (*n* = 15) didn’t have emotional responses to “Flower Duet” and “Story of Stone” and some participants also reported that they didn’t respond to the rest of the examples emotionally, including “Hebrew Slaves Chorus” (*n* = 12), “Rigoletto” (*n* = 10), “Summertime” (*n* = 8), “Peach-Blossom Fan” (*n* = 8), “Zhongkui” (*n* = 7), and “Yezhu Woods” (*n* = 5).

Table 18.

Frequency of the Self-Reported Emotions Induced by the Musical Examples

	No Emotions	Happy	Relaxed	Amused	Admired	Love	Pity	Tender	Sad	Disgusted	Contempt	Frustrated	Bored
Rigoletto	10	16	-	2	-	-	-	-	-	-	-	-	-
Summertime	8	2	-	-	1	4	3	2	-	-	-	-	-
Hebrew Slaves Chorus	12	-	-	-	-	-	1	-	3	-	-	-	2
Flower Duet	15	1	1	-	-	-	-	-	-	-	-	-	5
Story of Stone	15	4	-	-	-	-	-	-	5	-	-	-	2
Peach-Blossom Fan	8	-	-	-	-	-	1	-	9	1	-	1	4
Zhongkui	7	6	2	2	-	-	-	-	-	1	-	1	1
Yezhu Woods	5	-	1	-	-	-	-	-	-	1	1	-	7

Reasons for having or absence of emotional response. The participants also explained why they had or didn’t have emotional responses to the musical examples. Findings suggested that the reasons included acting, making sense of the context, music, and the length of the videos.

Acting. The singers’ acting was the most important factor for inducing the participants’ emotions relevant to the expressed emotions of the music examples. Out of 53 comments relating to acting, 44 comments suggested the positive relationship between the perceived good acting and the induced emotions. Through acting, the participants perceived the expressed emotions in

the musical examples and gradually had emotional response with the singer in the imagined context. In such a situation, the expressed emotions and induced emotions were usually similar or related. “Rigoletto” and “Peach-Blossom Fan” were two examples that showed expressed emotions explicitly in that the singers either smiled or sobbed to show their emotional states. Thus, it was understandable to see the participants’ reported “happy” (n = 16) for “Rigoletto” while “sad” (n = 9) for “Peach-Blossom Fan.”

On the contrary, the participants reported that they didn’t have any emotional responses due to the singer’s poor acting. The singer in “Story of Stone” was considered by some participants as not acting well to express emotions. Four participants reported that they didn’t have any emotions when they were watching “Story of Stone” because the singer didn’t show emotions. As the vocalist Wen-Yi simply put, “She didn’t act well, I didn’t see any sign of emotions so how could I have emotions with her.”

Music. In addition to acting, music was another important factor for provoking emotions from the participants although sometimes the induced emotions were less related to the expressed emotions in the musical examples. Some participants reported that they felt happy when they watched “Story of Stone” because the singing and instrumental music sounded relaxed and pleasant. After knowing that this example actually expressed sad emotion, the participants were surprised. As the vocalist Zhi-Ru commented:

> I didn’t feel that it was a sad example. At that time I felt that this singer sang very well, so I was happy. It was because I didn’t watch from the beginning of this complete work, so I was not able to feel her emotions. When I watched it my first thought was that I liked it, so my response was, I was happy. If I watched the complete work, probably I would bit by bit know what she was acting and gradually engaged in it.

There was another situation in which the participants might perceive the expressed emotions through the singers' acting, but their emotional response didn't match the expressed emotions due to the music. The vocalist Fang-Yuan reported that he found the "Hebrew Slaves Chorus" was not a happy piece, but he was happy to watch the example of good singing.

On the other hand, disliking the music was a reason for the absence of emotional response or the induced negative emotions. If the participants found the singing and instrumental music not of their taste, they were more likely to either rejected the emotional engagement or had strong negative emotions. There were eighteen comments relating to the consequence of disliking the singing/instrumental music of the musical examples that the participants were either absent-minded or felt bored, frustrated, or even disgusted about the music examples. Some participants reported that they could not focus on the musical example and their minds were "blank" for a while when they listened to the "piercing"-sounding examples. The instrumentalist Li-Wen exemplified this:

> I didn't like the singing ("Yezhu Woods"). The singing was piercing. Sometimes my mind was blank. By the time when I tried to see the subtitles then suddenly I seemed to loss consciousness that I knew nothing. Later I recovered…I was not able to engage in this piece, the singing was not good.

Furthermore, the vocalist Kong-Xiang reported that he was frustrated to listen to the singing of "Zhongkui" while the instrumentalist Li-Ying felt disgusted to listen to "Peach-Blossom Fan". these participants responses showed that disliking the singing of the musical examples sometimes could block the musical appreciation process and prevented the emotional engagement with the music.

Making sense of the context. Findings indicated that the failure in making sense of the context was the major reason for absence of emotional response to the musical examples. There were 53 comments relating to the relationship between making sense of the context and emotional responses, and 48 of the comments suggested that the failure in making sense of music was the main reason for lack of emotional response and experiencing the state of mind blocking. As the Xi-Qu and opera were dramas, the participants tried to experience the emotions of the music in certain context. If they could not make sense what the song was singing about, it was hard to engage their emotions with the song. As mentioned in the previous section, the instrumentalist Tian-Hao exemplified this. He told the researcher that he liked the scenery and costumes of "Flower Duet" but he didn't have emotional response to this piece as he didn't make sense the context. As he further explained:

> I didn't have any emotions for this video ("Flower Duet"). The problem was that I really didn't know what they were singing about so I didn't know what kind of emotions in the song. I had to just watch the scenery, facial expressions, and costumes and it was hard to connect my emotions to the singers. If it had subtitles and lyrics, it probably would be better as I would imagine something. If you give me a context, and the lyrics were also shown when they were singing, probably I would imagine and have emotions.

The participants' responses showed that offering lyrics was helpful to make sense of the song. In addition to Tian-Hao, four participants also reported that they had emotional responses to "Story of Stone" because the lyrics indicated the singer's emotional state. But there were situations in which even if the examples contained subtitles of lyrics, some participants still found it hard to engage in the song emotionally because the lyrics were not adequate to indicate the context. As the instrumentalist Li-Ying commented, "I read the lyrics (of "Peach-Blossom

Fan") but I still didn't understand what they were doing." In such a situation, the participants either watched the video without emotional engagement or could not focus on the musical examples any more.

Length of the musical examples. The length of the musical examples was cited as a problem for emotional engagement. The participants (n = 10) pointed out that the length of the videos was too short for them to emotionally engage in the musical examples. As the vocalist Si-Qi stated, "I didn't have emotional response to "Peach-Blossom Fan", because it was too short, just about two minutes. I was about to engage in it then it finished."

Similarly, the vocalist Ying-Qi commented that it was difficult to have emotional response in very short time span. As he stated, "These examples were all very short, so you could not expect emotional engagement with them. I mainly focused on the music and acting, and sometimes the scenery." The instrumentalist Tian-Hao also stated that it was hard to have emotions if the musical examples were short, "I didn't have emotions (with "Story of Stone"), but I could perceive the emotions that the singer tried to express. It was very difficult for me to emotionally engage in the music for such a one-minute excerpt."

Interestingly, the length of the videos was subjectively perceived as long or short. If the participants disliked the musical example, they usually complained that it was too long, even the one-minute long example "Story of Stone" was too long. The vocalist Kong-Xiang told the researcher that his mind was "blank" shortly after the musical example "Story of Stone" started and complained that the video was too long and boring. However, he didn't complain about the length of "Peach-Blossom Fan" which lasted for 2'37" and was two times longer than "Story of Stone". He commented that the acting of "Peach-Blossom Fan" was so good that he could focus on this example. The subjectively perceived length of the musical examples indicated that the

engagement with music was a complicated phenomenon that could not explained by a single factor.

Diversity of the emotional response. The participants' had different emotional responses to the same musical example which indicated the diversity in the participants' perceptions of the musical examples and the willingness to engage in the examples emotionally. Many participants (n = 16) found the acting and singing of the singer in operatic example "Rigoletto" expressive and this example provoked happy emotion, though very weak, from them. However, other participants (n = 10) didn't report any emotional responses to this example because they could not emotional engage in this example due to the length of the video (n = 2), the failure in making sense of the context (n = 6), and disliking the acting and lyrics (n = 2).

The participants' emotional responses to "Peach-Blossom Fan" were also highly diverse. Some participants reported that they perceived the sad emotions of expressed in this example and became "a little bit sad" (n = 9) or "pity" (n = 1) with the singer. But some other participants didn't prefer the music of this style and was not able to emotional engage in the sad expressed emotions. They reported that they felt "bored" (n = 4), "frustrated" (n = 1), or "disgusted" (n = 1) for this piece. The participants' diverse responses suggested that many factors could influence the participants' emotional response to the given example.

Psychophysiological response. When the participants commented on the musical examples, some of them told the researcher about their physiological responses to the music. The responses could be divided into two categories, the responses for the liked examples, and that for the disliked examples. Two participant reported the physiological responses to the liked piece while more participants reported their physiological responses to the disliked music examples.

Psychophysiological response to the liked examples. The vocalist Zhi-Ru reported that when she was watching "Hebrew Slaves Chorus", she had strong emotional response to this piece and her body hair stood on end. As she stated:

> I sang this piece in choir. I am familiar with it very much and I know the lyrics because I sang the Chinese version. I know what it was talking about and I know the emotions it wanted to express. I was emotionally shocked by this video and my emotion went with this song. My body hair stood on end when I heard the volume grew at the end of the video.

It seemed that the familiarity with this piece helped provoke strong emotional resonance and psychophysiological response to "Hebrew Slaves Chorus" as Zhi-Ru had previous experience with this piece. But another participant who had the same experience with Zhi-Ru didn't have any emotions with this example. The vocalist Zi-Yi was also in the choir that Zhi-Ru was in and also sang "Hebrew Slaves Chorus" with Zhi-Ru in the choir, but she said that she was "calm" when she watched this piece and didn't have any emotional responses, not to mention psychophysiological response. The reason was that the stage scenery looked not good so she could not engage in the music. On the contrary, Zhi-Ru said that the stage scenery of "Hebrew Slaves Chorus" was unique and she liked it very much. It suggested the individual difference among the participants regarding their standards for judging the elements of the musical examples.

The vocalist Yu-Yang reported that when she watching "Summertime", she felt that she smiled. As she stated,

> I felt that I wanted to smile, probably I smiled. The mother loved her baby, and it was a touching moment. I smiled with the mom. She reported that she felt the corner of her lips

raised a little bit.

Interestingly, although a number of participants reported that they felt happy when watching “Rigoletto”, they didn’t think that they smiled. They reported that they usually don’t have any facial expressions when watching something, except that the video showed very strong emotional moment. As the vocalist Zi-Yi stated, “I usually don’t have facial expressions when I watched something, I just focus on the video. Only at the strong emotional moment I might shed tears.”

Psychophysiological response to the disliked examples. The participants reported their responses to the disliked examples that could be categorized into the psycholphysiological responses, including mind blocking (n = 27), sleepy (n = 7), shivering (n = 1), and smile (n = 1).

Mind blocking referred to the state of “blank mind” that the participants’ brains blocked the sensory information. Although they still looked at the audiovisual example, their brains seemed to stop processing the sound and images being presented. Findings showed that the following examples caused mind blocking, including “Yezhu-Woods” (n = 12), “Flower duet” (n = 6), “Story of Stone” (n = 3), “Peach-Blossom Fan” (n = 3), “Summertime” (n = 1), and “Zhongkui” (n = 1). “Rigoletto” was the only example that no participant reported having the state of mind blocking.

As mentioned in the previous section, the vocalist Li-Wen said that he seemed to loss consciousness suddenly and didn’t hear or see anything. Similarly, the vocalist Luo-Fei reported that his mind was “blank” temporarily when he was watching “Flower Duet”. As he stated, “My mind was blank just now, because it was so boring… My eyes still looked at the screen but I actually didn’t hear and watch. I didn’t know what I was doing.”

The instrumentalist Meng-Lan also reported “blank mind” when she watched “Flower

Duet". As she said, "I just gazed at the subtitles, and then my mind was blank". Furthermore, two participants reported that their eyes blurred while in the state of mind blocking. The vocalist Mei-Yuan exemplified this, "My eyes suddenly blurred for a while and my mind came back when it ("Yezhu-Woods") finished".

Sleepy was another psychophysiological response to the disliked examples. The participants reported that the following examples made them sleepy, including "Flower Duet" (n = 3), "Yezhu-Woods" (n = 2), "Summertime" (n = 1), and "Peach-Blossom Fan" (n = 1). As the instrumentalist Li-Ying commented, "I almost fell in sleep when I watched this piece ("Peach-Blossom Fan"), my eyes almost closed". Not making sense and disliking singing were the main reasons for feeling sleepy with the examples.

Moreover, one participant reported that she shivered when she was watching "Yezhu Woods". As she stated, "Her (the female singer in "Yezhu Woods") voice was so piercing, I shivered when I heard her voice and my body hair stood on end. Her voice made me frustrated."

I found that the vocalist Hua-Liang smiled when he was watching the Xi-Qu examples, so I asked him the reasons why. He explained that he smiled because the Xi-Qu piece sounded and looked so strange, he said that the smile didn't' mean positively, just a kind of sneer.

The vocalist Zhi-Ru also told me that she wanted laugh when she watched "Yezhu Woods". She found the facial expressions of the female singer so strange so she wanted laugh, but such kind laugh didn't mean she liked it.

Model of Xi-Qu and Opera Preference

Based on the qualitative findings, I created a model of Xi-Qu and opera preference to demonstrate the relationships between the factors influencing music preference. The "personal

factors" box with thick frame was in the middle which stands for the person who watches the audiovisual examples. The "cultural factor" on the top indicates the influence of cultural factors on multiple aspects of the people's life, including education, formal training, community, and television programs. "Cultural factors" may influence the philosophy of education, teaching content and methods, preferred activities in community and the values and prevalent ideology as presented in television programs. Peers as well as the participants merged into the cultural environment and their behaviors and ways of thinking were influenced by the Chinese culture and regional culture. The participants also interacted with the peers, strengthening or modifying their behaviors and opinions (see Figure 11).

The "environmental factors" box on the right side of the model means that it includes the variables on the left of this box, such as education, formal training, community activities, Xi-Qu program on television, peers, family members, and teacher. Some variables might not automatically reach the participants, so the boxes "teacher" and "family members" are placed in the middle to indicate the ways through which the participants get in touch with Western singing skills and Xi-Qu. The teacher's music preference could influence the selection of teaching content, so the students might have different opportunities to get access to different music styles and specific pieces. Family members' music preference could determine the styles or types of music that the participants could encounter at home and in community. If the participants' grandparents or parents preferred certain music genre, they were more likely to watch the related television programs and to encourage the participants to go with them to participante in the community activies in which the preferred music being played. Also, family members' strategies to introduce Xi-Qu to the participants influence the level of engagement with Xi-Qu. The two –sided arrow between "personal factor" and "Community and TV program" suggests that

watching Xi-Qu on television and participation in community activities could be passive or active. The participants might passively encounter the music activities in community or the music programs on television by chance without family members. They might actively watch Xi-Qu on television or in community.

The two-sided arrows suggest the interactions between the variables in the related boxes. The two-sided arrow between "teacher" and "family members" suggests that during the process of musical training, the teacher and the family members interacted to each other to make strategies for the students' study and future career. The two-sided arrow between "family members" and "personal factors" means the interaction between parents/grandparents and the participants during the music learning process. Parents or grandparents might influence or decide the selection of the participants' primary instruments and help them find teachers. Furthermore, family members don't just impose their opinions to the participants, but sometimes listen to the participants' feedback and opinions to select musical instruments or to modify the music training plans. As aforementioned, peers and the participants might interact to influence each other, judging each others' music preference and sharing opinions, so the two-sided arrow indicates the interactions. The arrow between "internet" and the "personal factors" suggests that searching prefered music genres or pieces online was a self-directed activity.

The box on the left contains "visual factors" and "musical factors" that stand for the audiovisual example being presented. The arrow between this box and the "personal factors" box indicates the interactions between the two sets of variables. The audio and visual information goes through the filter of "familiarity" and "religious belief" through which the participants' musical responses to the audio and visual information varied. The participants may also actively select the music due to familiarity and religious belief.

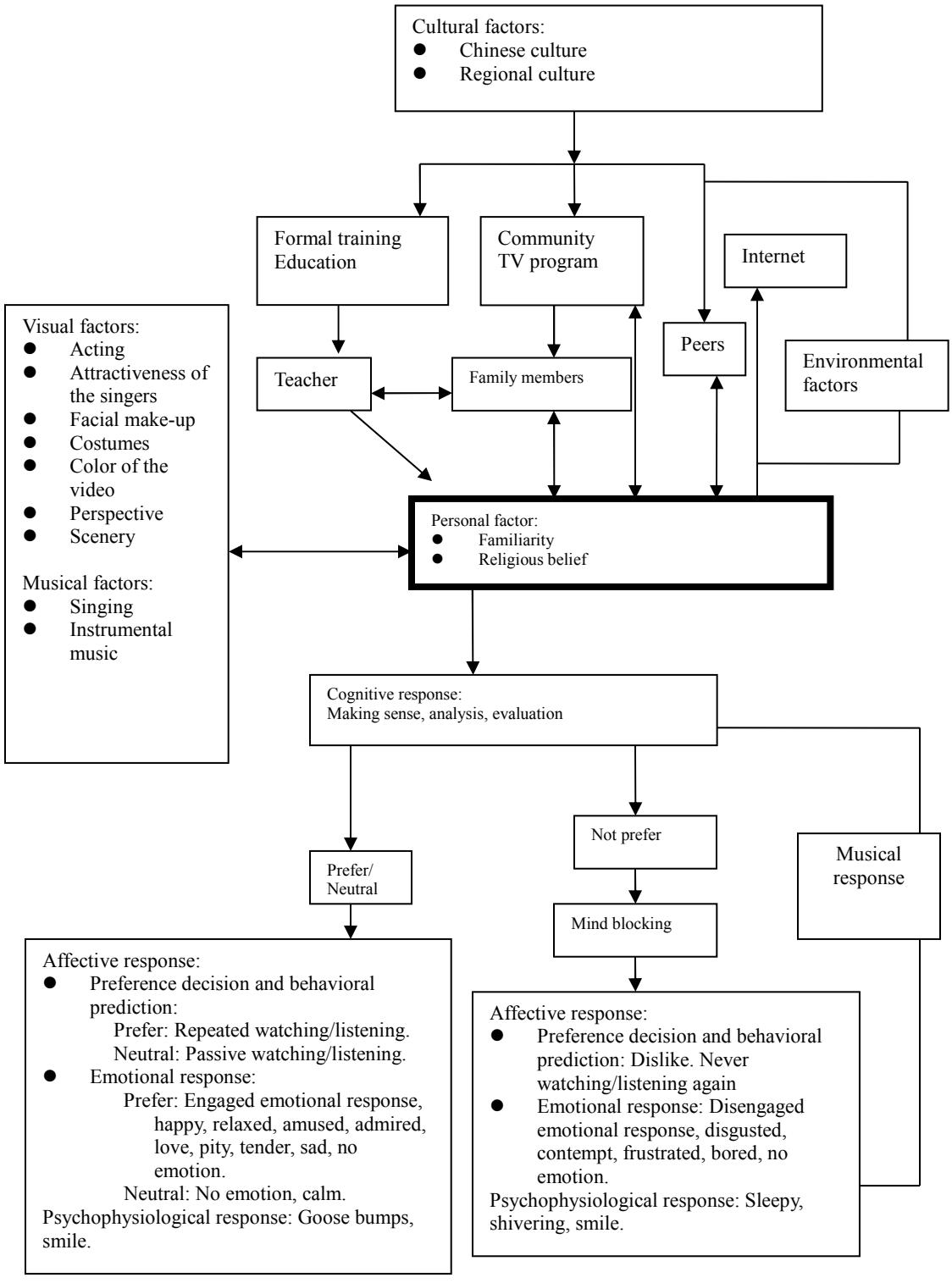

Figure 11. Model of Xi-Qu and opera preference.

The musical response includes cognitive, affective, and psychophysiological response that might occur concurrently instead of showing the linear relationship. I listed the "cognitive response" box separately because I found that preference for the musical examples led to different affective and psychophysiological response. If the participants didn't prefer the piece, they might experience the state of "mind blocking" that their brains seemed to stop processing information due to the dissatisfaction with the video. They might have disengaged emotional response and also have body responses such as shivering and smiling. By disengaged emotional responses it refers to the situation that the participants didn't watch the video with focused attention and didn't try to engage into the context of the musical examples. They may reject the given piece and predict that they would never watch the piece again. On the contrary, if the participants preferred the piece then they might have engaged emotional responses and sometimes also demonstrate psychophysiological responses, such as goose bumps and smile. Engaged emotional responses mean that the participants watched the audiovisual examples with focused attention and engaged in the music and visual information. They responded to the audiovisual information emotionally and their emotions might be in accordance with or different from the expressed emotions in the given musical example. However, they might not have emotional response even if they prefer the piece due to multiple reasons, such as length of the video and difficulty in making sense of the context. They may predicte that they would watch/listen to the piece repeatedly in future. Some participants who keep neutral to the piece might predicte that they would listen to the piece in future passively instead of actively.

The Xi-Qu and opera preference model was created based on the qualitative findings of this study and only applicable to this group of Chinese undergraduate music majors. Whether or not this model could be generated to a larger population needs further in-depth investigation.

Furthermore, this model is only applicable to the eight examples for this study, although it might also explain the preference for other Xi-Qu and opera works. Preferring some Xi-Qu and opera examples sometimes does not necessarily mean preference for all other Xi-Qu and opera works. This research area still needs further examination.

Summary

This chapter was the findings of the qualitative strand to explore the reasons for preference and the underlying factors that might influence the participants' music preference. Based on the findings, I created a model of Xi-Qu and opera preference to demonstrate the relationships among the factors influencing music preference and musical response. I put the variables that emerged from the qualitative coding into five categories, including personal factors, cultural/environmental factors, musical factors, visual factors, and musical responses. As the findings indicated, the relationship between familiarity and preference was a complicated phenomenon in that the participants might adopt different criteria for rating familiarity. The environmental factors, such as formal training, family member's music preference, media, community, and peers were the sources of getting familiar with Xi-Qu and opera. These ways had different level of influence on preference for the musical examples. Furthermore, religion was related to the preference for the religious work that the Christian participants commented differently about the religious work in comparison to the non-Christian participants.

The cultural and environmental factors category contained Han-Chinese culture and regional culture. Findings revealed that Han Chinese culture influenced the participants' perceptions of the appropriateness of the costumes. Cultural influence could be counterbalanced by formal training as this group of participants generally liked the operatic examples more than

the Xi-Qu examples although Xi-Qu was of their tradition. Formal training and the notion that Xi-Qu was the music of the old were the main factor that counterbalanced the cultural influence. Furthermore, the fact that the majority of the participants liked the regional Xi-Qu style and the Southern Xi-Qu styles indicated the influence of regional music culture. However, due to the diversity in participants' experience with various Xi-Qu styles, the participants might also like the Xi-Qu styles originated from out side of their hometown.

The visual information was important during the music appreciation process, including acting, followed by the attractiveness of the singers, facial make-up, costumes, the color of the video, changes of perspectives, and stage scenery. Humorous acting, more interactions among the singers, more body movement, more people shown on stage, and showing emotional states explicitly were the expected or the liked acting in the video. Moderate and clean facial make-up was welcomed while the heavy facial make-up was more likely to receive negative comments. However, those who were familiar with Xi-Qu were more tolerant to the heavy Xi-Qu facial make-up. The costumes with bright colors, not showing women's bodies, fitting the character's identity were preferred although exceptions existed. The bright overall color of the video was considered comfortable, but the dark color or whit color might also attract the participants. Keeping a long shot for a long time and the static perspective could seriously affect the music appreciation as the participants wanted to observe the singers' facial expression to make sense of the context. Colorful/unique/naturalistic scenery was welcomed as such kinds of scenery would capture the participants' attention and helped make sense of the context.

The musical factors were mainly related to singing and instrumental music. The quality of the singing was important for the participants, but good singing could not guarantee preference if the visual information was not satisfying, such as in the case of "Flower Duet".

Furthermore, the “piercing” female voice was less welcome comparing to the male voice, but the participants might found the high-pitched singing comfortable and pleasant if they were familiarity with the singing style, such as in the case of Jing-Ju “Yezhu Woods”. As for the instrumental music, the participants liked the accompanying music that used their primary instrument. Furthermore, familiarity with the music style also positively influenced the participants’ preference for the instrumental music of the musical examples. Some participants desired for the balance of the volumes between instrumental music and singing and hoped that the instrumentation of the instrumental music could fit the expressed emotions of the song.

The musical responses included cognitive responses, such as making sense of context, affective response, including preference and emotional response, and psychophysiological responses. Making sense of the context was the process during which the participants comprehended, analyzed and evaluated the information in the example. Making sense of the context of the song was important for music appreciation in that the failure in making sense could cause lack of attention. As for the emotional responses, the participants reported that they might not have emotional responses due to failure in making sense of the context, poor acting, and the length of the video (too short to provoke emotions). The expressed emotions in music and the participants’ emotional responses could be the same or not related. Furthermore, good acting and expressive singing/music would help induce emotions from the participants. When the participants liked the music, they might smile or have goose bumps. When they disliked the musical example, they might shiver, being sleepy, experience the state of “mind blocking”, smile, or not have emotions.

CHAPTER SIX

CONCLUSION AND DISCUSSION

This chapter includes the answers to the research questions based upon the quantitative and qualitative findings. The results of the quantitative and qualitative strands are merged to answer the research questions and to describe the Chinese undergraduate music majors' preference for Chinese Xi-Qu and Western opera examples and the factors influencing their music preference. In particular, the results of FaceReader are compared to the results of the self-reported measures, including questionnaire and interviews, to explore the usability of FaceReader in music preference studies. Following that was the discussion on the implications and recommendations. The suggestions for future research were discussed.

Answers to Research Questions

The following questions guided this study to explore preference of Chinese music majors for Chinese Xi-Qu and Western opera examples:

1) What were Chinese participants' preferences for Xi-Qu and Western opera?
2) What were the reasons for Chinese participants' preferences for Xi-Qu and Western opera?
3) What was the relationship between familiarity and preference for the Xi-Qu and Western opera selections?
4) What was the relationship between participants' emotional responses as indicated by FaceReader and music preference as revealed by self-reported measures?

The answers to the questions are presented in the following sections.

Answers to question one. The first research question: what were Chinese participants' preferences for Xi-Qu and Western opera? The quantitative and qualitative findings are combined to answer this question, including the most and least preferred style and example.

Preference for genres. According to the quantitative findings, the participants' generally preferred the Western opera to Chinese Xi-Qu as indicated by the composite mean preference ratings. The composite mean of operatic examples was 4.89 (*SD* = 1.20) which was higher than the composite mean of Xi-Qu examples (*M* = 3.78, *SD* = 1.47).

Furthermore, The preference for opera style could be proved by the fact that the top three preferred examples as indicated by the mean preference ratings were all operatic examples, including "Rigoletto" (*M* = 5.85, *SD* = .91), "Summertime" (*M* = 4.86 , *SD* = .91), and "Hebrew Slaves Chorus" (*M* = 4.67 , *SD* = 1.14); while the least preferred three examples were all Xi-Qu examples, including "Yezhu Woods" (*M* = 2.85, *SD* = 1.49), "Zhongkui" (*M* = 3.74, *SD* = 1.40) and "Peach-Blossom Fan" (*M* = 4.00, *SD* = 1.33). The results suggested that the participants generally liked the operatic examples more than Xi-Qu examples. Thirdly, the mean preference ratings of the operatic examples were all above the midpoint of the 7-point Likert scale. But a half of the Xi-Qu examples (*n* = 2) were below the midpoint of the scale.

The least preferred Xi-Qu example showed bigger standard deviation than the operatic examples. the variability in scores suggests that the participants' preference ratings for these pieces were less consistent than for the operatic examples.

According to the qualitative interview results, the participants generally liked operatic examples more than Xi-Qu examples. As discussed in the "familiarity" section, even those who gave the high preference rating to some Xi-Qu examples frankly said that they were more

comfortable with the operatic examples in comparison to the Xi-Qu examples. Furthermore, the participants who claimed that they didn't like both styles still felt that the operatic examples were more acceptable.

There were individual differences in that two participants commented that they could appreciate both opera and Xi-Qu, as in the cases of the vocalists Mei-Yuan and Ying-Qi, although such comments were not a main stream opinion among this group of participants. Furthermore, the qualitative findings also revealed that a number of participants were interested in some of the Xi-Qu examples and give highest preference rating ("7") to their liked piece, such as in the cases of Yu-Yang and Zhi-Ru who liked the Yue-Ju example and in the case of Zhu-Ling who liked "Peach-Blossom Fan" very much.

The qualitative findings also revealed that the participants liked some Xi-Qu styles and pieces that were not included in this study. These styles included Huang-Mei Xi (黄梅戏), Yu-Ju (豫剧), Lianhualao (莲花落), Chuan-Ju (川剧), and Huagu-Xi (花鼓戏). Some participants told me that if this study included these styles or the specific pieces, such as Yu-Ju "It's Wrong to Say Men are Better than Women" (谁说女子不如男，豫剧), or the Yue-Ju Work "Liang Shan-Bo and Zhu Ying-Tai" (梁山伯与祝英台，越剧), they would like them. The findings complicated the phenomenon in that disliking the Xi-Qu examples in this study didn't necessarily mean that some participants didn't like other Xi-Qu examples or Xi-Qu styles in general.

In conclusion, the majority of the participants preferred the opera more than Xi-Qu, and some participants may like some individual Xi-Qu pieces in this study or the styles/pieces that were not included in this study.

Preference for musical examples. The quantitative findings revealed that among the operatic examples, "Rigoletto" was the mostly preferred example with the highest mean

preference rating with smallest standard deviation among the musical examples for this study (M = 5.85, SD = .91). The example "Flower Duet" received lowest mean preference rating (M = 4.19, SD = 1.21). Although "Flower Duet" was the least preferred operatic example as shown by the rankings of the mean preference rating, the preference rating of this piece was still higher than the majority of the Xi-Qu examples. Notably, "Flower Duet" received preference rating "7" from a vocalist, which meant it was the most preferred example for this participant.

This study used two examples that composed by the same composer, Verdi's "Rigoletto" and "Hebrew Slaves Chorus". The participants gave higher preference rating to the former than that for the latter. The results indicated including multiple pieces of one composer or one singer probably could provide more comprehensive view of music preference.

Among the Xi-Qu examples, "Story of Stone" received highest mean preference rating (M = 4.52, SD = 1.19), even higher than the operatic example "Flower Duet", which meant that this example was the most preferred Xi-Qu piece. However, the mean preference rating of "Story of Stone" was still lower than that of the majority of the operatic examples. The least preferred Xi-Qu example was "Yezhu Woods" (M = 2.85, SD = 1.49).

"Story of Stone" was of the regional Xi-Qu style in this province. Moreover, the least preferred example was of Jing-Ju style. As aforementioned, Jing-Ju style was the one that the Ministry of Education required the students from first through ninth grades to study in general music class.

Moreover, the examples of the Southern Xi-Qu styles, "Story of Stone" and "Peach-Blossom Fan", received higher preference ratings than the two Northern style examples, "Zhongkui" and "Yezhu Woods". This suggests that participants in this study were generally more comfortable with the Southern Xi-Qu examples than with the Northern ones.

The results of the qualitative results showed that “Rigoletto” received the least negative comments. Only one participant kept neutral to this example as she was less interested in humorous works. Another participant who disliked the lyrics of this example still reported that she actually liked the singing of this example. Furthermore, no participant reported the state of “mind blocking” when watching this example and no negative words such as “bored” were used to describe this piece.

The example that received lowest preference ratings was Jing-Ju “Yezhu Woods”. More participants (n = 7) felt bored with this piece in comparison to the rest of the musical examples. However, two participants who were from the middle of region of China liked this piece which indicated the influence of regional culture and familiarity. Moreover, a participant who watched Jing-Ju in childhood with grandparents also liked the Jing-Ju example which indicated the influence of familiarity gained by family member’s guidance. The findings indicated the diversity of the participant’s background and the preference for different Xi-Qu styles.

Furthermore, the Xi-Qu example “Story of Stone” was commented by the majority of the participants as the most familiar and comfortable piece in comparison to other Xi-Qu example. The only exception was that a vocalist felt sleepy when watching this piece but was interested in the Jing-Ju example “Yezhu Woods.” The participants’ comments about the other Xi-Qu styles were less consistent that they listed various reasons for liking and disliking an example which would be discussed in the next section.

In conclusion, for the majority of the participants, the most preferred opera example was “Rigoletto” while the least preferred operatic example was “Flower Duet”. The most preferred the Xi-Qu example for the majority of the participants was “Story of Stone” while the least preferred example was “Yezhu Woods”. Individual difference among the participants existed that

the participants might held different opinions about the same example.

Answers to question two. The second research question: What were the reasons for Chinese participants' preferences for Xi-Qu and Western opera? The participants listed multiple reasons for liking or disliking an example. I combined the quantitative and qualitative findings to find the main reasons for liking/disliking the musical examples.

Reasons for preference for operatic examples. The quantitative and qualitative results were listed to show the main reasons for liking/disliking the operatic example. As shown in Table 19, the quantitative findings showed how prevalent a reason was among the participants as indicated by the frequencies of the top three liked and disliked elements; while the qualitative findings explicitly showed how the liked and disliked elements influenced the participants' perceptions of the musical example.

Results showed that singing and acting were always among the top three reasons for preference for the operatic examples. Among the four operatic examples, three of them had the same top three liked elements despite that the orders differed, including "Summertime," acting (n = 18), singing (n = 17), scenery (n = 9); "Hebrew Slaves Chorus," scenery (n = 19), singing (n = 14), acting (n = 11); and "Flower Duet," singing (n = 20), scenery (n = 15), acting (n = 8). The top three reasons for liking "Rigoletto" included singing (n = 22), acting (n = 20), and instrumental music (n = 16).

The reasons for disliking the opera examples were not related to the audio factor, neither singing nor instrumental music, but pertaining to visual factors. Furthermore, just a few of participants selected the disliked elements in three operatic examples, including "Rigoletto," facial make-up (n = 3), scenery (n = 2); "Summertime," acting (n = 3), costumes and scenery (n = 2); and "Hebrew Slave Chorus," acting (n = 3). The musical examples that received higher

frequencies of disliked elements were “Flower Duet” that was also the least preferred operatic example. The disliked elements in this video included facial make-up (n = 9), costumes (n = 8), and acting (n = 4). The reasons for disliking this piece indicated that visual information, such as facial make-up and costumes, could affect perception of the overall effect of the musical example.

The qualitative findings revealed more details of the reasons for preference. The specific reasons for liking “Rigoletto” were good singing skills, humorous acting, showing emotions explicitly, provoking happy emotion, and the attractive singer. Interestingly, although the majority of the participants selected instrumental music as the liked element, they didn’t talk too much about it but mainly focused on acting and singing. A few of participants found that the face of the singer looked dirty or untrimmed and one participant disliked the lyrics of this example because the lyrics seemed to indicate that women were bad.

The reasons for liking “Summertime” were good acting that showed a mother’s love, good interactions among the choral singers, good singing skills, harmonic effect of the ending of the song, and the naturalistic scenery that well indicated the context (poor people’s place). A few of participants complained that the costumes were too plain-looking in comparison to the Xi-Qu costumes. Although the quantitative findings showed that a few participants selected acting and scenery as the disliked elements, the participants didn’t emphasized that they didn’t like these elements during interviews.

The reasons for liking “Hebrew Slaves Chorus” were the unique scenery, good singing skills, good harmonic effect, explicit facial expression that showed sad emotions, costumes that fitted the context. A number of participants disliked the acting of the singers due to the lack of body movement, the facial expressions that didn’t show emotional states clearly, and the failure

in making sense of the context.

Table 19.

Reasons for Liking/Disliking the Operatic Examples

	Reasons for Liking		Reasons for disliking	
	Quantitative	Qualitative	Quantitative	Qualitative
Stimulus	Top Liked Elements		Top Disliked Elements	
Rigoletto	1, singing (*n* = 22) 2, acting (*n* = 20) 3, instrumental music(*n* = 16)	Good singing skills, Humorous acting, Showing emotions explicitly, Showing dramatic effect, Attractive singer Provoking happy emotion	1, facial make-up (*n* = 3), 2, scenery (*n* = 2)	Face looked dirty, lyrics were not good
Summertime	1, acting (*n* = 18), 2, singing (*n* = 17), 3, scenery (*n* = 9)	Showing mother's love Singers' good interactions, Good singing skills, Harmonic effect of the ending Scenery showed context	1, acting (*n* = 3), 2, costumes and scenery (*n* = 2)	Plain costumes
Hebrew Slaves Chorus	1, scenery (*n* = 19), 2, singing (*n* = 14), 3, acting (*n* = 11)	unique scenery, Good singing skills, Good harmonic effect, Facial expression showed sad emotions, Costumes fitted the context	1, acting (*n* = 3),	Lack of body movement, Didn't show emotional states, Didn't make sense No subtitles
Flower Duet	1, singing (*n* = 20), 2, scenery (*n* = 15), 3, acting (*n* = 8)	Good singing skills, Beautiful scenery, Pleasant color of the video, Beautiful costumes	1, facial make-up (*n* = 9), 2, costumes (*n* = 8), 3, acting (*n* = 4)	Heavy facial make-up, Costumes exposed the singer's body, Implicitly emotions, Static perspectives, Sexy-looking singer, Didn't make sense, Piercing singing

The reasons for liking "Flower Duet" were good singing skills, beautiful scenery, the pleasant color of the video, and the beautiful costumes. But some participants disliked this example because of the following reasons, heavy facial make-up, costumes that exposed the singer's body, implicitly expressed emotions, static perspectives, sexy-looking singer, piercing singing, and the failure in making sense of the context. It indicated that the visual features of this piece and the difficulty in comprehend the context seriously affect the music appreciation. As a result, although the majority of the participants liked the singing of "Flower Duet," they didn't prefer this video in comparison to the other opera examples. Furthermore, the results also showed the diversity in the participants' perceptions of this example that some of them liked the costumes while others were not comfortable with the costumes. The opinions about the acting of

the singers also differed as shown by the quantitative results. Although the quantitative findings showed that some participants liked the acting of "Flower Duet," no such comments were found during the interviews.

Reasons for preference for Xi-Qu examples. As shown in Table 20, the participants had multiple reasons for liking or disliking the individual Xi-Qu example. The reasons obtained from the quantitative strand were the frequencies of the top three liked and disliked elements in the Xi-Qu examples while the details of the reasons for preference were shown by the information obtained from the qualitative strand.

The Quantitative findings showed that the three main reasons for liking "Story of Stone" were facial make-up (n = 14), costumes (n = 14), and scenery (n = 14). The main reasons for liking "Peach-Blossom Fan" were acting (n = 16), instrumental music (n = 13), and costumes (n = 11). The main reasons for liking "Zhongkui" were acting (n = 13), singing (n = 9) and instrumental music (n = 8). The main reasons for liking "Yezhu Woods" were costumes (n = 10), singing (n = 6), and acting (n = 6)

Moreover, the reasons for disliking the Xi-Qu examples always contained the singing element. The top three reasons for disliking "Story of Stone" were singing (n = 4), acting (n = 3), facial make-up and scenery (n = 2). The main reasons for disliking "Peach-Blossom Fan" were singing (n = 13), facial make-up (n = 6), and scenery (n = 6). The main reasons for disliking "Zhongkui" were facial make-up (n = 8), singing (n = 6), costumes (n = 4). The main reasons for disliking "Yezhu Woods" were singing (n = 14), facial make-up (n = 11), and acting (n = 8).

The findings of the qualitative strand showed the details of the reasons for preference. The reasons for liking "Story of Stone" included comfortable/natural-looking facial make-up, beautiful costumes, the scenery that relating to the lyrics, pleasant color, pretty singer, and

comfortable singing. The reasons for disliking this piece were the pronunciations of the singer that showing local accent, implicit expressed emotions, heavy facial make-up, scenery that was not authentic, and failure in making sense of the context.

Table 20.

Reasons for Liking/Disliking the Xi-Qu Examples

	Reasons for Liking		Reasons for disliking	
	Quantitative	Qualitative	Quantitative	Qualitative
Stimulus	Top Liked Elements		Top Disliked Elements	
Story of Stone	1, facial make-up, costumes and scenery (*n* = 14)	Comfortable facial make-up, Beautiful costumes, Scenery was related to lyrics, Pleasant color, Pretty singer, Comfortable singing	1, singing (*n* = 4), 2, acting (*n* = 3), 3, facial make-up and scenery(*n* = 2)	Showing local accent, Implicit expressed emotions, Heavy facial make-up, Scenery was not authentic, Failure in making sense
Peach-Blossom Fan	1, acting (*n* = 16), 2, instrumental music (*n* = 13), 3, costumes (*n* = 11)	Acting showing sadness, Comfortable music, Beautiful costumes, Unique scenery, White color looked clean or elegant	1, singing (*n* = 13), 2, facial make-up and scenery (*n* = 6)	Piercing singing, Heavy facial make-up, White color indicating sadness, Simple scenery, Tragic context
Zhongkui	1, acting (*n* = 13), 2, singing (*n* = 9), 3, instrumental music (*n* = 8)	Humorous dance, Good dance movements, Pleasant singing tone color, Good facial make-up, Liking the god Zhongkui	1, facial make-up (*n* = 8), 2, singing (*n* = 6), 3 costumes (*n* = 4)	Horrible/scary/dirty facial make-up, Piercing singing, Costumes looked not good, Failure in making sense
Yezhu Woods	1, costumes (*n* = 10), 2, singing and acting (*n* = 6)	Good/classical costumes, Pleasant singing Good singing skills	1, singing (*n* = 14), 2, facial make-up (*n* = 11), 3, acting(*n* = 8)	Piercing singing, Heavy facial make-up, Strange facial expressions, Lack of body movement, Failure in making sense

The reported reasons for liking "Peach-Blossom Fan" were acting showing sadness, comfortable music, beautiful costumes, unique scenery, and white color. There were also a number of reasons for disliking this piece, including piercing singing, heavy facial make-up, white/grey color of the visual effect, simple scenery, and tragic context.

The reasons for liking "Zhongkui" were humorous acting, good dance movements, pleasant singing tone color, and good facial make-up, and liking the god Zhongkui. The reasons for disliking "Zhongkui" were horrible/scary/dirty facial make-up, piercing singing, costumes that looked not good, and failure in making sense.

Finally, the reasons for liking "Yezhu Woods" were good/classical costumes, pleasant singing and good singing skills. The main reasons for disliking "Yezhu Woods" were piercing singing, heavy facial make-up, strange facial expressions of the female singer, lack of body movement, and failure in making sense of the context.

In conclusion, the reasons for preference for operatic and Xi-Qu examples suggested a general picture of the participants' preference for the two musical genres. The reasons for liking an example included comfortable singing tone color, indicating context through the singers' acting, showing subtitles of the lyrics, and naturalistic/appropriate scenery, unique/beautiful scenery, attractive singer(s), visible and active body movement, humorous/comedic effect, pleasant/bright color, moderate/comfortable facial make-up, showing more people interactions and dramatic effect, refined or bright-colored costumes or the costumes fitting in the identities of the characters, and utilizing various type of perspectives. The musical examples that didn't show these features were more likely to decrease the participants' preference.

These listed reasons were obtained from the combined quantitative and qualitative findings and based on the majority participants' opinions. However, the diversity in the reasons for preference should be noticed as the minority doesn't necessarily equal to unimportance. Although the majority of the participants liked comedies, some participants were moved by the tragic but touching singing and acting. Furthermore, the perceptions of pleasantness of colors, appropriateness of the costumes/facial make-up, feeling of comfort with singing tone color, and the attractiveness of the singers were subjective issues that participants held different opinions.

Answers to question three. The third research question: What was the relationship between familiarity and preference for the Xi-Qu and Western opera examples? The answers to this question were as follows.

Familiarity was an important variable influencing the participants' preference for the Xi-Qu and opera examples to different extent depending on the depth of the familiarity with the two genres. The quantitative data and qualitative data suggested somewhat contradicted findings but the qualitative findings could explain the discrepancy between the findings of the two strands.

As the quantitative findings revealed (see Table 21), the relationship between familiarity and preference ratings was modest but showed a statistical significance ($r = .45$, $p < .01$). The qualitative findings showed that participants adopted both absolute and relative criteria, and they gained familiarity with Xi-Qu and opera in different ways. Formal training was the major way of gaining familiarity with the Western singing skills and had positive influence on preference for the operatic examples. Watching television and participation into community activities were major ways of gaining familiarity with Xi-Qu and had various effect on preference for Xi-Qu.

Table 21.

Relationship between Familiarity and Preference

Quantitative		Qualitative		
Correlation		Familiarity	Opera	Xi-Qu
r	*p*	Criteria for rating familiarity	Absolute + Relative	Absolute + Relative
.45	<.01	Major ways of gaining familiarity	Formal training	Watching TV, Community activity
		Effect of familiarity	Positively related, liking opera because of training in vocal skills	Depth of familiarity with Xi-Qu was positively related to preference

The qualitative findings suggested that the relationship between ratings of familiarity and preference was a more complicated issue. There were two main factors that resulted in the complexity of the relationship between familiarity and preference. First, the participants might adopt different criteria for rating the familiarity with the examples. As discussed in the

"familiarity" section in chapter five, the participants adopted both relative and absolute criteria to rate the familiarity with the examples.

Secondly, as aforementioned, the major ways of getting familiar with opera and Xi-Qu were totally different in that formal voice training was the major way of getting familiar with Western singing skills and therefore with the singing of opera. However, watching television and participating community activities were the major ways of getting in touch with Xi-Qu. The participants might rate the familiarity with Xi-Qu and opera similarly or the same, but the depth of familiarity with the two genres was actually different. The random exposure to Xi-Qu on television and in community without guidance was less possible to develop in-depth understanding and extensive knowledge of Xi-Qu. Thus, the same or similar familiarity rating for Xi-Qu and opera meant different level of familiarity with the two styles. These factors might explain the reasons why the qualitative findings showed the close relationship between familiarity and preference, but the quantitative findings only showed a modest relationship between the two although the relationship was of statistically significance.

Moreover, the participants got familiar with opera and Xi-Qu through different ways so the depth of familiarity varied. Due to the different level of familiarity, the participants appreciated the opera and Xi-Qu examples in different dimensions and judged the musical examples differently. These listed factors might lead to the modest statistical relationship between familiarity and preference.

Furthermore, findings also suggested that repeated listening was not always positively related to preference depending on the context in which the music was repeated. Repeated listening to Jing-Ju without guidance didn't cultivate positive attitudes toward this style. As some participants reported, they encountered Jing-Ju on television programs and got familiar with the

"screaming" of the Jing-Ju singing. The repeated listening didn't increase preference but strengthened the negative impressions about this style. On the contrary, in a context that the family members guided the participants to listen to some Xi-Qu styles, the participants developed positive attitudes toward the Xi-Qu styles. The different effect of the repeated listening on music preference suggested that repeated listening with guidance probably had more positive influence than the repeated listening without guidance.

In conclusion, based on the combined findings of quantitative and qualitative strands, familiarity with Xi-Qu and opera and preference for the two genres showed the positive but complicated relationship. The ways of gaining familiarity had different effect on preference. Familiarity gained by formal training and guided listening had consistent and positive influence on preference for opera and Xi-Qu respectively, while the repeated listening without guidance or random exposure to Xi-Qu didn't show the consistent effect on preference , when researchers interpreted the relationship between quantitative familiarity rating and preference rating, the following factors should be taken into account, including the different criteria for judging familiarity and the depth of familiarity by examining the ways of gaining familiarity.

Answers to question four. The fourth question: What was the relationship between participants' emotional responses as indicated by FaceReader and music preference as revealed by self-reported measures? The answers to this question were as follows.

The findings of quantitative of qualitative strands were combined to answer this question. The FaceReader findings showed that the dominant emotional state was "neutral" across the eight examples and it was in accordance with the participants' self-reported emotional responses that they didn't have emotional responses to the examples, and those who reported having emotional responses emphasized that they just have a little bit emotions when watching the

videos. It was possible that sometimes the emotional responses were too weak to be detected by FaceReader.

The Spearman's correlation between the rankings of the score of "angry" as calculated by FaceReader and the preference ratings obtained from the survey questionnaire showed a statistically significance (*rho* = -.976, $p < .001$). Furthermore, the Spearman's correlation between "sums of negative emotions" (SNE) showed a moderate correlation (*rho* =.741, $p < .05$). The results indicated that preference for a piece might be related to the detected "angry" and "SNE" for this group of participants. Furthermore, no statistically significant relationships were found between the ranking of the preference ratings and that of the rest of the emotions. However, no participant ever reported that they felt "angry" when they were watching any of the examples. It is possible that music could provoke more emotions than the seven emotions plus neutral in FaceReader. Probably "frustrated" could better represent the negative emotion instead of "angry" in this study.

The qualitative findings and the findings of FaceReader showed two sides of the relationship between "happy" and preference. On one hand, the detected "happy" was related to the preference for the video that showing the humorous effect. The example "Rigoletto" showed the highest "happy" score ($M = .0817$) and the majority of the participants ($n = 16$) reported that they experienced "happy" emotional state when watching "Rigoletto", the example that received highest preference rating ($M = 5.86$).

On the other hand, "happy" emotion as detected by FaceReader was not positively related to the self-reported preference as revealed by qualitative findings. The participant might smile when they encountered the disliked music example as they found the singing and acting strange. Such type of smile meant negatively, but it was detected by FaceReader as the positive emotion

"happy." These findings suggested that the meaning of "happy" detected by FaceReader could be multi-faceted.

In conclusion, the negative emotion "angry" and "SNE" as detected by FaceReader were negatively related to the self-reported preference ratings obtained by the questionnaire, and the relationships were statistically significant. Furthermore, the findings that the dominant state was "neutral" as indicated by FaceReader were in accordance with the participants' self-reported emotional responses, as they didn't have emotional responses for some examples or just have weak emotional responses. "Happy" was not a reliable indicator of preference in this study although it could predict the most preferred the piece with happy expressed emotions. The relationship between "happy" and preference probably need to be further examined by the different research design, such as selecting the videos that showed the same expressed emotions.

Discussion

The main purposes of this study was to explore the preference of Chinese undergraduate music majors for Xi-Qu and Western opera examples, the reasons for preference, relationship between familiarity and preference, and the relationship between the FaceReader results and the preference ratings. As the findings revealed, the participants generally preferred opera to Xi-Qu examples, but the participants might prefer some Xi-Qu examples due to multiple factors that could be put into personal, visual, musical, cultural/environmental, and the musical response categories. The depth of familiarity was positively related to preference as indicated by the ways of gaining familiarity with the genres or styles. Furthermore, the findings of FaceReader indicated that the detected emotion "angry" and "sum of negative emotion" were significantly related the survey findings.

The model of Xi-Qu and opera preference that developed based on the participants' response showed some similarities to the models created by other researchers, such as sources of variation in music preference (LeBlanc, Jin, Stamou & McGrary, 1999) and reciprocal response model (Hargreaves, MacDonald & Miell, 2005; North and Hargreaves, 2008). In the sources of variation in music preference model, LeBlanc and colleagues (1999) proposed that the variables influencing music preference were of three groups, including the listener, music, and environment. Some of the variables in those groups were also found in this study and were put into the similar group, such as peers, family members, and education in cultural/environmental factors box; performance/singing Quality in musical factor box. As for the reciprocal response model, some variables in this study could be put into the similar group in the reciprocal response model, such as the physiological, cognitive, affective responses in the musical response category.

There were major differences between the model in this study and the other two models. First, I included the visual factors in the model that the other two models didn't have or didn't clearly demonstrate the influence of the visual variables in music preference. It was mainly because that this model was developed based on the audiovisual Xi-Qu and operatic examples and explored how the visual information influenced preference through qualitative interviews, while the other two models were mainly based on the audio examples. However, I argue that the influence of visual information should be included in the models of music preference. The answers to the following questions would help understand the inclusion of visual information in music preference models. Is opera/Xi-Qu music? Is drama the indispensable element of opera/Xi-Qu? If the answer to the two questions were positive, then no doubt visual information should be taken into consideration. It is because we usually watch drama, no matter live performance or recorded live performance. It is possible that we can just appreciate the music

part of Xi-Qu and opera, but Xi-Qu and opera works were incomplete if taking way the visual information. Thus, the visual information would matter in preference for opera/Xi-Qu. If the answers to the two questions were negative, then the consequence would be, taking out opera/Xi-Qu from the music history books and then no longer offering live performance of opera/Xi-Qu since listening to the audio part was enough. Since the latter situations would not possibly happen at least in the recent few decades, visual information should be put into music preference models.

Secondly, I included familiarity variable into the Xi-Qu and opera preference model and put it into "personal factors" category instead of "music factors" category as it was in the reciprocal response model. As aforementioned, in the reciprocal response model, familiarity was put into the "music" box. Since I concerned that familiarity was subjectively perceived instead of the permanent property of music, I would put familiarity into the personal factor to emphasize the subjective feature of this variable. As music preference was complicated and researchers explored this topic from different perspectives, probably currently no model could include all the variables that influence music preference.

The findings pertaining to the preference for Xi-Qu and opera were in accordance with the literature that Chinese music majors liked Western classical music, including opera, more than Xi-Qu (Cai & Huang, 2006). The qualitative findings of this study offered some details regarding the reasons for preference and the factors that helped the development of the music preference. As the findings suggested, formal training exerted strong influence on the development and shaping of the participants' taste and attitudes toward Western vocal works and Chinese Xi-Qu. The participants who had early exposure to Xi-Qu and liked Xi-Qu in childhood found the Xi-Qu singing was problematic because Xi-Qu singing methods were contradicted to

what they studied in schools. Furthermore, evidence also showed that the participants who formerly disliked the Western vocal skills changed their attitudes positively. The findings seemed to support the literature that preference for music could be increased by actual teaching (Baltagi, 2006, Carper, 2001).

The importance of formal training could be further proved by the studies involving Chinese non-music majors that non-music major undergraduates disliked both Western European music and Xi-Qu but preferred the popular music (Bai,2006; Cai & Huang, 2006). In Cai and Huang's (2006) study, the mean preference rating for Xi-Qu was even a little bit higher than Western Opera for the non-music majors, but the music majors preferred Western instrumental music and opera while Xi-Qu and rock music were among the least preferred styles.

To further explore the influence of formal training in Western singing skills on preference, I found that singing art songs by using Western vocal skills had been an audition requirement in the two institutions. To my knowledge, the music schools of higher education in China generally had such an audition requirement for the music students. The music students, regardless their primary instrument, must prepare for audition and study voice during the pre-college years. As the findings of this study showed, the participants at least took one year of private voice lesson while others might study voice for years before entering the college in order to better meet the audition requirement. Furthermore, the undergraduate students must study voice in university for one year as a requirement except for the popular style voice majors and the majority of them were also required to study keyboard skills for at least for one year. Such requirements attached great importance to the Western music and might imply that such skills were part of the core knowledge of the music majors and were crucial in the undergraduate students' future career as musicians or music teachers. Therefore, the participant might be motivated to study voice to

show their musicianship as professional musicians. As the singing of the Western opera usually adopted the Western vocal skills, most of the participants had a sense of familiarity with the operatic examples despite that they didn't know the specific piece at all. The high preference ratings for operatic examples was not just due to the familiarity with the Western vocal skills obtained by formal training, but probably also because of the perceived value of Western singing as implied by the policy and curriculum design of the higher music education in China

Xi-Qu, however, was not considered as important as opera by the participants and the two institutions, as no courses offered to study Xi-Qu professionally like studying the Western vocal skills. Just a few of institutions, such as China Conservatory, required that the music students must sing a folk song or a Xi-Qu piece as an audition requirement. Furthermore, although the universities usually offered Chinese traditional music courses and Chinese music history courses which included the introduction to Xi-Qu, such courses were either just a general review of the history of Xi-Qu or to teach a few pieces of some Xi-Qu styles. Studying Xi-Qu professionally was not a mainstream in music schools of higher education in China.

Although the findings of this study and the literature suggested that formal training had strong influence on the participants' preference, and I assume that it was also possible to help increase the music majors' ability to teach some Xi-Qu styles in schools of various levels, the question is that if the policy could be modified to give Xi-Qu an equal status as Western opera owns in the curriculum of higher education.

The quantitative findings pertaining to music revealed a modest but statistically significant relationship between tempo and preference ($r = .23$, $p < .01$), but the qualitative findings didn't offer enough information to explain the relationship between the two. Only a few of participants gave short comments that they preferred fast tempo. Furthermore, some

participants commented that tempo was not the main factor influencing preference for the musical examples. As the literature suggested, music with fast tempo was more preferred than that with slow tempo (Fung, 1996; LeBlanc, Colman, McGrary, Sherrill, & Malin, 1988; LeBlanc & McCrary, 1983). It was also possible that the audiovisual examples presented abundant audio and visual information that the participants didn't have adequate time to comment on all the music characteristics.

As for the other factors that influencing music preference, the most unexpected finding was that religion played an important role in the perceptions of and preference for the religious works. As mentioned in the "religion" section under the title of "personal factors", three Christian participants had special feelings about "Hebrew Slaves Chorus" that other participants didn't have, such as hearing people's calling for help or feeling harmonious. Two of them said they would increase the preference ratings for this example if they knew in advance about the background information. The relationship between religion and music preference was unexpected because when I was selecting the musical examples for this study, I didn't take the religious features of the examples into account. Furthermore, China is not a religious country although people are free to have religious belief. Thus, I had no idea about how religion would influence one's music preference. The Christian participants told me that many undergraduate students in universities were Christians and some of students' families were Christians for generations. This finding probably would be of importance as it would help the teachers to choose appropriate opera works when facing a student population with diverse religious beliefs.

This study used audiovisual stimuli and the findings suggested that visual information was the important factor in music appreciation process. The findings that the attractiveness of the singers could influence the participants' preference for the video lent support to the literature

(Wapnick, Darrow, Kovacs, & Dalrymple, 1997), meanwhile this study offered the details regarding the standards for judging attractiveness from the perspectives of this group of participants. As the findings suggested, this group of participants generally liked the slim female singer while the female singer who looked over-weighted was less popular. The participants didn't have trouble with the over-weighted male singer in "Rigoletto" who was strong, showing manhood, humorous, and demonstrating good singing skills. Furthermore, the participants were more likely attracted by the singer with moderate facial make-up and whose faces looked clean, while they might dislike the female singers with heavy facial make-up, especially those participants who were not familiar with the types of Xi-Qu facial make-up. As attractiveness of the singers was of the subjective judgment and might be influenced by one's cultural background, this study only offered some preliminary information pertaining to the attractiveness of the singer from the perspectives of these Chinese young music majors. The opinions about the standards for judging the attractiveness of the singers probably need further exploration by investigating people of different cultural background, locations, or age groups.

The findings relating to other visual information were supportive to the literature that the participants were more comfortable with the videos with bright/pleasant colors and active visible movements (Fung, 1998). However, the participants might like the videos not showing bright colors, such as the video "Rigoletto" and "Summertime" that mainly showing brown background color, as the preference ratings of these two pieces were higher than the rest of the examples. Furthermore, some participants liked the white color of "Peach Blossom Fan" but others didn't. The participants' different opinions indicated the diversity in preference for colors. But as the bright color were accepted by the majority of the participants, it is still safe to select videos with bright colors for teaching.

The desire for body movements was evident among the participants, but to what extent the body movement could influence one's preference for music was still not conclusive. By comparing the preference ratings of "Hebrew Slaves Chorus" featuring absence of any body movement and the Xi-Qu work "Zhongkui" featuring active body movement, one may find that body movement was not a strong indicator of preference as the preference rating of the former was higher than the latter. Furthermore, some participants were comfortable with the lack of body movement of "Hebrew Slaves Chorus" because they paid more attention to the expressive singing and unique scenery. Probably such a comparison was not valid as the two examples were of the two different music and acting systems.

By comparing the operatic examples, I found "Hebrew Slaves Chorus" received lower preference rating than that of the two examples showing moderate body movement and active facial expressions. For the Xi-Qu examples, "Story of Stone" and "Peach-blossom Fan" that showed gentle dance movements received higher preference ratings than "Zhongkui" that showed considerable dance movements. It seemed to indicate that too static or too many body movements would be less preferred. But it was too early to make such a conclusion in that the participants judged preference for the musical examples based on multiple factors and body movement was just one of them. Probably the great satisfaction with other elements could compensate for the lack of movements to some extent. The influence of body movement would be clearer if the following variables were well controlled, including singing format, singing tone color, music style, and the amount of body movement, and the types of the body movement such as dance and gestures.

Moreover, the desire for making sense of the context of the song was in accordance with the literature. As the literature suggested, the students preferred the audiovisual presentation of

music to the audio as the visual information could help them understand the lyrics (E. S. Ellis, 2013). As the findings of this study revealed, making sense of context could influence the participants' preference decisions and the emotional responses to the musical examples. These findings suggested that helping the students understand the context of the song was important in Xi-Qu and opera appreciation.

The unexpected finding relating to visual information was the influence of static perspective on music preference. The participants' opinions about the lack of change in perspective in "Flower Duet" were a surprise to me because when I was selecting videos for this study, I didn't think about the changes of perspectives at all. I selected the excerpt "Flower Duet" purposefully because I wanted to show the full view of the stage to examine the influence of the beautiful scenery on music preference. As a result, showing the full stage for too long time prevented the participants from observing the singer's facial expression, so they found it hard to focus their attention. As the findings about the influence of the static perspective in music preference were still limited, probably more studies should be carried out to further explore this topic.

The influence of lyrics on music preference was the least studied area (North & Hargreaves, 2008). As this study didn't control for the meaning of the lyrics, no systematic and comprehensive information could be offered. However, the qualitative findings suggested that the lyrics showing disrespect to women could upset the female participants. As the participant Wu-Ji stated, she didn't want to listen to the musical example selected from "Rigoletto" because the lyrics were talking bad about women. Although she objectively acknowledged the good singing skills of the singer and the overall effect of the video, she just didn't want to listen to it. She also mentioned the moment when she and his classmates watched this video in music

appreciation class in which all the female students were angry about the lyrics of this song while the male students read the lyrics loudly and laughed. It seemed to be wise not to choose examples with gender sensitive lyrics in music appreciation class due to the possibility of offending the targeted gender group. However, Wu-Ji was the only participant who overtly told me about her feelings. The influence of lyrics on music preference is still a new research area that needs further exploration.

The findings that the participants considered Xi-Qu as the music of the older generation went beyond the issue of musical identity, but reflected the prevalent ideology in the music profession in China. Musical identity is the sense of self constructed and maintained by music (MacDonald, Miell, & Hargreaves, 2002). Both opera and Xi-Qu were the classical musical genres that had a long history, so if Xi-Qu was supposed to be the older generation's music, opera should be considered as the music of the old adults too. As the literature revealed, the Chinese undergraduate non-music majors didn't like both opera and Xi-Qu (Cai & Huang, 2006), so the logic should be that the music majors also disliked opera due to the musical identity as the young. But it was not the case as the findings of this study suggested. It was mainly because the fact that there were probably two aspects of the musical identity for the young music majors, the young adults and the professional musicians. As Western classical music was the important component in Chinese music education system, Western classical music, including Western vocal works, were supposed to be the core knowledge possessed by a professional musician. Studying and liking opera music would prove the identity as a musician, although it probably didn't well fit the identity as the young. But the status of Xi-Qu was totally different in that Xi-Qu was not considered the important component in music education system. If the participants knew little about Xi-Qu, it would not threaten their identities as musicians. When the participants told me

that they didn't know or didn't like Xi-Qu, no one felt embarrassed for knowing nothing about this important Chinese musical genre. The underlying factor probably was the dominant Eurocentric ideology that influenced the participants' perceptions of the importance of different musical styles and genres. The literature also showed that the students might like the music of other culture but didn't like the music of their own tradition. Malay students in Singapore were more familiar with Chinese music examples and they preferred the Chinese musical examples to the Malay musical examples (Teo, Hargreaves & Lee, 2008). The researchers attributed the Malay 'students' preference pattern to the Malay students' minority identity. However, in this study, all the participants were of the Han Chinese which was the biggest ethnic group in China, so the outgroup favoritism effect didn't fit in the findings of this study. The findings of this study reflected the influence of the dominant musical style/genre in the music education system on the students' music preference.

The most recent published music education policy by the State Council probably would become a major impetus to the inclusion of Xi-Qu in the higher music education. In September 15, 2015, the Office of the State Council released the *Suggestions for Strengthening and Improving Aesthetic Education* (Office of the State Council, 2015) and suggested that schools of the first through twelfth grades should gradually offer dance, drama, and Xi-Qu courses in addition to the existing music and art lessons. The policy emphasized that the schools should stress the importance of the traditional art forms in regional curriculum and design the teaching content based on the regional culture and traditions. These traditional art forms included Xi-Qu, Chinese choreography, seal-carving (篆刻), and paper-cutting(剪纸). This policy along with the previous published policy, the revised *Standards for Music Curriculum* (Ministry of Education, 2008), provided opportunity for the inclusion of Chinese traditional art forms, including Xi-Qu,

in general music education system meanwhile challenged the existing music teacher training programs. Probably the reform in curriculum of the music programs in higher education would be carried out in the near future to meet the requirement and suggestions of the State Council. A new conservatory opened in 2015 in the South of China announced that the undergraduate program for the regional Xi-Qu style, Yue-Ju, would be offered so that music students will be able to study Yue-Ju professionally in this modern conservatory. It is no doubt a meaningful start and probably more and more music institutions would offer programs of various Xi-Qu styles in future.

Finally, the FaceReader results indicated that the detected emotion "angry" was negatively related to preference ratings and such a relationship showed statistical significance. It was supportive to the FaceReader literature that negative emotions could better indicate preference (De Wijk, Kooijman, Verhoeven, Holthuyzen, & Graaf, 2012,). As discussed in the answers to the question four, no participants reported angry emotion. Probably FaceReader needs to add more emotions in order to meet various research topics and context so that the results would more accurately to indicate the emotional states. The candidate emotions that might be related to music preference studies could be tender, pity, admired, amused, love, relaxed, frustrated, bored, as reported by the participants.

The emotion "happy" didn't show a statistically significant relationship with preference ratings, and the qualitative findings showed that smile might indicate both liking and disliking. The findings were in accordance with the literature that the participants smiled when trying drinks with disliked taste (Danner, Haindl, Joechl, & Duerrschmid, 2014; De Wijk, He, Mensink, Verhoeven, & De Graaf, 2014). Furthermore, the findings of this study were also supportive to the literature that "happy" was positively related to the level of amusement in the video and the

preference for the advertised brand in the video. The literature of facial EMG studies also showed that preference was positively related to the zygomatic activations (smile) (Witvliet & Vrana, 2007) when the participants listened to the sad and happy music. Such contradicted findings possibly were due to the research design. In the latter study, the expressed emotions in the videos were controlled just to show amusement while the tastes of the drinks in the former studies varied. Probably if the expressed emotions in the videos in this study were also controlled to show a single emotion, such as happy or sad, the relationship between emotions and preference could be better explained. In the facial EMG literature, the expressed emotions in music examples were controlled by selecting equal number of examples showing different emotions.

The findings revealed that the participants needed longer time to engage in the music and the context, and responded to the musical examples emotionally. The length of the video was important as many participants attributed to the absence of emotional responses to the short time of the videos. Having emotional responses not only need to make sense of the context, but also need time to gradually engage in the context. The longest video "Peach-Blossom Fan" lasted for about three minutes, but the participants who liked this piece still complained that the video was too short to have deeper emotional response to it. As the participants usually reported, they were about to have emotional responses but the video finished. The participants' reports indicated that probably the longer music videos should be used to examine the relationship between emotional responses as indicated by the facial expressions and music preference. But what will be the ideal length of the videos still need further exploration.

Limitations of the Study

Although there are consistencies among colleges and universities in China as the curriculum for undergraduate music majors have been developed based upon the guidelines of Ministry of Education of PRC, there are also differences may threaten the reliability or validity of this study. Such differences include but not limit to regional cultural background (residents of a certain region may prefer the regional Xi-Qu styles), competency of Chinese traditional music faculty (some of them may not be familiar with some regional Xi-Qu styles), student population, and the prevailing attitudes toward Xi-Qu and Western European opera within the institutional settings.

The major limitation of this study is related to the sample. Although I tried to recruit undergraduate majors with various primary instruments so that diverse opinions would be included, only two Chinese style instrumentalists finally finished data collection. It was mainly because of the participants' own willingness to participate into this study or due to the conflict of school course schedule. Since this sample mainly included the Western style instrumentalists and vocalists, their opinions might not reflect the comprehensive perspectives of the music majors in the two institutions. Follow-up study should be carried out to explore the opinions of the Chinese style instrumentalists.

The unbalanced sample size between the two institutions was also a limitation. The majority of the participants were recruited from school A while only two participants were from school B. It was mainly because of the issues with FaceReader. Almost all the prospective participants in school B were near-sighted so they had to wear glasses. Unlike the participants in school A who all wore contact, the majority of the prospective participants in school B didn't use contact due to the concern of potential harm to eyes. As wearing glasses would affect the

accuracy of FaceReader analysis, I tried to find frameless glasses as FaceReader manual suggested, but such kind of glasses was not available in the city. Thus, finally only two participants who didn't have eye problems finished data collection. As a course instructor in school B taught a Xi-Qu style, the music majors in school B might provide some more different opinions from the participants in school A that didn't have any experience with Xi-Qu at college level. Follow-up studies should be carried out to explore the influence of university course on music preference.

The "personal factors" box only contains familiarity and religious belief so it does not cover all the possible variables that might influence the participants' preference, such as age and gender. This group of participants was of the similar age group and unbalanced geder ratio, so the findings don't offer the relevant information. Future research could address these variables by different research design.

I also concern the researcher's bias. This study involved qualitative interview to collect the participants' opinions about Xi-Qu and opera, therefore, my opinions regarding the value of inclusion of Xi-Qu in music education system might influence the directions of the interview. I tried to avoid the bias by asking the same number of questions about Xi-Qu and opera so that the participants would not be aware of my stance. I also told the participants that I didn't care about which example or style they preferred. After interviewing the first participant, I listened to the recordings and found some evidence of my bias. When I tried to summarize the participant's opinions, I used some words that seemed to be what I expected. Fortunately, the participant corrected my summary and told me about his true opinions. Since then I frequently reflected on the interview process after each interview and questioned myself if I tried to elicit what I wanted instead of the participants' own opinions. During the interviews, I tried to listen to the

participants' opinions instead of summarizing their ideas rashly. If they agreed with my ideas, I would ask them if they were influenced by my opinions. I also asked the same question for several times during the interview process, and if I found the discrepancy in the participants' answers, I would ask the reasons why. These strategies seemed to have good effect in that the participants told me that they expressed their true opinions.

One of the limitations was relating to FaceReader. As I must record the participants' facial expressions, they were told to sit still while watching the musical examples as the FaceReader manual suggested. Some participants reported that they wanted to move with the music but had to give up due to the requirement. The participants probably would have more psychophysiological responses without such a requirement. Hopefully FaceReader could be further improved to allow for more body movements during data collection process.

Implications and Recommendations

The implications and recommendations of this study were mainly related to the suggestions for selecting appropriate videos for Xi-Qu and opera teaching. I have discussed the influence of visual information in the previous section, so I just briefly summarize the suggestions. Secondly, I would briefly discuss the potential of FaceReader in music preference studies.

Xi-Qu and opera works were dramas, so I would recommend that the teachers well address the dramatic characteristics of Xi-Qu and opera. Selecting examples with dramatic effect was important to introduce Xi-Qu and opera into classroom. I suggest that the teacher could try to select some excerpts showing the dramatic moment in which more people involved and interacted, just as the participants in this study suggested, "I want to watch more things in the

video".

To address the students' desire for making sense of the song, giving background information before or after watching and offering simultaneous subtitles to show the lyrics in the video would be strongly recommended. As the participants suggested, selecting the video that includes singers' conversations and singing could indicate the context better. Sometimes conversations would directly tell what was going on than the lyrical singing.

As for which Xi-Qu styles should be chosen for teaching, the recommendations are as follows. First, as the findings revealed, it was easier for the participants to accept the regional Xi-Qu style or the styles of the adjacent geographic locations. As they were more likely to have exposure to the regional styles, the sense of familiarity would help attract their attention. However, I suggested that the teachers might include more Xi-Qu styles in their teaching plans when introducing Xi-Qu to the students, because the students might have different experience with various Xi-Qu styles. Some participants who lived in the South might be familiar with the Northern Xi-Qu styles due the family members' influence. Furthermore, at the college level, the student population might be diverse in that the students might come from various geographic locations. Selecting Xi-Qu styles of different regions could meet the diversity of the student population. Finally, Southern students might like the Northern Xi-Qu styles and vise versa. Introducing the regional Xi-Qu styles only would loss the opportunity to broaden the students' views. The teachers could introduce the regional Xi-Qu styles first, and then guide the students to explore the Xi-Qu styles in other regions. Visual information was as important as audio information in Xi-Qu and opera appreciation. If the teachers try to select Xi-Qu and operatic examples as the teaching materials, they are suggested to pay attention to a range of visual variables. I would suggest selecting videos in which the singers didn't have heavy facial make-up,

or if the singer had heavy facial make-up, choosing the excerpts that didn't show close-up perspective on the singers' faces. For the Xi-Qu examples, the introduction to the types and functions of the facial make-up probably could help Xi-Qu appreciation.

Furthermore, humorous acting and the works with the comedic theme could quickly capture the audience attention. Xi-Qu has developed plenty of humorous Xi-Qu works, so the teachers might consider selecting some comedic examples. The diversity of the students' preference for comedy and tragedy should also be taken into consideration by selecting the examples showing various contexts and express various emotions.

As for the implications relating to Face-Reader, I recommended that researchers may try to use FaceReader to explore the relationship between emotions as expressed by facial expressions and music preference. Exploring more measures in music studies is important as researchers endeavored to obtain objective data and findings. FaceReader might have a potential in music studies. Furthermore, I would suggest that FaceReader could be further improved to meet various research context and topics by adding some more emotional states, such as the emotions as reported by the participants, including relaxed, amused, admired, love, pity, tender, frustrated, and bored,

Recommendations for Future Research

The findings of this study suggested that several research areas probably would be of the researchers' interest. First, researchers could further explore the participants' preference for various Xi-Qu and opera styles. As this study only used the limited number of examples, the features of Xi-Qu and opera were not completely represented. I used two examples that composed by Verdi, but the preference ratings were quite different. Researchers may use multiple

examples of the same composer, or a number of pieces of the same Xi-Qu style, or choosing various pieces of the same role (all female or all male) within one style to explore the preference for Xi-Qu and opera in depth.

The influence of lyrics on music preference was the least studied area and also needs further exploration. Songs and instrumental music are equally important in music education of various levels. As the lyrics might seriously affect music appreciation as indicated by this study, researchers should further explore this research area in order to offer useful information for song selection in music classes.

The influence of religion on music preference should be further examined as this study only involved three Christian participants. Religion was the least study area in music preference studies. As the students might have various religion backgrounds, the knowledge about the influence of religion would be beneficial.

Researcher may use FaceReader in music preference studies with the more controlled research design. As discussed in the previous sections, using music videos that expressed the same type of emotion probably would offer some consistent findings. The relationship between "happy" and preference was still undecided, so selecting music videos that all express happy emotion probably could better explain the meaning of smile and how smile was related to preference.

The influence of the change of perspectives would be a topic for future examination. As the findings suggested, static long shot resulted in lack of interest in "Flower Duet". As music videos were commonly used in classroom, the information about the perspective changes would provide practical and useful information for video selection in music classroom.

The influence of lyrics on music preference is still a new research area that needs further

exploration. As songs were important teaching area in music education, exploring the influence of lyrics would be important to offer relevant information.

The findings of this study only provided preliminary information about these suggested research areas. As this study only involved twenty-seven Chinese undergraduate music majors, the findings, recommendations, and suggestions might not be readily applicable to other institutions in China or in the Western countries. More studies should be carried out to further explore the topic through examining the preference of people of various cultural backgrounds and music of different styles/genres

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Appendix A

Questionnaire (Simplified Chinese Version)

录像 1

1, 根据喜欢程度选择数字, 在所选的数字上划圈或打对号

非常不喜欢			中立			非常喜欢
1	2	3	4	5	6	7

2, 根据熟悉程度选择数字, 在所选的数字上划圈或打对号

不熟悉			中立			很熟悉
1	2	3	4	5	6	7

3, 挑选你最喜欢元素(可不选或多选)

A 唱腔
B 舞蹈
C 表演
D 伴奏器乐音乐
E 服装
F 面部化妆
G 舞台布置
其他:

4, 挑选你最不喜欢元素(可不选或多选)

A 唱腔
B 舞蹈
C 表演
D 伴奏器乐音乐
E 服装
F 面部化妆
G 舞台布置
其他:

请回答以下问题 (可在合适选项上打勾或画圈)

1 专业方向

A 音乐表演
B 音乐教育
C 作曲
D 其他

2 主修

A 中国乐器 (请具体写出乐器)
B 西洋乐器 (请具体写出乐器)
C 流行音乐唱法
D 西洋声乐
E 民族声乐

3 学习主修乐器(包括声乐)有多长时间?

4 除主修外还学习过那些器乐或声乐技巧? 有多长时间?

5 性别: 女 男

6 民族:

7 籍贯:

8 年龄:

9 年级:

Appendix B

Questionnaire (Simplified English Version)

Video Number 1

1, Circle the number that best represent your preference for this video

Strongly dislike			Neutral			Strongly like
1	2	3	4	5	6	7

2, Circle the number that best represent your familiarity with this video

Not familiar at all			Neutral			Very Familiar
1	2	3	4	5	6	7

3, Select the element(s) you like the most (you may select multiple elements or none)

A Singing
B Dancing
C Acting
D Accompanying instrumental music,
E Costumes
F Facial make-up
G Scenery for the play
Other:

4, Select the element(s) you dislike the most (you may select multiple elements or none)

A Singing,
B Dancing
C Acting
D Accompanying instrumental music,
E Costumes
F Facial make-up
G Scenery for the play
Other:

Answer the following questions.

1 Major

A Music performance
B Music education
C Composition
D Other

2 Primary Instrument(s)

A Chinese instrument (specify)
B Western instrument (specify)
C Popular music singing skills
D Western vocal skills
D Chinese vocal skills

3 Years of studying primary instrument(s).

4 Years of studying other instrument(s) in addition to primary instrument(s), including singing.

5 Gender Female Male

6 Ethnicity

7 Place of Birth

8 Age

9 Classification

Appendix C

Results of the Qualitative Coding

Model of Xi-Qu and Opera Preference

- Personal Factors
  - Familiarity
    - Different criteria for rating familiarity:
      - Absolute criteria (AC): familiarity with piece
      - Relative criteria (RC): familiarity with genre/style
      - Mixture of absolute and relative criteria
        - AC for all opera + RC for all Xi-Qu
        - AC for some operatic examples + RC for some Xi-Qu examples
    - Ways of getting familiar with Xi-Qu and opera
      - Familiarity gained within institution
        - General education (1-12 grades)
          - Xi-Qu
            - Music class (1-9 grades)
              - Negative effect:
                - False information
                - Negative attitudes
              - Positive effect:
                - Knowing concepts
            - Chinese class (7-9 grades)
              - Good impression about painted-face
            - School contest (1-6 grades)
              - Good impression about painted-face
          - Opera
            - Music class (10-12 grades)
              - Gaining familiarity with opera
        - Higher education
          - Xi-Qu
            - Singing Kun-Qu in a course
            - knowing peers' Xi-Qu practice
          - Opera
            - One-year required voice training
            - Watching opera in a course
            - Peer's singing on stage
      - Familiarity gained outside of institution

- With family members
  - Xi-Qu
    - Watching television
      - Passive watching
        - "Blank-minded"
      - Active watching:
        - Enjoying singing
        - Enjoying acting
        - Enjoying story
        - Emotional response
      - Grandparents' Strategies
        - Sang at home
        - Playing recordings
        - Telling stories
    - Community activity
      - Spring Festival period
        - With focused attention
          - Crying
        - Without focused attention
          - Plying with peers
          - Eating
        - Reasons for lack of interest
          - No lyrics offered
    - Wedding reception
      - Showing "changing face"
    - Family gathering in restaurant
      - Showing "changing face"
    - Performance in public park
      - "Forced" by grandparents
- Without family members
  - Xi-Qu
    - Switching television channels
    - Hearing in park, or on street
    - Hearing neighbor's radio
  - Opera
    - Encountering on television
    - Taking private Western voice lessons
    - Finding singing materials online

Effect of familiarity on music preference

- Watching television
  - With family members
    - Positive effect
      - Neutral or prefer
      - High rating for familiar style
      - Positive opinions
        - "Root of Chinese culture"

- Need to include in school
- Without family members
  - Negative effect
    - Increasingly disliking
    - Stereotyped idea
- Participation in community activities
  - Association with happy memory
  - Preference for familiar style/genre
- Education
  - General education
    - Xi-Qu
      - Neutral
      - Negative: Boring
    - Opera
      - Positive attitudes
        - “Classical”
      - Negative effect
        - Musical = opera
  - Higher education
    - Xi-Qu
      - Offering Xi-Qu content
        - Acceptance
          - “National heritage”
          - High preference ratings
        - Rejection
          - Admiring Western singing
          - Neutral or low ratings
      - No Xi-Qu content
        - Rejection
          - Not scientific
          - Western music is better
          - Uncomfortable singing
        - Inconsistent attitudes
          - “National quintessence”
          - “Disgusting” singing
    - Opera
      - Strongly positive
        - Comfortable singing
        - “Scientific” singing skills
        - Liking for no reasons
        - High preference ratings
- Internet
  - Self-directed
  - Major ways of finding useful materials
  - Prevalent use of cell-phone
- Peers

- Weak influence on both genres
- Familiarity and the Dimensions of Appreciation
  - Unfamiliar ----Perceptual appreciation
    - "Good to the ear"
    - "Uncomfortable pronunciation"
    - Pretty costumes
    - "Piecing singing"
    - "Simple Scenery"
  - Familiar--- Perceptual + Rational appreciation
    - Good singing methods
      - "Open singing organs"
      - "Fluent air flowing"
    - Matches between color and emotion
    - Matches between costumes and emotion
    - Not traditional acting
    - Meaning of face colors (painted-face)
- Religious belief
  - Different reaction to religious piece
    - Christian participants
      - Hearing "Calling for help"
      - Familiar with singing harmony in church
      - Curiosity in background information
      - Increasing preference ratings
    - Non-Christian
      - Good singing skills
      - Unique scenery
      - Static perspectives

- Cultural and environmental factors
  - Influence of Han-Chinese culture
    - Uncomfortable with exposing women's bodies
    - Awareness of Chinese identity
  - Influence of regional culture
    - Inconsistent preference
      - Comfortable with hometown's Xi-Qu styles
      - Accepting unfamiliar Xi-Qu style
      - Disliking hometown's Xi-Qu styles
    - Reasons for inconsistency
      - Influence of family members' preference
      - Diversity in television programs
    - Factors counterbalancing cultural influence
      - Musical identity
        - Identity as young adults
          - Xi-Qu = music of old people
          - Popular music = Young adults' music
        - Identity as musician
          - Western music/opera = musician

Xi-Qu = irrelevant to musician

- Influence of visual information
  - Acting
    - Humorous acting
      - Majority
        - Preference for comedy
      - Minority
        - Accepting comedy and tragedy
      - Single case
        - Disliking humorous works
    - Body movement
      - More is better
      - Influence of familiarity
        - Having experience in choir
          - Accepting motionless acting
        - Without experience in choir
          - Boring motionless acting
    - Interaction among the singers
      - Desire for more people on stage
      - More interactions among singers
    - Showing emotional states explicitly
      - Liking expressing emotions clearly
      - Disliking implicit emotions
  - Attractiveness of singers
    - Attractiveness of the male singers
      - Manhood
      - Good personality
      - Good singing skills
    - Attractiveness of the female singers
      - Preference for slim singers
      - Preference for good facial appearance
  - Facial make-up
    - Diverse opinions about heavy facial make-up
      - Preference for painted-face
      - Liking “natural” and “clean” faces
      - Disliking painted-face
      - Disliking heavy facial make-up
    - Influence of familiarity
      - Having experience with painted-face: liking
      - Without experience with painted-face: disliking
  - Costumes
    - Xi-Qu
      - Delicate and refined
      - Fitting personality
    - Opera
      - Contextual fit

- The color of the video
  - Preference for "happy" color: green pink, yellow, red
  - Disliking white color = unfortunate event
  - Influence of personal preference
    - Liking white in general
    - Disliking yellow in general
- Perspectives
  - Preference for changes in perspectives
  - Disliking static perspective
- Scenery
  - Preference for natural scenery
  - Preference for Unique scenery
  - Preference for colorful scenery
  - Preference for scenery relating to lyrics
  - Disliking simple scenery
  - Disliking "fake" Xi-Qu scenery

- Music factors
  - Singing
    - Quality of the singing skills
      - Preference for good skills
      - Good singing skills ≠ preference
        - Poor visual effect
          - Static perspective
          - Exposing women's bodies
          - Heavy facial make-up
    - Preference for harmonic singing
      - Comfortable ending (Summertime)
      - Good singing effect (Hebrew Slaves Chorus)
      - Singing tone color
        - Preference for male's tone color
        - Disliking piercing female voice
        - Accepting Young male role's voice in Xi-Qu
  - Insturmental music
    - Influence of primary instrument
      - Liking the music played by one's main instrument
    - Influence of familiarity
      - Liking regional instrumental music
      - Liking instrumental music ≠ preference
    - Balance between volumes of singing and instrumental music
    - Matches between expressed emotion and instrumentation
    - Diversity in opinions

- Musical response
  - Making sense of the context
  - Affective response
    - Preference decision and behavioral prediction
      - Prefer: repeated watching/listening

- Not prefer: Never watching again
- Neutral: passive watching in future

Emotional response

- Emotional response to liked example
  - No emotions
  - Engaged emotions
    - Induced emotion = expressed emotion
    - Induced emotion ≠ expressed emotion
  - Disengaged emotions
    - State of mind blocking
      - "Blank mind"
    - Induced emotion ≠ expressed emotion
- Reasons for having emotional response
  - Acting
  - Music
  - Making sense
  - Length of the musical example
    - Too short to have emotional response
    - Subjectively perceived length
- Diversity in emotional response
  - Different emotional response to the same piece

Psychophysiological response

- For liked music
- For disliked music

Appendix D

IRB Approval Letter

USF
UNIVERSITY OF
SOUTH FLORIDA

RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-7091

May 21, 2015

Hong Chen
School of Music
Tampa, FL 33613

RE: **Expedited Approval for Initial Review**
IRB#: Pro00022131
Title: Preference of Chinese Undergraduate Music Majors for Chinese Xi-Qu and Western Opera

Study Approval Period: 5/20/2015 to 5/20/2016

Dear Ms. Chen:

On 5/20/2015, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents outlined below.

Approved Item(s):
Protocol Document(s):
protocol.doc

Consent/Assent Document(s)*:
Consent form Hong Chen.pdf

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s).

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

(6) Collection of data from voice, video, digital, or image recordings made for research purposes.

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John A Schinka, Ph.D.

John Schinka, Ph.D., Chairperson
USF Institutional Review Board