

**THE FLOWING MATERIALITY OF CRYSTAL: A GLOBAL COMMODITY CHAIN  
OF FENGSHUI OBJECTS FROM BRAZIL, CHINA TO TAIWAN**

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**The Flowing Materiality of Crystal: a Global Commodity Chain of *Fengshui* Objects from  
Brazil, China to Taiwan**

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After the 1990s, one type of *fengshui* object became extremely popular in Taiwan: crystals. A diversity of crystal products, including crystal points, crystal balls, and amethyst geodes, became hot commodities and earned their *fengshui* meanings. However, these *fengshui* objects did not exist in Taiwan before the 1990s, and they are all from Latin America, Africa, India or other foreign sources.

Inspired by Appadurai's "the social life of things" (1986) and Kopytoff's "the biography of things (1986)". This thesis will reveal the cultural and historical meaning of the Taiwanese crystal *fengshui* objects embedded in a network of global commodity chains. First, the decline of Taiwan's jewelry processing industry led the businessmen to turn to invest in China and search for potentially beneficial minerals from the globe. For example, the buyers purchased crystal materials in Brazil, processed them in China, and sold them in Taiwan. At the same time, this global commodity chain turned Taiwan's role from jewelry processing factories to jewelry consumption. Second, it indicates the modernization of Taiwan's society. Modern scientific education has drawn scientific conceptions into Taiwanese folk cosmology. This challenges the traditional concept of *qi* and force Taiwanese *fengshui* consultants to reinterpret the core concept of their professional knowledge and absorb crystals into their materials.

In summary, the crystal *fengshui* commodities not only indicate globalization's impacts on Taiwanese folk beliefs, they also embody the adapting process of "glocalization".

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## 1.0 INTRODUCTION

### Say Hello to Maurice Freedman

Maurice Freedman, the first anthropologist to study *fengshui* customs in Hong Kong in the 1960s, may never think of how the Taiwanese would change their ways of practicing *fengshui* fifty years later. If he had a chance to visit Taiwan, he would hardly expect to find that a sort of mineral, crystal, from South America has become the most popular *fengshui* object in contemporary Taiwan and other pan-Chinese societies.

He may observe that crystals have been treated as *fengshui* objects for bringing good fortune as granted by contemporary Taiwanese. This material culture which covers all sorts of minerals could be called *shuijin* (crystal) in Mandarin Chinese, and includes material such as quartz, amethyst, geode, and tourmaline. There are over 1,000 crystal shops throughout Taiwan Island and they sell crystals for crystal collectors and *fengshui* practitioners. On every weekend, there are also over 50 stalls grouped in the Taipei Holiday Jade Market selling crystals to customers passing by.

It is pretty easy to find an amethyst geode or a crystal ball on the cash desk of a restaurant or a cloth shop. People would tell Freedman that the amethyst geode has the function of agglomerating *caiqi* (the energy bringing prosperity). The Taiwanese would also tell him that he should choose an amethyst geode with a deeper pit inside because it may be better for accumulating the prosperity energy.

In terms of linguistics, Freedman may also notice that people use the term “*nengliang*” (energy) or “*cichang*” (magnetic field) to replace the traditional term “*qi*”, which is a term important in his ethnography to interpret why *fengshui* works or why crystal functions for bringing good luck. The Taiwanese would say that crystal has energy inside; therefore, it is functional to *fengshui*.

Many Taiwanese also like to wear jewelry accessories made of crystal. Some people believe that if they wear a bracelet made of rose quartz, it may bring him or her some opportunities to meet their future spouse or build good social relationships with people. If you wear a necklace made of titanium rutile quartz, it will bring you future prosperity. The Taiwanese would tell Freedman that people believe crystals have these functions according to their belief in *fengshui*.

On a 10:30 pm, on a cable TV program, two female hosts and one *fengshui* expert were visiting a singer’s apartment in Taipei. The *fengshui* expert was analyzing the composition of the singer’s apartment and explaining why she recently had some bothersome issues. The *fengshui* expert was also suggesting that the singer put out an array of seven small crystal balls to resolve the issues caused by bad *fengshui* inside of the house. This recommendation made the crystal shops sell more of the products which were broadcasted by the program.

I wonder what questions Freedman would ask if he could come to Taiwan to continue his study of *fengshui*. How would he deal with such a material “crystal” in his ethnography?

In 2002, I was conducting my fieldwork for my master’s degree dissertation associated with *fengshui* issues. During that period, I had opportunities to meet some informants who ran crystal shops and sold crystal commodities as *fengshui* products. At the same time, I also noticed that a lot of people surrounding me used crystals for *fengshui*. One day, I asked one *fengshui* specialist,

Mr. Yuan, who taught me *fengshui* knowledge and techniques and had many clients who ran crystal shops in Taipei, a question about this phenomenon:

SHS: There are many people that have asked you about how to use crystal. How do crystals work for *fengshui*?

Mr. Yuan: Actually, my master did not teach me anything about crystal when I learned *fengshui* with him. Before (the 1980s), there was no application of crystal in *fengshui* at all. It is totally new. We can use the theories of *qi* and the five elements to interpret its function. However, crystal was not used by our ancestors or senior *fengshui* masters.

Yuan's answer reminded me that the use of crystal for *fengshui* is definitely an "invented tradition". I also found when I interviewed my informants running crystal shops, that all these crystals for *fengshui* were not local but from Brazil, Uruguay, or other countries in South America or Africa, and were processed in China.

"Why do Taiwanese *fengshui* practitioners like to use foreign minerals?" and "how do these foreign minerals become *fengshui* commodities sold in Taiwan?" are questions that came to my mind after I realized a global commodity chain (GCC) existed behind the commodities and supported the demand of Taiwan's market. However, I did not have the capability to deal with these ethnographical data and the relevant anthropological questions during that period. This was how I met crystals and I just left those questions there until I started my Ph.D. program.

In 2009, through my Taiwanese informants' assistance, I got a chance to visit a factory processing crystals in China during my first pre-dissertation fieldwork. In that factory run by the Qian family from Taiwan, I observed that Chinese workers treated these crystals totally differently than the Taiwanese. These workers were just laborers who emotionlessly dealt with the raw minerals in front of them. They may hear about how the Taiwanese use what they

produce, but they have had no chance to consume them with their limited salaries. I also observed a giant wholesale crystal market, Liwan Plaza, located at the center of Guangzhou City, and all kinds of semi-manufactured crystal products or sculptures were waiting for Taiwanese businessmen's purchase. During this fieldwork, I was also informed that there were buyers from Taiwan and China conducting purchases with local miners and middlemen in South America and Africa.

In my formal dissertation fieldwork in 2012, I conducted participant observations in multiple crystal mines. Miners' attitudes towards crystals were different when compared with the Chinese and the Taiwanese. I noticed that miners in the middle of Brazil were pretty satisfied with the income from mining crystal. Before, the Taiwanese were their main buyers. Presently, however, the Chinese have substituted for the Taiwanese's position. In addition, many local landscapes' changes and Brazilian's attitudes towards crystals are all tied with Taiwanese *fengshui* custom.

It is obvious that we cannot merely use *fengshui* customs to explain contemporary Taiwanese uses of crystals. Behind this cultural behavior, there is a giant economic and social network connecting goods, places, and people. This network is shaped by countless commodity chains crossing national borders. Crystals travel on these chains and have their own stories. The travel stories of crystals are about their interaction with people who have different roles on this GCC. It corresponds to the concepts of "the social life of things" by Appadurai (1986) or "the biography of things" by Kopytoff (1986). These crystals' social lives and biographies will provide a new angle by which to understand Taiwanese *fengshui* practice and how it links with a global framework.

This is a dissertation about crystal's materiality along a GCC, and I focus on how a new material becomes a *fengshui* commodity through its transnational travel. This dissertation seeks to answer: How do foreign crystals from Brazil become Taiwanese *fengshui* commodities? Behind this, there is a GCC in which the raw crystal from Brazil, processed in factories located in China, is then sold to Taiwan. This phenomenon raises the following questions: How do people in different locations along this commodity chain interact with crystals and create its symbolic meaning? How did Taiwanese *fengshui* culture and its market construct a GCC of crystal products? How does this GCC commercialize *fengshui* practice in Taiwan and China? How does the 'consumption' of a stone assumed to bring good luck at the market in Taiwan interlink with social issues in China and Brazil? How does the materiality of crystal epitomize the social networks and issues in each location?

## **1.1 MATERIALITY, GLOCALIZATION AND GLOBAL COMMODITY CHAIN, AND FENGSHUI**

In order to answer the above questions, this dissertation has three theoretical concerns: the materiality on a global scale, the glocalization on a GCC, and the changes of *fengshui* practice. I will reveal the interplay between the four levels of meaning: meaning shaped by people's interaction with the objects, meaning shaped by market and media industries, meaning shaped by *fengshui* professionals, and the meaning shaped by consumers of crystals in daily practice. My analysis illuminates some of the effects of structural cultural forces on this particular commodity chain, mass media and *fengshui* professionals. I also narrate the effect of external economic forces such as international economics, tariff, and trade treaties. I indicate that

these forces intertwine and influence the outcome for all participants along the GCC of crystal *fengshui* objects.

### **The Flowing Materiality of Crystal on a Global Commodity Chain**

“Materiality” is the first theoretical concern of this thesis since I will focus on interpreting the cultural practice surrounding crystals. Nicole Boivin claims that materiality is used to emphasize the physicality of the material world – the fact that it has dimensions, that it resists and constrains, and that it offers possibilities for the human agent (or organism) by the virtue of a set of physical properties (2008: 26). Maurice Godelier distinguishes five kinds of materiality, depending on the manner and extent to which human beings are implicated in their formation. First is that part of nature which is wholly untouched by human activity; secondly there is the part that has been changed on account of the presence of humans, but indirectly and unintentionally; the third is the part that has been intentionally transformed by human beings and that depends upon their attention and energy for its preproduction; the fourth part comprises materials that have been fashioned into instruments such as tools and weapons; and the fifth may be identified with what we would conventionally call the ‘built environment’ – houses, shelters, monuments, and the like (Godelier 1986: 4-5). Godelier’s classification is based on his concern of proposing a materialistic interpretation of how human culture transforms nature. However, this approach overlooks how a material’s physical features influence its cultural applications and how a local culture may change to apply a foreign material by exterior factors.

Chris Tilley and Tim Ingold have similar concerns and both stress the perception of material in discussing materiality. Tilley in his *The Materiality of Stone: Exploration in Landscape Phenomenology* (2004), claims a phenomenological approach to studying materiality

and stresses the importance of human perception to landscapes' material features in religious sites. Ingold also emphasizes the importance of discussing the embodying process when anthropologists study in the interaction between materials and subjects (2011: 171).

Based on the study of consumption, Daniel Miller treats materiality as a dialectical process involving the co-production of subjects and objects (1987, 2005), and is more concerned with the general notion that humans engage with the things of the world as conscious agents, and are themselves shaped by experiences. Miller's approach to studying materiality includes the concept of objectification, which is based on his reflection of Hegel's, Marx's, Munn's, and Simmel's ideas of the interaction between subjects and objects, and transcends the discussion of physical properties. In Miller's view, commodity is constructed by systems of social relations, production, economic exchange, and subjects' cultural imagination. Commodity in consumption represents not merely a materialism control on humans, but also a process of human endless objectification and reappropriation of things (1987: 192).

Miller's studies become more inspiring when consumption becomes the most dominating mechanism by which connect subjects and objects, and materiality represents this dialectical relationship. Janet Borgerson (2005) claims that Miller's dialectic approach of studying materiality enriches the study of consumers and consumption, since his theory of materiality emerges from Hegel's notion of dialectic and focuses upon the creation of institutionalized embodied subjectivities within the organization. Furthermore, Miller's theory of materiality stresses the importance of the agency of subjects and objects, and it helps to decode the dialectical relationship constructed between consumers and commodities.

Compared to Miller's research interests of the connection between materiality, commodity and consumption, anthropologists in the volume *Materiality*, which is edited by

Daniel Miller as well, apply the idea of materiality to discuss the interaction between subjects and objects in different categories, such as artwork for economic exchange (Myers: 2005), religious healing (Engelke, 2005), and financial practice (Maurer, 2005; Miyazaki, 2005). These works remind us that the effects and constraints followed by objects in cultural and social practice, and many theoretical tools, such as commoditization, cognition and classification, all need a concern of materiality.

Materiality has also been noticed in the fields of religious studies and STS (science, technology and societies). To scholars in these fields, their concerns transcend the category of commodity, and materiality becomes a methodology by which to illustrate the material performance of different categories. For example, David Morgan, in *Religion and Material Culture: The Matter of Belief*, claims that forms of materiality—sensations, things, and performance—are a matrix in which belief happens as touching and seeing, hearing and tasting, feeling and emotion, as will and action, as imagination and intuition (2010: 8). He also claims that materiality is a compelling register by which to examine beliefs, because feeling, acting, interacting, and sensation embody human relations to the powers whose invocations structures social life (ibid.: 8). That is to say, discussing materiality leads the religious scholars to notice the fundamental material base for religious practices and religious effects on material performance. Religious objects are not only symbolic representatives, but also a media with which to bring physical or emotional experiences in a religious context embedded in a more complicated society. For example, the materiality of a deity's statue waiting for religious practitioners' consumption in Vietnam transcends the sacred/profane objects and could indicate a nexus of traditional deities' images, craftsmans' understanding of religion, and people's interactions with statues in their daily lives ( Kendall, Tâm and Hu'o'ng, 2010). Similar to this,

Stanley Tambiah's research on Thailand's amulets also indicates a transformation from forest recluse saints' charisma to concrete metal amulets in which the amulets not only objectify the centrality of asceticism to Buddhist monks as a path to liberation, wisdom, and compassionated "detached action", but also as the centrality of "merit making" for lay men, whose power enables access to the consumption of goods and affirms their merit (1984: 343).

Scholars in the field of STS encounter more issues following the development of science and technology in a contemporary world, and expect to attract more attention to the dialectical relationship between technology and human. Leonardi (2012), Faulkner and Runde (2012) all claim the importance of "sociomateriality" in the research of STS in order to reinforce that social practice shapes the materiality of a technology and its effects. Human intentions are constructing/constructed by technology, and the development of technology will bring more complicated social relationships through its materiality. For example, the development of communication technology brings people to interact in a virtual space as well as change the relationship between identity and space (Eknbia and Nardi, 2012). Furthermore, in contrast to the anthropological microscopic view to the interplay between subject and object, STS, in a macroscopic stands, is more concerned about the "socio-technical-system" to discuss the interdependence of "social system" and "technological system". In this example, materiality refers to the properties of a technology that are used in various ways to support various tasks in a society's technical subsystem (Lenoradi 2012: 40-41). For example, floral businessmen in North Europe developed better refrigerated transport technologies in order to maintain the freshness of flowers (Ziegar, 2007); or farmers and Jesuit missionaries in Madagascar developed better agricultural technology in order to deal with the materiality of rice seeds (Glover, 2011) .

All previous research related to materiality contributes to discussing “the materiality of crystal” in this thesis. Crystal has been commonly applied around the world in human history. From archeological records, Mayan culture (Brady and Pruffer, 1999) and the Mediterranean (Evans 1976; Plantzos 1997) both found tools made of crystal. Stewart and Strathern state that crystal is treated as a spiritual gift from the deity Payuno Iwa and used in ritual contexts in Papua New Guinea (2002: 108). McClean (2012) notices that crystal is well used in spiritual healing in contemporary England, and it is influenced by the import of Hindu yoga.

In fact, crystal is an ambiguous term even though it is a term that we all use very often to address minerals. In general English speaking, according to the Merriam-Webster Dictionary, crystal is defined as

- 1:** quartz that is transparent or nearly so and that is either colorless or only slightly tinged
- 2 :** something resembling crystal in transparency and colorlessness
- 3:** a body that is formed by the solidification of a chemical element, a compound, or a mixture and has a regularly repeating internal arrangement of its atoms and often external plane faces
- 4:** a clear colorless glass of superior quality; *also* : objects or ware of such glass
- 5:** the glass or transparent plastic cover over a watch or clock dial

These definitions have indicated that the linguistic uses of “crystal” imply some material and visual characteristics. However, the reality is that “crystal” in English, “*shuijin*” in Mandarin Chinese, or “*crystal*” in Portuguese is not a definite term based on modern mineralogy. In contrast, the use of this term already implies an understanding of minerals based on ethno-mineralogy, or folk mineralogy, and knowledge of mineral’s materiality based on local contexts. In this dissertation, I mainly focus on quartz family minerals used for crystal *fengshui* objects, including white quartz, green phantom quartz (green chlorite quartz), amethyst, rose quartz,

rutilated quartz and amethyst geode. These minerals' main ingredient is silicon dioxide (SiO<sub>2</sub>) but each has its own characteristics of appearance.

Based on people's interaction with them in different occasions and areas, mining, processing, and consumption respectively interact with crystals in different ways and construct different forms of materiality. In my opinion, we need to expand the concept of "materiality" and make its discussion more contextualized. This is to treat materiality as what we need to observe in research and study how the form of material culture presents itself or how the form changes due to the dynamic relationship between subjects and objects. This approach is inspired by the book, *Materiality and Organizing: Social Interaction in a Technological World* in which multiple scholars argue to use the concept of "socio-materiality" to research the changing forms of social interaction following the development of communication technology, especially for mobile technology and the internet. Pail M. Leonardi claims that the concept of social material practice is akin to what socio-technical system theorists referred to as the "technical subsystem" of an organization, or the way people's tasks shape and are shaped by their use of machines (2012: 38-40). He defines "sociomateriality" as: enactment of a particular set of activities that meld materiality with institutions, norms, discourses, and all other phenomena we typically define as "social." This idea corresponds to Miller's "dialect" of materiality and stresses the shaping/reshaping process between subjects and objects from a broader institutional perspective.

However, the forms of social interaction vary with its actors' institutional background, purposes, and other factors. Thus, in this dissertation, I argue that we should further refine the theoretical tool of materiality and focus on the four forms of materiality of crystal: economic materiality, social materiality, symbolic materiality, and ritual materiality. This strategy stresses that crystal is not just a concept in each category, but a concrete material for the interaction

between groups. It also admits that the inter-subjective agency between people and crystals on a GCC and the change of crystal's shape in this chain have linguistic foundation, economic value, social function, symbolic implication, and ritual significances. All these contribute to crystals' different forms of materiality. The concern of materiality will penetrate the whole thesis, but the theoretical discussion will be presented in Chapter 7.

### **The Glocalization on a Global Commodity Chain**

The second concern of this dissertation research is the dynamic and dialectical relationship between the global and the local. Most social scientific studies of globalization focus on hegemonic influences within cultural diffusion such as World System Theory (Robertson 1992; Wallerstein 1974), or the receiver's reaction to cultural transmission, such as localization, reterritorialization, and disjunction (Miller 1995; Watson 1997; Appadurai 1990). Anthropologists' studies of globalization and global business have reminded us that it is not only a process of homogenization. Oppositely, local culture's responses to globalization or items from around the world all indicate a tendency of developing heterogeneities based on local contexts. In this context, the notion of "glocalization" developed by Roland Robertson (1995) provides a useful framework to view what happened at the local level within a global context. He argues against the tendency to perceive globalization as involving only large-scale macro-social processes, which neglects how they are localized. In other words, this process always takes place in some locality, while at the same time the local is (re)produced in the courses of globalization. The local contains much that is global, while the latter is increasingly penetrated and reshaped by many locals (Salazar, 2005: 630). This framework does not presuppose the opposition of

globalization and localization but their simultaneous occurrence. As Shinji Yamashita claims, in terms of glocalization, globalization is not a unidirectional homogenizing process, but a dual process of hybridization. That is to say, localization is viewed as a process which is caused by globalization (2003: 6)

Following this academic trend, Hopkins and Wallerstein (1986) and Collins (2000) suggest that studying GCCs are useful to trace the connections among complicated production and distribution systems and to organize information on processes that cross national boundaries. Collins (2000: 98) also argues that commodity chain analysis offers a means of moving beyond models of local communities connected to abstract forces. Anthropological research following this approach has offered an understanding of specific social relationships that exists within the distance between the points of production and consumption (Taussig 1980; Mintz, 1985; Korzeniewicz and William 1994; Collins 2000). For example, Zielger (2007) stresses the importance of middlemen enterprises on a GCC. Her ethnography, *Favored Flowers: Cultures and Economy in a Global System*, focuses on the complex middle sector of the GCC of fresh-cut flowers, including: exporters, importers, wholesalers, and retailers. She reveals the dynamic nature of the response to uncontrollable structural changes and to alterations in growing and consuming practices. Their actions send social, cultural, and economic waves back and forth along the chain and constantly alter this system of provision (ibid.: 6). Otherwise, she also focuses on the role of the consumer on the fresh-cut flowers GCC and stresses those consumers' interests and preferences are communicated in a market and how they influence what is produced (ibid.:7).

Anthropological research of globalization/glocalization requires a more dynamic view and multi-site ethnography because GCCs have woven the world into a complex web (Marcus

1995, Bestor 2001). By reflecting the world system paradigm, the research on GCC is proposed as a solution to provide a way to map and analyze the international division of labor; commodity chains are tools that enable us to study the operation of global capitalism beyond the territorial confines of a national economy (Bair 2005: 156). By focusing on the global life history of the crystal *fengshui* commodity, this project seeks to understand how the totality of relationships that constitutes overlapping and interlocking commodity chains reflects core-periphery relations which are determined by particular mixes of activities engendered by the struggle over the benefits of the world division of labor and consumption (Schmitz and Knorringa 2000: 178-179; Bair 2005: 171).

Studying materiality on a GCC stresses to the examination of the construction of materiality and the dialectical relationship between subjects and objects on a multi-sited research framework. Previous research tends more to discuss one location's responses to globalization. However, on a GCC which has more complicated labor division, sources of raw material, and flows of capital, any change that happens in one location would bring direct/indirect influence to other locations on the same commodity chain. That is to say, anthropologists should draw more sites which are connected with each other into a study of materiality in order to present a dynamic and organic vision.

Crystals, especially crystal *fengshui* products, are a suitable commodity for tracing the interaction of culture and economy on a GCC. Crystals are unlike other frequently studied commodities such as food and clothing which have direct utilitarian function and will decay. Consumption of *fengshui* crystal products is always culturally and socially meaningful rather than biologically required. Furthermore, to focus on the construction of materiality helps to narrow the research scope and have an obvious line connecting people working and living on a

GCC. It provides a microscopic viewpoint by which to examine dynamic cultural responses to globalization beyond the framework of production-consumption. Answering the questions of materiality, such as “How do people think of a material?”, “How do people get the object?”, or “What do people use a specific type of object?” by presenting voices from different locations on a GCC would reveal not just local cultures’ view of the same material, but also how these views are connected with each other via a GCC.

### ***Fengshui* Objects and Taiwanese Cosmology in a Global Context**

This thesis will also interpret the influence of globalization on Taiwanese *fengshui* practice by examining its practice’s materiality embedded on a GCC.

*Fengshui* is a Chinese way of viewing the material world and a material culture based on the motivation of pursuing good fortune. *Fengshui* categorizes the world according to theories of energy flow, called *qi*, such as *yin*, *yang* and the five elements (wood, fire, earth, metal, and water). When humans live in an environment providing beneficial energy, the residents will earn good luck. In contrast, when living in an environment with negative *qi*, residents experience a high chance of encountering misfortune. That is to say, *fengshui* provides a way to view objects’ symbolic function and link it with people’s physical and social lives in a cultural way. This material culture objectifies an ideal living space and provides a mechanism to improve one’s fortune based on the objects’ materiality. Traditionally, *fengshui* was treated as a sort of Chinese cosmology ( Freedman 1965, 1966; Feuchtwang 1974), which influences how the Chinese choose locations to build communities and houses, or to select gravesites for the future development of the village and lineage (Freedman 1965; Ahern 1973; Li 1976; Lin 2007).

However, this mechanism is socially, culturally, and historically constructed within the social development of Taiwan and its globalization.

Anthropological studies of *fengshui* outside Taiwan reminds us that the research of *fengshui* practice should notice the interplay between politics and local religious custom. Governors may use *fengshui* as a tool for political control or suppress *fengshui* practice in order to achieve political goals. Watson and Watson's research on Hong Kong (1997, 2008) recorded how the British colonial government used *fengshui* as a negotiative policy to practice governmentality. Ole Bruun's study in China (2003) recorded *fengshui* experts' life histories during the period of the Cultural Revolution and after the economic reform in 1978. Bruun states that the Cultural Revolution suppressed people's practice of *fengshui*, but people's beliefs still existed and practices were revived after the economic reform.

Following Watson and Watson and Bruun's concerns about the relationship between *fengshui* practice and social institutions, this thesis also studies Taiwanese *fengshui* from a macroscopic viewpoint. In contemporary Taiwanese society, people practice *fengshui* differently than in traditional villages. After the 1980s, industrialization, modernization, globalization and modern scientific education all influenced contemporary Taiwanese cultural practice. In this context, Taiwan's *fengshui* crystal commodities do not merely represent a traditional custom. The commodification of alien crystals in Taiwan for *fengshui* purposes represents a complicated changing process of *fengshui* practices. I have interpreted how modern lifestyles in urban areas influence Taiwanese *fengshui* practice in my master thesis, *The Objects and Qi of Living House Feng-shui in Taiwan Contemporary Society* (2004). In this thesis, I argue that many factors lead people in metropolitan areas to stress more the *fengshui* of the living house rather than of ancestors' graves, including lifestyle, occupations, the interaction with the neighborhood,

cremation, and the distance with cemetery. Moreover, buying *fengshui* commodities due to broadcasting by the mass media has been a popular way instead of relying on *fengshui* consultants' services.

In this doctoral thesis, inspired by Kaishih Lin (2007), I argue that the anthropological study of *fengshui* should divide its practitioners into two categories: *fengshui* specialists and non-specialists. This strategy assists in examining the dialectical relationship between the two sides. The former is the group treating *fengshui* as an expertise and a complex of techniques, and the latter treats it as a sort of belief and folk practice. Even though they both practice *fengshui*, they own different cultural capital (Bourdieu 1986) in this category. They are both influenced by the GCCs of crystal *fengshui* products. Fine and Leopold suggest that "production adjusts as forms of distribution alter and when the cultural meaning of the good changes. Each sector of the chain changes the others (Fine and Leopold, 1993: 15)." This study reveals how consumption dynamically responds to the development of a GCC. Meanwhile, this change also relied on the specialists' adaptation. *Fengshui* specialists' professional interpretations of crystals and their promotions in mass media may authorize crystal's function on *fengshui* practice and lead the change of the folks' cosmology.

In this context, as I mentioned at the beginning of this chapter, the use of foreign crystal for *fengshui* leads us to rethink the materiality of *fengshui* customs, the change of the cosmological system by questioning the process of its appropriation in Taiwan, and the local religious practice's global influence.

## 1.2 METHODOLOGY: FIELDWORK ON A GLOBAL COMMODITY CHAIN

In terms of methodology, this thesis is based on a multi-sited ethnographical fieldwork. It is necessary to extend the research scale since most of the Taiwanese crystal *fengshui* commodities originate from South America and are processed in China. This methodology directly corresponds to the influence of globalization/glocalization in my research design. Marcus defines a multi-sited ethnographical research:

In short, within a multi-sited research imaginary, tracing and describing the connections and relationships among sites previously thought incommensurate is ethnography's way of making arguments and providing its own contexts of significance. (Marcus 1998, 14)

The movement of crystal along the commodity chain is a global phenomenon which connects the people, concepts, technologies, resources, social structures, and capitals in different regions. This commodity chain is embedded in a world system and requires a methodology beyond the local. This methodological strategy brings advantages. Firstly, it brings a comparative viewpoint by which to examine the interactions between the same objects (crystal) with people in different regions. This highlights how the materiality is constructed in a local context embedded in a GCC. Secondly, it helps to collect a complete "life history" of objects. "Follow the thing: is one of the dominating strategies used in multi-sited ethnographical research, especially when the research is dealing with the capitalist world system?" (Marcus 1995: 106-108). Studying commodities benefits to discuss the discussion of how different local economic institutions hinge on a GCC. By conducting the fieldwork along the trajectory of crystal's movement, this thesis has recorded not only its interaction with people, but also its

figures changed by natural forces or human agencies and its relations with landscapes and economic systems.

I also put a historical concern into my research design and tried to rebuild the history of the construction process of the crystal *fengshui* objects' GCC. This strategy corresponds to anthropological concerns of the GCC's influence on production and consumption. Notable examples include sugar (Mintz, 1985), tuna (Bestor, 2001, 2004), and fresh-cut flowers (Ziegler 2007). All these exemplify that rebuilding the history of GCC's construction process helps explain the connection between the distributed areas.

Some researchers conducting global business research claim to apply the approach of global value chain (GVC), in which the offshoring subcontractors' linking role in an international business frame is stressed, to replace the approach of GCC, which is more a buyer/producer-driven framework (Mahutga, 2012: 1-3). However, the GVC approach, from the perspective of anthropology, overlooks the dimension exterior to business and the determining force of local culture on this chained network. That is to say, GCC in this thesis is not only a business linkage but also a research site in which, even though it is shaped by international transactions, it is where people build relationships with each other at different locations through interacting with a specific type of object or material.

There were many difficulties accompanying this multi-sited strategy and the complicated composition of the GCC studied in this research. I must explain the restrictions and challenges following these difficulties and my problem solving strategies before presenting my ethnographic material. Firstly, to build the connection with the GCC of crystal products was difficult since all of the crystal products have no logo and the businessmen prefer not to work with an academic as to avoid unnecessary interventions. Research of giant global branches point

out that corporations, such as NIKE (Korzeniewicz, 1994), apply a GCC and outsource the process of manufacturing to downstream plants for the purpose of cost reduction. In such a model, the brand company's headquarters has powerful control of downstream plants in order to maintain the quality of products and production efficiency (Gereffi, 1994). This type of GCC is much easier to locate and trace. Compared to this, the GCC of crystal products is more loose and flexible since there is no such giant brand. This made the fieldwork difficult to conduct at the beginning, and it was difficult to step into a relatively closed business-oriented network.

For solving this challenge, I conducted pre-dissertation research to build my connections in the summers of 2009, 2010, and 2011. In the three fieldworks, my main job was to build my network with people in the GCC, especially in Taiwan and China. Fortunately, I constructed a good relationship with the Qian (anonym) family who is one of the dominating groups in the crystal processing industry and has offices in Brazil for purchasing crystals, as well as a factory and offices in China for selling raw materials to downstream plants. With the Qian family's kind assistance, I won the following opportunity to conduct the formal field research in Brazil and China. Naturally, male members of the Qian family became my key informants during my fieldwork. However, this does not mean the Qian family was my only source of data, since I realized their narratives must be influenced by their positions on the GCC. I also collected data from other sources and this provided me with materials to conduct cross-comparisons. In terms of people along the commodity chain, my informants crossed the categories of occupations and social status. Many of them are technicians of globalization (Bestor 2003), people who are running the business of the commodity chains.

It is an ethnography populated by individuals, including mining workers, wholesalers, overseas purchasers, *fengshui* experts, crystal shop owners, and consumers. In order to protect

my informants' privacy, the majority of the names in this dissertation are pseudonyms. However, this GCC is a smaller group than expected and people's connections are close. Therefore, I adjusted some names of companies and the ages of informants with the premise that would not influence the analysis.

The second difficulty is that it was extremely difficult to collect accurate and trustworthy statistical data to present the operation of the GCC since the fieldwork touched some materials sensitive to the informants conducting business, including tax information, reports of exports and imports, etc. Because of this, this research relies more on the data collected through interviews and participant observations. Participant observation, according to Dewalt and Dewalt, is a way to collect data in naturalistic settings by ethnographers who observe and /or take part in the common and uncommon activities of the people being studied (2002:2). My participant observation moved with the flow of crystals from its stage as a buried raw material, a half-finished product, a *fengshui* commodity sold in stores, and, finally, to a *fengshui* object used by *fengshui* practitioners. That is to say, I not only participated in and observe people's interactions with each other but also looked of the interaction between people and objects, and even objects interactions with other objects along the commodity chain.

Although crystals cannot talk, people involved in this commodity chain can express a lot about how they think about these objects. In each phase, interviewing was another important method, such as informal interviewing, unstructured interviewing, and in-depth interviewing (or semi-structured interviewing) with important informants (Bernard 2006 210-212) depending on the different needs in my fieldwork. In order to conduct successful in-depth interviews with informants, the interview guides were designed according to the theme of each in-depth interview. Informants' statements helped me understand not only how they view their jobs, but

also how they thought of the interaction between themselves and crystals. This means that crystal is one part of the informants' life histories. It also corresponds to Janet Hoskins' idea of "biographical objects" (1998). Through accumulating the narratives of biographical objects, this dissertation will form a biography of crystal with people's stories.



Figure 1: Fieldsites on a global commodity chain

Due to the nature of my research concern, my fieldwork in 2012 had three phases, and each one was conducted in a different country of the GCC, such as Brazil, China and Taiwan. In the first phase, I conducted my fieldwork in multiple cities in Brazil and collected data related to the crystal mining process and local crystal transactions. In this stage, my goal was to collect data about how buyers from China and Taiwan found suitable sources of crystal materials. I participated in and observed the mining process and the operation of a jewelry company and local crystal markets.

In the second phase, I moved my research field to the area providing processing work. I focused on three specific sites in China: the Huadu District of Guangzhou City, Heifong City in northeast Guangdong Province, and Donghai City in the northeast Jiansu Province. In Guangdong, I mainly collected data about how the processing itself introduces outer *fengshui* concepts into local societies, and about how crystal processing transformed raw crystals into commodities. With the Qian family's help, I participated in and observed the processing work of crystal commodities. I stayed in factories to make record of the processing job, workers' daily lives, and the owners' and laborers' discourses about their jobs. Otherwise, by interviewing informants, I also collected data about how the processing of crystals introduces advanced *fengshui* concepts into contemporary Chinese society. In addition, I also conducted fieldwork in the wholesale market in Guangzhou and the market of raw crystal material and crafts in Donghai. The data collected from the markets bridge the mineral sources and the processing factories, and contribute to enrich the narrative of the GCCs, as well.

In the third phase, I conducted my fieldwork at the market area in Taipei, Taiwan. I focused on the market's operation of *fengshui* crystal products in Taipei City and New Taipei City (formerly Taipei County) and how people, including professional *fengshui* consultants and common *fengshui* practitioners, interpret this foreign material's application to *fengshui* practice. I participated in and observed the marketing of *fengshui* crystal commodities in stores and the service of *fengshui* consultants. In stores of crystal commodities, I observed how merchants promote their products to clients through direct promotion and indirect advertising. I also conducted interviews with non-specialist *fengshui* practitioners and consultants and questioned them about their application and interpretation of crystal *fengshui* objects.

### 1.3 OVERVIEW OF THE CHAPTERS.

The purpose of Chapter 2 is to briefly introduce the formation of the crystal *fengshui* object commodity chain. I will begin by giving a historical review on the Taiwanese jewelry processing industry and its development because of the global market demand. In the 1980s, Taiwan was one of the most important countries which conducted processing works for the jewelry market in North America and Europe. Jewelry made from Jade and agate was the most important jewelry products exported from Taiwan. While almost all of the Taiwanese processing factories moved to China in the early 1990s, Taiwan's domestic market was transformed to consuming the crystal products from China.

In this chapter, I will also briefly introduce the Qian family, my key informants, and its role on a GCC of crystal products. It will be a good example to indicate how some Taiwanese businessmen went overseas to build the channels for purchasing raw materials for the demand from Taiwanese jewelry processing industry.

Chapter 3 explores how the buyers from Taiwan and China purchase crystals and how local miners excavate crystals in Brazil. I will present my fieldwork from three different locations: Amethista do Sul, the origin place of the amethyst geode in Rio Grande do Sul, Curvelo, the origin place of white crystal and chlorite quartz in Minas Gerais, and Novo Horizonte, the origin place of rutilated quartz in Bahia. Then, I will discuss the interactions of three groups of people: buyers from Taiwan and China, local middlemen, and local miners. Furthermore, I will also discuss how the crystal selling and use in East Asia influence local landscapes and Brazilians' ways of viewing these minerals.

In theoretical terms, the mining industry and crystal purchases are like gambling. The result of mining is hard to predict and the market of crystal is unfathomable. Local landlords,

foreign buyers, crystal miners, and dealers are all gambling for a great profit with risks. To them, crystal is not used for luck, but for gambling.

Chapter 4 moves the lens to three locations important to the crystal processing industry in China: Ketang Town, Huadu District, and Donghai County. The first two are sites important for processing crystals in Guangdong Province. The former is a small town with over one thousand workshops and small factories; and the latter is a city whose jewelry processing is run by Taiwanese investors. I will also introduce Liwan Plaza, a wholesale market selling products from the three locations mentioned, and Donghai, a city which has been named as “The Crystal Capital of China” and famous for the transactions of raw crystal materials and crystal crafts. This chapter will not only explore the development of the crystal processing industry in China, but also examine the interaction of the Taiwanese and the Chinese in processing factories and the wholesale market. I will present that the factories and the wholesale market are not just places where people produce products or exchange goods and capital, but also where cultures fuse and people produce social relationships. For example, Chinese sellers are learning about how the Taiwanese use crystal for *fengshui* or spiritual purposes in the trading process.

Theoretically, the alienated and semi-finished crystal products imply the alienated nature of human labor. While migrant laborers “process” the materiality of crystal and manufacture commodities for consumers who want to consume crystals for good luck, they hardly have opportunity to upgrade to a higher social status. By contrast, factory owners and wholesale sellers view crystal absolutely as goods and meticulously calculate their costs and profits.

Chapter 5 focuses on the uses and marketing of crystal in Taiwan. The Taiwanese have developed comprehensive ways of crystal application, especially for *fengshui* and spiritual purposes. People assume that the diverse sorts of crystals can deal with different issues, either

social or physical. This is associated with crystal shops' marketing strategy, *fengshui* experts' appropriation, and the mass media's propaganda after the 1990s. Influenced by these factors, crystals have gradually become a well-accepted type of *fengshui* object in Taiwan.

By presenting ethnographic data collected from relevant shops, users, and *fengshui* consultants, I will claim that the five elements theory applied in *fengshui* and chakra theory in yoga are the two most important concepts used to interpret crystal's supposed effects on humans. Presently, "New Age Movement" ideas are gradually becoming a further important source of knowledge for crystal users of the younger generation.

Following the narratives in Chapter 5, Chapter 6 will review some changes in Taiwanese *fengshui* practice. By examining the timeline of practiced *fengshui* customs, it will indicate that *fengshui* is neither a static technical system for the experts nor a rigid application of common sense for average people. It is a cultural system corresponding to the social changes and residential variations in Taiwan.

I also apply a phenomenological perspective to interpret *fengshui* objects' cultural perception for the Taiwanese. Generally speaking, scholars may assume that people use *fengshui* objects because they have *fengshui* concepts in their minds. However, from a phenomenological perspective (Tilley, 2004), people instead learn *fengshui* first through their interaction with *fengshui* objects, since these objects present the cultural characteristics of *qi*. That is to say, through examining the use of crystal *fengshui* objects, we will better understand how the contemporary Taiwanese think about *fengshui*. This also leads us to reflect how plentiful crystals prompt the change of Taiwanese *fengshui* culture.

Chapter 7 will focus on theoretical discussions of glocalization, materiality, and commodity fetishism. This dissertation claims that we need to contextualize this discussion in

order to explicitly grasp how materiality is constructed and changed due to its connection with globalization and glocalization. The four forms of materiality — economic materiality, social materiality, symbolic materiality, and ritual materiality — are twisted with each other and keep changing with each site's economic and social changes within a GCC. Crystal's physical features and changing shapes indicate that crystals on a GCC not only have the value of economic exchange, but also become a basis of social interaction. Further, crystals' symbolic meaning may change while local ritual practices follow with globalization and are adapted through glocalization. All these contribute to the fetishism of *fengshui* practice as well as endow it with the feature of commodity fetishism.

In my conclusion, I will review the preceding chapters and argue that contemporary material culture research cannot neglect the influence of “glocalization”. Crystal's flowing materiality embodies how people in different societies view materials in different ways and how these different societies are connected by a GCC. This is a process of “glocalization”. Taiwanese crystal *fengshui* objects indicate that the GCC is where people from different locations interact with the same material and inter-subjectively construct different parts of its materiality in time-space.

## **2.0 THE TAIWANESE JEWELRY INDUSTRY AND ITS TRANSFORMATION, 1960-2000**

Crystal is categorized as semi-precious stone. Compared to gemstones, such as diamond, ruby, sapphire, and emerald, semi-precious stones are more widespread and have lower hardness. Among these, crystal is one of the most popular materials used in jewelry production. However, Crystal was not a sort of commodity for mass consumption in Taiwan until the 1990s. The Taiwanese first dealt with crystal as a processing material in the exportation industry before it became an important *fengshui* object. Crystal became an important material for Taiwan's Jewelry industry (TJI) imported with other minerals, such as agate and cirtine. As such, it is necessary to review the history of TJI, especially with the respect to the processing of semi-precious stones, since TJI built the connection between Taiwanese and foreign minerals. It will be also helpful to explain how the roles of crystal and other minerals played in Taiwan's economy at different periods of time.

Taiwan started to develop its exportation industry in the 1960s, and its economy became export-oriented in the 1980s. Taiwan's gross national product (GNP) grew by an average of 9.7% per year between 1961 and 1980, and by 6.7% between 1981 and 1999. This change concluded the political democratization, economic globalization, and cultural localization in Taiwan. In the mid-1980s, Taiwan was called one of the "four dragons of Asia" with Hong Kong, South Korea, and Singapore, due to its outstanding economic growth. Some scholars used

the term “economic miracle” to refer to Taiwan’s rapid economic development between 1960 and 1990 (Hsiung, 1996), and claimed that there were multiple factors in constructing this miracle. For example, the U.S.A. AID mission in the 1950s which supported the most difficult time of the economy, the green revolution which released the labor to manufacturing (Clark, 1989), the flexibility of small-scale factories (Hsiao, 2001), the tariff friendly to Taiwanese products (Yeh, 2001; Chou, 2001), and relatively cheaper labors (Hsiung 1996) are all factors which formed the best time of Taiwan economy. The growth of TJI was one part of this miracle and it also introduced crystal into Taiwanese’s daily life.

TJI could be basically attributed to the category “small and medium enterprises (SMEs)”<sup>1</sup> or “satellite factory systems (SFCs)” which were claimed to be important factors of “Taiwan’s economic miracle”. Taiwan’s economy was predominantly comprised of SMEs, which accounted for around 98% of all local enterprises until 2000 (Wan & Mai, 2001: 231). By working with SFCs located at the outskirts of economic centers, including Taipei and Kaohsiung, Taiwan’s SMEs were quickly developed and characterized by their flexibility. His-Huang Hsiao describes the characteristics and superiority of Taiwan’s SMEs:

The reason why Taiwanese businesses have been able to secure such orders from multinational corporations while expanding abroad has been particularly due to the ‘enterprise network’ which emphasizes cooperative relationships based on trust and mutual benefit to achieve a flexible division of labor in the production process. Because of the combination of the small scale of Taiwan’s SMEs and their export dependency, they must always be sensitive to immediate adjustments following demand for orders or movement. Flexible cooperative production relationships allow the

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<sup>1</sup> According to Chi Schive and Ming-Wen Hu study, SMEs is defines as enterprises employing fewer than 100 employees (2001: 250). In my fieldwork, most jewelry corporations and factories had less 40 employees between 1960 and 2000.

manufacturing network to show its ability to handle these challenges, so that it can make automatic adjustments to its production lines, at low cost and within a very short space of time. The line of production is not simply situated in a single factory – it does not require accumulation of a large quantity of raw material, and uses widely distributed ‘invisible factories’ (including home-workers) adjusting production to fit orders (Hsiao, 1992, 2001)

As closely tied with global economy and overseas markets, SMEs were actively pursuing new overseas markets and accumulating foreign exchanges, obviously representing a different phenomenon than the few large enterprises, which focused mainly on the domestic market (Cheng, 2001: 145).

The development of TJI was also characterized by the features of Taiwan SMEs. Reviewing this development helps us to understand the interaction between crystals or other sorts of semi-precious stones, the Taiwanese, and GCCs in a history context. Unfortunately, it still evades historians’ concerns and there is no formal historical study of it. Without formal and complete statistics and documents, it is difficult to present this history. Therefore, I rely on the oral history collected from my informants regarding TJI, as well as on limited literal materials, and cross-examined them to restore a credible history. I interviewed with important entrepreneurs in TJI and collected their oral histories about their enterprise’s developments, including Zhong-Chao-Quian Lin, the former chairman of the TJI Association, and Chong-Wan Lo, the manager of Fu Jewel Merchandise Co., who were the two earliest Taiwanese to travel in Brazil in order to import semi-precious stones back to Taiwan. I also collected a former jewelry worker’s oral history, which provides a perspective opposite to capitalists. I will also introduce the Qian family, my main informants, and their international mineral business as an example of the formation of the global commodity chain.

## **2.1 A BRIEF HISTORY OF TAIWAN JEWELRY INDUSTRY AND ITS POSITION ON A GLOBAL COMMODITY CHAIN, 1960-2000 <sup>2</sup>**

I identify TJI with the production of jewelry consisting of semi-precious stones. Compared to the gold and silver adornment industry which focuses on the domestic market, TJI is constantly export-oriented. TJI has lost its own prosperity since the middle of the 1990s. However, it was an important industry between the 1970s and the early 1990s. It was not only an economic institution for processing mineral into jewelry, it also produced a period to connect the Taiwanese with minerals from other countries.

According to Xin-Yi Chang's memoirs of TJI (1999), its development initiated in 1961-1965 with the discovery of Taiwanese jade, a sort of nephrite originating from Hualian, an eastern county of Taiwan. At the beginning, processing factories were few and concentrated in Hualian County. In the Japanese colonial period, this area was important for mining asbestos, which is an important material for military applications. However, in 1960, Taiwanese jade's economic value was been proved and then caused a boom of mining in a short time. Their techniques were not good and lacked efficient equipment. Because of this, the factories' production cost was high and their yield was limited. Until 1964, many factories started to imported better equipment which largely increased the output. Meanwhile, many factories opened in Kaohsiung and the outskirt areas of Taipei, including Sanchong, Luzhou, and Banqiao.

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<sup>2</sup> The material of this section is mainly from *Taiwan Gem Jade* (1999) the oral history from Zhong-Chao-Quan Lin.

In this period, the main jewelry products were carved pieces that were smaller than 1-inch. The motifs of these artifacts included animals and religious symbols. The international market gradually opened to these products. The profit from the exportation was estimated to be US\$0.5 million.

The period between 1966 and 1973 was the best time for Taiwanese jade products. Processed jade and coral became the best products for export. The carving skills in this period improved and the size of products also increased from 3-inch to 10-inch in size. The popular motifs included Chinese traditional characters, such as *guanyin* (bodhisatta), *milefou* (maitreya), ancient beauties, or animals, such as elephants, lions, tigers, eagles, and bears. In addition to the international market, U.S. soldiers who joined the Vietnam War and Japanese tourists became the most important consumers in the domestic market. Furthermore, the high class artifacts became popular in this period as well. Jade artworks imitating Chinese ancient jade artifacts were also popular, such as *cong*, *gua*, *ruyi* (scepter), statues, and incense stoves. Other products, such as bead necklaces and tea sets also had a good market. Processing factories in this period had expanded from Hualien County and Kaohsiung County to Taipei County (Sanchong, Luzhou, Banqiao, Zhonghe, Yunghe), Hsinchu County and Miaoli County. The number of processing factories had also increased from about one hundred to over one thousand. It was the miniature of the satellite factory system afterward. Additionally, after 1970, large pieces (15- 60 inch) of jade artifacts started to become popular in the market. In this period, the Taiwanese economy started to quickly grow up and some wealthy people started to collect these exquisite jade artifacts by Taiwanese carvers.

In 1973-1975, TJI experienced its first transformation. The market had no preference for Taiwanese jade because of the booming international market and the development of the

industry. Overseas buyers also expected more sorts of jewelry consisting of semi-precious stones. Thus, many corporations started to use jade materials introduced from Canada, which had similar quality with Taiwanese jade, and introduced more advanced equipment and technologies. These changes assisted factories in manufacturing products by imported foreign raw materials with greater hardness, such as agate, tiger eye, rose quartz, amethyst, and aventurine. It was the first time that the Taiwanese had the opportunity to contact foreign raw minerals. However, in this period, Taiwanese relied on Japanese tradesmen to import these raw materials since Taiwanese businessmen had not built their own sources of goods. This also meant that TJI had no power to bargain for the price of imported raw material with foreign tradesmen.

In the period of 1976-1978, Taiwan became one of most important countries for jewelry processing, including for the categories of semi-precious stones and gemstones. Taiwan had imported precious minerals from South Africa, Brazil, India, Australia, and Canada. Meanwhile, the processing technique became more mature and could satisfy the demands from across the globe. With the development of TJI, Taiwanese also produced relatively advanced equipment, such as bead grinding machines and modeling machines, in order to deal with the diverse demands and orders. This allowed TJI to produce more diverse products, including sculptures, beads, balls, and ring surfaces. Additionally, TJI also possessed some of the techniques of making crystal spheres in the world. For example, only Taiwan could produce mineral beads with a 2mm diameter and produce mineral balls which were almost perfectly spherical.

Additionally, some Taiwanese factories successfully invented the dyeing technology for agate, causing the agate processing industry to quickly develop. The dyed slices of agate were visually pleasing but also could be used for manufacturing jewelry. This technique rapidly opened the international market for Taiwanese agate products. Because of the market demands,

Taiwanese factories annually imported large quantities of agate which originated from Brazil, Uruguay, and South Africa. These factories were located in Sanchong, Banqiao, Zhonghe, and Yung in Taipei County. The satellite factory system of TJI had been completely formed in this period.

The motifs of the sculpture products produced in this period still corresponded to the international market and the development of global tourism. For example, the Thai market requested elephants and Buddha with a sitting posture. Japan's market mainly requested turtles and Buddha. North American markets preferred wild animals, such as eagles, elephants and bears. Australian markets preferred religious motifs, such as the Star of David and twelve star constellations. West European markets liked cats, dogs, dolphins, and owls. Compared to these, the motif of flat products also started to have geometry, abstract styles or fusion. Meanwhile, factories manufacturing metal jewelry accessories and rhinestone also joined the production line. This also made TJI quite successful even though Taiwan itself lacked native gemstone materials.

At the end of the 1970s and the beginning of the 1980s, TJI also encountered multiple difficulties despite superficially showing a booming trend. Firstly, after twenty years of development, the output of mined Taiwanese jade had been decreasing extremely. In the early 1980s, Taiwan already had the advanced technology of the precision molds and could produce products to meet the needs of the market. However, the mining of Taiwanese jade was shut down. Before this, many businessmen and factories had predicted the difficulties and started to process imported raw mineral materials. Secondly, the Second Oil Crisis in 1979 also had impact on Taiwanese economy because of the tightening global market. Thirdly, the rising value of Taiwanese currency and the average salary also reduced the competitiveness of the export

industry. The NT dollar exchange rate appreciated to 32:1 in 1979, and the basic salary had risen up to \$75 per month.

In May 1980, the Taiwan Jewelry Industry Association (TJIA) was founded. It represented the well development of TJI, and there were many issues which required an institution to deal with. This association has played the assistant role to TJI and negotiated with the government. The association stood by the objective of coordinating relationships within the industry, enhancing mutual interests and promoting economic development. In response to the Taiwanese government's policy on the freedom of international trade, the association had fought for tax exemption on imported and exported jewelry products important for TJI.

Meanwhile, new materials gradually became dominating to TJI and took over Taiwanese jade. Some minerals with lower price, usually called *zashi* (miscellaneous stones), entered TJI and enriched the diversity of products. In addition to mineral materials, pewter, artificial pearls (urea pearls), enamel, acrylic, plastic modeling materials all became well-applied in the industry. In 1984, the value of jewelry products exported from Taiwan to the U.S. was over 242 million. It was ranked 11th place, behind shoes, fabrics, and electronics.

In the middle of the 1980s, new factors started to challenge TJI. Firstly and domestically, the appreciation of NT dollar was up to 28:1. The service industry had developed well, which caused a labor shortage in the manufacturing industry. Secondly, China started to promote economic reform. Many Hong Kong enterprises started to import jewelry processing equipment into China and used the cheaper labor force in the southeast coast area. Thirdly, in 1985, the U.S. government cancelled the tariff preferences of products from Taiwan. Meanwhile, neighboring countries' jewelry industry had been developed, also challenging TJI. Taiwanese products had no

superiority with other products from Southeast Asian countries which had tariff preferences with the U.S. or had cheaper labor costs.



Figure 2: The export value of jewelry and processed metal products. Source: Custom Administration, Ministry of Finance, R.O.C (Taiwan).

In 1987, the Taiwanese government lifted the ban on visiting the relatives in China. After 1988, Taiwanese jewelry companies started to investigate the possibility of investing in China's jewelry industry. Following this, in the early years of the 1990s, TJI started to move their factories to China because of the relatively cheaper labor force and friendier tax incentives. In a few years, factories, including those respectively conducting jade producing, manufacturing pewter jewelry, producing cubic zirconia (or called CZ diamond) jewelry, and conducting jewelry plating almost all moved to China, especially to Fujian Province and Guangdong Province.

In the late 1990s, exports of native Taiwan jewelry industry had extremely declined. In contrast, China's jewelry industry quickly developed because of Taiwanese investment.

According to my informants' narratives, after the 1990s, Taiwan almost had no more factories processing semi-precious stones. Meanwhile, China's jewelry industry quickly developed in Fujian Province and Guangdong Province. In particular, the Hefong County at the north of Guangdong, which also had the same production process and scale as the previous satellite factory system in Taiwan, gradually became the most important area for processing semi-precious stones. In addition, compared to TJI, China jewelry industry manufactured more crystal products because Taiwan and overseas pan-Chinese societies, such as Hong Kong Malaysia, and Singapore, had good markets for relevant products.

In 2000, Liwan Plaza, a wholesale center for jewelry materials or semi-manufactured jewelry was opened in the center of Guangzhou City. It represented the maturation of the jewelry industry in Guangdong, and even throughout China, which completely took over Taiwan's position on a global commodity chain between 1960 and 1990. The interesting thing is that Taiwan became the main market of the jewelry products in Liwan Plaza. According to the sellers' narratives, before 2008, the Taiwanese running crystal shops comprised the biggest group of their clients.

Meanwhile, *shujindian*, or crystal shops, quickly spread in Taiwan after the middle of the 1990s. There is no accurate number for Taiwan crystal shops and how many crystal shops were opened in this period. However, according to the interviews of crystal shops and my informants' calculations, there were over 2000 business units, including stalls in market, shops, department store counters, and the internet sellers. Furthermore, according to the data collected, not all crystal shops which were associated with jewelry manufacturing in Taipei were opened after 1990. In fact, the majority of them were opened after 2000. I will discuss these shops and the crystal users in chapter 5. Except for amethyst geodes which do not need too much processing

work were directly imported from Brazil or Uruguay, the majority of commodities sold by these crystal shops were purchased, directly or indirectly, in the Liwan Plaza at Guangzhou.

Overall, TJI connected the Taiwanese with global semi-precious stones, including crystals. However, before the 1990s, this connection laid particular stress on the export economy and most of the Taiwanese lacked opportunity to buy these products. Otherwise, there were some characteristics of TJI which brought cultural and social effects. For example, the Taiwanese jewelry industry in this period was a labor-intensive industry. The technical requirements in this industry were not extremely strict and attracted many laborers with a lower educational level on average.

Compared to other manufacturing industries, such as fiber and foods, or the high-tech industries cultivated by the government, TJI was characterized by its low technical threshold between 1970 and 1990. It was easy to imitate the successful factories as long as a new factory had the same, even better, equipment and stable sources of raw mineral materials. This easily made each factory cut their profit in order to compete with others. This also made a cycle of vicious competition.

The scale of jewelry corporations and factories between 1960 and 2000 was relatively small. There was not a giant corporation which monopolized the industry. In contrast, it was extremely easy to join in the production line by opening a small workshop for sharing the plentiful overseas orders. While TJI in this period still focused on non-craft-based manufacturing, some workshop owners stepped into this production line just by purchasing a grinding machine or a polishing machine. It is also implied that this industry was not technical oriented. Carving small statues may require laborers' skill, but the need for crafts was not large and could later be conducted by ultrasonic wave equipment.

From the 1960s to the 1990s, TJI experienced dramatic ups and downs. This change followed the economic change of Taiwan's overall economy. TJI relied on exports and the international market. When Taiwanese factories could not provide relatively cheaper products, foreign buyers reasonably chose factories which provided cheaper prices in other countries.

## **2.2 THE TRANSFORMATION OF TAIWANESE JEWELRY INDUSTRY: FOUR EXAMPLES**

Several current crystal shops in Taipei took part in the best time of TJI. In this section, I will briefly introduce their developments and present states. Through reviewing these corporations' histories we will have a better understanding of the development of TJI and how it built the relationship between the Taiwanese and the global commodity chain of semi-precious stones jewelry, especially for crystals. The data came from my interviews with each corporation's chairman or manager. Their memories favor rebuilding the history of TJI.

### **Tip Top Gold & Jewelry Corp. (TTGJC)**

TTGJC was built by two brothers, Lin-Chan Lin and Zhong-Chao-Quan Lin in Taipei, 1973. In the late 1960s, they lived in Fengtian, an area yielding Taiwanese jade in Hualien. Lin-Chan Lin started to sell local jade materials to mineral processing factories. Since his father had worked for Fengtian Asbestos Corporation (the former of China Mineral Corporation) in the Japanese colonial period, and had a good social network with the local miners, he could collect the raw Taiwanese jade minerals with the best quality. Zhong-Chao-Quan Lin remembered that

many American soldiers came to Taiwan because of the Vietnam War in the 1970s, and their visits brought a great demand of jade jewelry products.

Later, TTGJC started to purchase agate from Japanese and German companies and then sold these materials to processing factories. Between 1975 and 1976, the two brothers conducted business visits to sources of the agate, including India, Mexico, South Africa, Uruguay, and Brazil. They then figured out that the agate from Brazil had the best quality. Zhong-Chao-Quan remembered that it was difficult to enter Brazil since it has no diplomatic relationship with Taiwan. Therefore, they entered Uruguay and then found a way to smuggle into Brazil. Fortunately, they built their own sources of agate and different sorts of crystals, and then gradually became the biggest mineral importer in Taiwan until today. Between 1975 and 1994, TTGJC imported over 22,000 tons of agate material from Brazil into Taiwan. According to my informants, TTGJC provided over 70% of raw agate material for TJI. With the development of the crystal purchasing business in Brazil, TTHJC also introduced more types of semi-precious stones into Taiwan. These included crystals, but the quantity was low and only intended for processing in jewelry factories.

In 1980, Lin-Chan Lin also became one of the founders of Taiwan Jewelry Industry Association (TJIA). He was also the chairman of TJIA between 1988 and 1994. In this period, he also noticed the jewelry industry's movement to China, so he also extended the corporation's business to Hong Kong and the southeast coast of China and imported overseas minerals into these areas.

Presently, some of the next generations of their family are living in Brazil and some are living in China for the concern of business. Brazil is still its most important source of goods. The other source is the annual Tucson Gem Show in Arizona. TTGJC now is still the biggest

wholesaler of crystal products in Taiwan, and most of their products are large raw crystals, or geodes, which lack processing.

### **Fu Jewel Merchandise Co (FJCC)**

Zong-Han Lo is the oldest importer of foreign minerals in Taiwan and he has been in the mineral business for over forty years. He developed his business in Taipei at almost the same time as TTGJC. Most crystal shop owners that I interviewed had experiences of doing business with him and FJMC. When I interviewed him, he already lacked clearer memories about some specific years of the business development, but he still remembered some important events and liked to share his stories with me.

In the early 1960s, he went to a fishing job in Hualien, where he was introduced to the jade business by his local friends. He sold the jade excavated in Hualien to the processing factories in Taipei. In that period, he earned a lot of money because jade products were popular in the markets of Japan, North America, and West Europe. In the middle of the 1970s, he sensed that the output of Taiwanese jade was decreasing, so he then decided to go to Canada to import Canadian jade into Taiwan. In one of his travels to Canada, he noticed that some warehouses were storing crystals and amethysts from Uruguay. Then he also imported these crystals and amethysts back to Taiwan and sold them to factories. The responses to the crystal products were positive. The demand of crystals gradually increased, even though the quantity was still relatively less than that of other semi-precious stones. In the mid-1980s, he decided to travel to Brazil to purchase mineral materials. Through the assistance of local Taiwanese and Chinese

people, he quickly found the materials that he needed and imported them back to Taiwan. He claimed that he was the first one who introduced amethyst geode to the domestic market.

In 1990s, he noticed that Brazilian amethysts geodes had a great potential in the markets, so he then continually imported them into Taiwan's market. He also noticed that many of his old Taiwanese clients moved to Guangzhou, China, to run jewelry factories, so he also imported crystals materials to Guangzhou. Since he was still one of the few biggest importers of Brazilian crystal products, especially amethysts geodes, most crystal shop owners in Taipei conducted business with him and became his friends.

### **Blanco Crystal Corp (Blanco Crystal),**

Blanco Crystal was built in 1977 by two brothers, Hua-Hang Xu and Hua-Zhen Xu. Originally, its main business was to sell jewelry or semi-finished jewelry products to foreign orders, or to take foreign orders and then find local factories to produce the products. Hua-Zhen Yu remembered that in the 1980s, the foreign buyers came to Taipei to purchase the jewelry they needed or went to factories to submit their orders. In the 1980s, Blanco Crystal worked with the factories in Banqiao, Keelung, and Ilan to manufacture jewelry for the overseas orders. Hua-Zhen Xu recalled how their business was in the 1980s:

Me: Where were your customers from when the company doing trading business? What did Blanco Crystal sell?

Hua-Zhen: Mostly from the US, Japan, Australia, and European countries. Products were cut & polished semi-precious stones, including amethyst, citrine, peridot, garnet, etc... We also sold silver and brass gold-plated jewelry, gem sets, finished jewelry, rings, earrings, pendants, etc.

Me: Could you describe when the best year for the company was?

Hua-Zhen: The best year was in 1989~1990. It happened in the year that my first son was born. That year we sold more than 7 million US dollar.

Me: Before the company transferred to the domestic market, what did your brother and you observe which pushed you make the decision?

Hua-Zhen: First, there was a strong devaluation of US dollar against NT dollar. It made our products uncompetitive. Secondly, a lot of factories moved to China. The whole industry almost collapsed.

By viewing the potential difficulties of TJI, both brothers decided to sell their products to international gem shows and Taiwan's domestic market at the same time. In 1990, for example, they sold their products at the NY JA Show (Jewelry of America, New York) and the Swiss Basel Jewelry Fair. Meanwhile, they also went to the Tucson Gem Show to purchase mineral products from different countries for Taiwan's domestic market and Taiwanese mineral collectors.

In 1990, the two brothers opened their first shop in the Songshan District and started to sell crystal products to the public. Some informants stated that Blanco Crystal was the first shop to sell crystal adornments. In terms of marketing strategy, Blanco Crystal also became the first shop connecting crystal with religious concepts. It attracted many people with strong beliefs in religious concepts. In 1992, this company introduced the equipment which conducts Kirilian photography (also called energy photography) in order to prove crystal's effect on biology. After 1992, Ma-Long Yu published many books about applying crystal to making good luck and *fengshui*. His books have been well used by crystal shops in whole Taiwan. I will discuss its influence on Taiwanese *fengshui* concepts in chapter 5.

## **iStone**

iStone has become one of the biggest jewelry brands in China. Its mineral processing business was formed by three cousins from Changhua County in the 1970s. They decided to move to Keelung to conduct their mineral processing business. One of the cousins, Mu-Chin Su, noticed that this company's output was limited and had no prestige by which to negotiate for the price. In order to solve this issue, Mu-Chin Su led the company to cooperate with six other smaller workshops in order to amplify the output of production and have prestige with which to bargain. Because of this, they could order the raw material with a better price altogether and then distribute their products to the market. In the 1980s, their company was called Yuan Yi, which means the art of making beads. Appropriate to their company name, they were famous for their techniques of manufacturing beads and spheres, and the successful strategy of cooperation made Yuan Yi one of the leaders of the mineral processing industry in the 1980s.

In the early 1990s, Yuan Yi moved to China and ran its production line in Tungkun, Guangdong Province. In 1997, it built its brand, named *Shitouji* or iStone in English, and tried to open in the domestic markets in China and Taiwan. Meanwhile, iStone also moved its production line to Guangzhou and quickly spread its franchise system in the coastal provinces. Presently, it already has over 1000 franchises throughout China. Moreover, iStone led other Taiwanese jewelry enterprises to Huadu Jewelry Industrial Park, a special processing zone for Taiwanese enterprises in the jewelry industry. Presently, this special zone has iStone and 12 other Taiwanese enterprises running their factories and production lines. Mu-Chin Su is also leading these enterprises, transforming them from an manufacturing industry into culture and creativity industry and tourism.

## **IAS and Qian Family**

Members of the Qian family were all my key informants. With their help, I quickly entered the field for collecting the required data. Shu-Mu Qian, the founder of IAS, started to work in the early 1980s with his brother-in-law, Yung-Wei Kang. In the late 1970s, Yung-Wei Kang learned the skill of processing minerals with some elder workers. Later, he opened his factory in Banqiao, Taipei County, and the business developed well, so he invited his brother-in-law, Shu-Mu Qian, to work together with him. Later, Shu-Mu Qian opened his own factory just adjacent to his brother-in-law's. He developed his own dyeing technology for application to agate, and the factory's business grew stably.

In the early 1980s, his factory relied heavily on the raw materials provided by TTGJC. However, in that period, too many factories and workshops competed for the limited agate materials imported by TTGJC. Shu-Mu Qian often needed to sacrifice the output of production just in waiting for the raw material. It pushed him to go to Brazil and personally find the source of the raw material. Shu-Mu said: "I went to Brazil because TTGJC did not give me enough agate. I needed 6 tons per month, but they only gave me 2 tons."

In 1987, Shu-Mu Qian traveled to Brazil for three months. His travel route was almost the same as Lin-Chan Lin's. First, he entered into Uruguay and found a way to smuggle into Brazil. Through the local Taiwanese and Chinese people's help, he successful built his source and then started to import agate into Taiwan. In 1989, his brother, Chiu-Shen Qian, moved to Brazil and settled down at Curvelo, Minas Gerais. After this, Chiu-Shen searched for and purchased potential minerals, especially crystals, and Shu-Mu sold them to factories in Taiwan and China. After the import business became stable, Shu-Mu closed his factory and focused on the mineral business. Yaun Yi (the former company of iStone) was also one of his clients in that period.

In 1992, Shu-Mu started to work with a crystal shop, Shan-Fu Crystal, in Taipei. After this, Shan-Fu transformed to mainly sell products manufactured by the IAS production line, with crystals and minerals imported from Brazil directly.<sup>3</sup>

In 1999, Shu-Mu founded the IAS Jewelry Corporation and its factory in Xiamen, Fujian Province, China. It used the raw material imported from Brazil to manufacture agate beads, crystal beads and other mineral products. At the same time, Shu-Mu also sold raw semi-precious stones to other factories on the southeast coast of China.

While Shu-Mu developed the manufacturing business in China, Chiu-Shen was also busy developing his mineral business in Brazil. In 1989-1993, Chiu-Shen traveled around Brazil and tried to find potential minerals and crystal mines. In 1993, he started to build the factory at Curvelo in order to provide initial processing to raw materials, and he invested in crystal mining in different regions for controlling IAS's purchase cost. Chiu-Shen quickly built his social network in Brazil and was proud of his successful investment in mining crystal in different regions of Brazil. Presently, IAS has three offices in Bahia, Minas Gerais, and Porto Alegre. I will discuss more about Chiu-Shen and IAS's influence on the Brazilian crystal mining industry in next chapter.

In 2003, the factory moved to Guangzhou city and then moved to Huadu Jewelry Industrial Park with other Taiwanese jewelry enterprises. After moving to there, IAS stopped its business of manufacturing jewelry and focused on the business of importing materials to Taiwanese enterprises in the same processing zone or the jewelry factories in Haifong. The IAS factory also transformed to process large crystals and amethyst geodes for its market in Taiwan.

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<sup>3</sup> The more ethnography about this crystal shop will be presented in Chapter 5.

## **Chin-Bin Chou**

The above examples are from the perspective of corporations and capitalists. It is obvious that they smoothly passed through the transformation that happened in the 1990s. However, the transformation also implied that many laborers lost their jobs or were forced to change their occupations. Chin-Bin Chou is such an example.

In 1985, Chin-Bin was 15 years old, and he decided to abstain from further studies in school. He chose to learn skills in the Baifu Neighborhood, which was an important community for producing semi-finished jewelry at Keelung which was the biggest port in North Taiwan. In that period, Yuan Yi also ran their production lines there. There were over five hundred people working for different kinds of jobs in the jewelry industry in that area in the 1980s. He still remembered how he learned the skills:

I began with observing mineral material. Then I needed to learn how to cut the stone and pick up the parts we need. It took me one and a half year. Later I spent two years learning how to grind stones with machines to become what can be used for jewelry. Lastly, I learned how to use an engraving machine.

Five years later, he moved to his uncle's factory located in Qidu, a district of west Keelung, not far from Baifu Neighborhood. He worked as a leader in his uncle's factory for ten years. However, around 1990, the factory business declined seriously:

I remember the factory could not receive more orders and our products could not sell out. We were unable to hire workers, since people thought this job was too hard and the salary was low. We could not pay higher salary so that people do not want to do this job. When I got in, the factory had ten workers. At the end, the factory only had two workers. One was me.

My uncle quit. He gave me the factory and the products he could not sell for free. However, I still could not survive without working. My friend told me that selling crystals was a good business. At that time, I did not understand why what I produced before had a good market in Taiwan. I assumed that they were produced for foreigners.

Then, I started to make my own small jewelry with crystals and sold them in markets and bazaars at Xizhi.<sup>4</sup> My business was pretty good and grew stably. Then, I opened my own crystal shop at Xizhi in 2003.

Sometimes, Chin-Pin traveled to Guangzhou and purchased some products at Liwan Plaza. He still has a workshop at the back side of this shop. Because he owns the equipment for processing semi-precious stones and has the skill to use an engraving machine, he sometimes helped his clients or other crystal shops repair their crystal sculptures or decorations, or he used the crystal materials he stored for many years to produce some jewelry.

Chin-Pin witnessed the ups and downs of TJI. He felt sad about this transformation, but he also admitted that this was an inevitable end. He admired some people, such as Mu-Chin Su and Shu-Mu Qian, who developed their business in China, but he also sighed that he had none of their good luck.

### **2.3 THE TRANSFORMATION OF CRYSTAL MATERIALITY FROM AN INDUSTRIAL PERSPECTIVE**

In terms of materiality, I wondered how my informants viewed or interacted with crystals or semi-precious stones when they worked in TJI. While it pleased the informants to recall the

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<sup>4</sup> A district of New Taipei City locates by the east side of Taipei City.

time between 1970 and 1990 and their relationship with crystals, they did not greatly value crystal. Instead, they all claimed that crystal was not a popular commodity until the 1990s, not even an important material for TJI. As Malong Yu's narrated:

In that period, we did not care about the domestic market and only worked for the overseas orders. Furthermore, we did not hear that crystals are useful for *fengshui*. This kind of saying became popular when more shops started to sell crystals in Taiwan.

This situation changed when the majority of entrepreneurs of TJI moved to and invested in China. From a business or industrial perspective, importers of this period cared more about whether their goods matched jewelry factories' needs of raw material. They also observed that overseas markets needed diverse mineral products for fashion purposes, so they tried to deal with more sorts of semi-precious stones. Even though they had chances to deal with crystal, they only focused on manufacturing and its overseas market.

Entrepreneurs' interactions with semi-precious stones differed with their roles on the global commodity chain. Jewelry trading companies, such as Blanco, were concerned about what sorts of semi-precious stones would be liked by the international markets. Importers, like Lin-Chan Lin, were more concerned about how to find mineral materials with better quality and cheaper prices. Factory managers were more concerned with how to maximize the profit and the output through controlling the production line and the raw material. Developing more efficient equipment, cutting raw materials with less waste, and developing new methods of dyeing were all strategies which worked on the materiality of these semi-precious stones and gave them higher economic value.

While these raw mineral materials were limited, this also became an occasion for examining the relationship between raw material importers and factory managers. This is

exemplified by Shu-Mu Qian, who did not receive enough agate and minerals from his supplier Lin-Chan Lin and he needed to find his own source of raw material in Brazil. In my fieldwork, it was common to hear that importers and factory managers had private social relationships constructed by long term cooperation. For each side, it would be a strategy to avoid the potential risks of business. In daily life, the two sides gave token of appreciation to each other for maintaining the relationship, such as mutually giving gifts on important holidays or the Chinese New Year, and treating each other to meals when a deal was sealed. In this case, the materiality of semi-precious stones is also an indication of the social connections within the commodity chain. Their social connections were not just based on economic exchange but also had a material basis. In this case, the materiality of semi-precious stones is also an indication of the social connections within the commodity chain.

Workers' views of minerals differ from those of entrepreneurs. As in Chin-Bin Chou's example, most workers quit their job in jewelry factories when the factory could not provide ideal salaries. Their incomes were exchanged for payments of crystal, agate, and other semi-precious stones. Their labor force and production were alienated and transformed to the benefit of factory owners.

I could not collect the data to present the accurate gender ratio in TJI between 1960 and 1990. However, according my informants' narratives and relevant studies of Taiwanese female laborers (Kung 1983; Hsiung 1996), it is believed that males and females were responsible for different jobs in TJI. For example, they strung semi-finished products or performed some basic inlaid jobs. In contrast, male workers with strength had better opportunities to deal with heavy materials or do jobs requiring greater strength, such as moving and cutting raw mineral materials. Males also had more chances to use equipment for cutting, polishing or perforating materials.

In addition, my informants claimed that there were some stereotypes attributed to the people working for TJI. In the field of the manufacturing industry, people usually called them “*zuoshihtuoderen*” or “people making stone products”. They were labeled by some features, such as relatively low-education, upstarts, and chauvinism. They were also characterized by their entrepreneurship, especially those running trading and processing businesses. The success of TTGJC, FJMC, Blanco Crystal, iStone, and IAS, as well as each male entrepreneur’s story, has been well spread throughout the present Taiwan crystal shops.

Crystal was not largely introduced for the domestic consumption until the middle of the 1990s. Before this period, outside the TJI, the majority of the Taiwanese people had no experience with crystals. They may have heard about it but there was no well-developed domestic institution for selling these products. Some crystal shop managers told me that a few crystal bracelets were sold in Buddhism craft shops in the mid-1980s. In that period, Buddhism crafts, such as wooden statues of Buddha and Guanyin, worshiping table, became popular for economic development and sold in craft shops which were concentrated on the north side of Taipei Railway Station.<sup>5</sup> Sometimes, these shops sold bracelets manufactured by jewelry factories working for overseas orders. When these factories had some surplus products, they sold them to Buddhism craft shops. These bracelets could have better prices on their tags by claiming their materials were from foreign sources. It would be the earliest opportunities for the Taiwanese consumers to touch crystal products out of the product line. However, it was not common at all. In this period, crystal was not broadly accepted for consumption in the Taiwanese market.

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<sup>5</sup> Usually, Taipei people called that area *Houhuochezhan*, or the back side of Taipei Railway Station. This had been a bustling commercial area because of its position near by the traffic centers, Dadaochen Port in colonial period and Taipei railway station after 1950.

Since 1990, Taiwan has not been an area manufacturing semi-precious stone jewelry. In contrast, it has become the main market of semi-precious stone jewelry or decorations manufactured in China. It is what my informant called “*gongzhang bian shihzhang*” (a factory became a market). While the Chinese jewelry industry started to develop in 1990s, the Taiwanese played an important role for importing crystals from Brazil. In the next chapter, I will discuss how Taiwanese and Chinese businessmen influenced the mining and transaction of crystals in Brazil.

### **3.0 CRYSTAL MINING AND TRANSACTION IN BRAZIL**

#### **3.1 CHIU-SHEN QIAN AND IAS JEWELRY CORP. IN BRAZIL**

Contemporary anthropological research on mining usually does not focus on mining itself, but tries to connect it with other social issues caused by globalization (Ballard & Banks 2003), such as economic exploitation (Nash 1979; Taussig 1980), indigenous labor rights (Heemskerk 2003; Theije & Heemskerk 2009), the change of subsistence strategy (Stewart and Strathern 2002), social responsibility of multinational corporations (Imbun 2006; Welker 2009), and political conflict (Macintyre and Foale 2004; Macintyre 2007). Indeed, mining is not merely a sort of subsistence strategy, but it also embodies the interaction between people and the geological conditions. Further, the transaction of selling the mining products is also a sort of social interaction connecting buyers and miners. Mining and mineral transactions are two sides of a coin and are in a dialectical relationship. To study both of them will help us understand how crystal becomes a *fengshui* commodity.

Crystal mining is the first stage of this global commodity chain of crystal *fengshui* objects. According to my interviews and calculations, over 80% of crystal products which are processed in China and sold in Taiwan are from Brazil. However, Taiwanese consumers' and academics' understandings to crystal mining are quite limited. In fact, gemstone production has become one of the most important aspect of Brazil's economy. Sandra de Brito Barreto and Sheila Maria Bretas Bittar summarize the gemstone industry in Brazil:

Of the 100 or so different types of gemstones found in the country, the most important in terms of production and/or originality are tourmalines, topaz, opals, varieties of quartz (agate, amethyst and citrine) and emeralds. Brazil is also one of the only producers in the world of imperial topaz and Paraíba tourmaline. The country also produces diamonds, rubies and sapphires on a smaller scale. Gem production in Brazil is, for the most part, carried out by prospectors and a handful of mining companies, reducing the capacity of the government to control the production and sale of gemstones. Another factor that tends to drive the industry to operate outside the law is the high tax burden, which is as high as 53% on the sale of jewelry and 25% on uncut or polished stones. Owing to the geographical distribution of gemstone deposits and the enormous size of the country, Brazil is divided into four gem-producing areas. In the Northeast there are primarily deposits of emerald, amethyst, citrine, hyaline quartz, elbaite, aquamarine, garnet, morganite and opal. The Central region is characterized primarily by emerald and diamond deposits, whereas in the South deposits and occurrences of amethyst, citrine, agate and diamond are found. The East is characterized mainly by the presence of gemstones associated with pegmatites and hydrothermal veins, Plio-Pleistocene sedimentary placer deposits and isolated concentrations of diamonds (2010: 123).

In the 1980s and the 1990s, this geographical information was not easy to grasp, especially for Taiwanese businessmen who wanted to purchase crystals or other kinds of semi-precious stones. The Taiwanese preferred to go to wholesale markets in Soledade, Rio Grande do Sul, to purchase what they needed. For example, Fu Jewel Merchandise Co. and Tip Top Gold & Jewelry both went to this city to purchase their products. In contrast, Chiu-Shen Qian selected a different strategy for Shu-Mu and his mineral business.

Chiu-Shen Qian, the owner of IAS Jewelry Brasil and Shu-Mu's brother, was originally working for an architect company. In 1989, he came to Brazil because his brother needed him to

organize the local business. After visiting many cities, he decided to settle down at Curvelo, Minas Gerais, since it is at the traffic center of different mining areas. Before 1994, his main business was helping his brother export agate from Brazil to Taiwan. In 1994, he built the IAS Corp. and started to construct the factory in Curvelo in order to perform some basic processing jobs of products. The construction process was completed in 1996, but the factory's production lines were gradually ended between 1998 and 2001 while IAS's factory in China stepped on the track.

The land Chiu-Shen bought for building residential houses and the factory is located at the margin of Curvelo. Even though it is somewhat far from the city center, there is no worry about the noise made in processing. Furthermore, its location is just by the side of the main traffic roads and allows convenient connection to nearby cities. Between 1989 and 1996, Chiu-Shen also spent a lot of time on traveling around Brazil in order to investigate the distribution of semi-precious stone mines. As Chiu-Shen had great a sense of humor, had good social skills, and loved to share with his friends, he would quickly form a strong network, whether in local elites or mining laborers. By working with each site's landlord or local elites, he also quickly stretched out his business territory.

In the best days of his business, Chiu-Shen built offices in different states in order to invest crystal mining, including Rio Grande do Sul, Minas Gerais, Espírito Santo, Bahia, Pará, Tocantins, Rondônia, Mato Grosso, and Goiás. These offices worked for finding investment targets, conducting mining jobs, and providing logistics for each mining site. He claimed that he had 2500 employees in the peak period and created over 6000 job opportunities in the industry. However, when more and more Chinese buyers from Donghai, Jiangsu Province came to Brazil to purchase raw crystal material, the market spiraled out of control and the profit decreased. As a

result, he decided to close most of these offices in order to step aside from the vicious competition. In 2012, he only left two offices in other states, one in Ametista do Sul, and the other one in Oliveira dos Brejinhos. I will discuss Donghai buyers' business model and their influences on the crystal market in the following sections.

Chiu-Shen enjoyed privilege in mining areas since he invested a lot in them and built strong relationship with the local people. While the Donghai people could not directly visit crystal mines for market factors, his son Jun-Yang held the privilege and could bring me to visit the crystal mining areas. It helped me extremely in conducting direct participant observations in the mining areas. Presently, Chiu-Shen has moved part of IAS's business to raw quartz which will be exported to China for producing silicon sands, which is important material for technical applications.



**Figure 3: The fieldsites in Brazil**

In the following section, I will explore the three crystal mining areas and try to answer the following questions: how Chiu-Shen and his son ran the Taiwanese business model in these three places, how miners conduct mining jobs in different areas, how middlemen do their business for different sorts of crystal products, and how Chinese buyers presently influence the

crystal market in Brazil. The examples will indicate that mining crystal is not just a process of taking the mineral down but also forms a material culture constructed by different sorts of crystals and groups of people.

It was not my original plan to conduct a fieldwork in three different mining areas. My original plan was to stay in Ametista do Sul, Rio Grande do Sul, for two months in order to study how miners conduct their mining jobs for amethyst geodes and lead their lives. I supposed that I would conduct my fieldwork with Jun-Yang who manages IAS's local business in Ametista do Sul. However, when I was arrived there, Jun-Yang informed me that he needed to go back to Curvelo and then go to the office at Bahia. As I mentioned in above chapters, my fieldwork relied greatly on the assistance of IAS Jewelry Corp, especially in Brazil. It was a necessary strategy since the Qian family has been involved in the local crystal business over twenty years and has well developed social networks. At first, I was quite disappointed at the change of my original field plan, since it would be impossible to quickly build my network without his help in a short time. Later, I realized this may have given me the best chance to grasp the crystal mining industry in different areas and give me a relatively holistic picture of it.

### **3.2 AMETISTA DO SUL: AMETHYST GEODE**

Ametista do Sul is a small town located at the north of Rio Grande do Sul. The majority of local residents are the descendants of Italian migrants, so this town still maintains some Italian traditions, such as foodways and the game of bocce ball. Its elevation is 505m, and its current population is more or less eight thousand. Ametista do Sul and Artigas, Uruguay, are the two most productive places for amethyst geode. To collectors, geodes from the two areas have

obvious differences. Artigas' geodes usually are spherical and smaller, and the crystal teeth are smaller and darker. In contrast, the geodes from the Ametista do Sul usually are relatively large, have irregular shape, and lighter colored crystal teeth. Because of this discrepancy, Ametista do Sul's amethyst geodes usually have relatively higher prices than the ones from Artiga in different crystal markets, including Taiwan.

The occurrence of amethyst geode raised geologists' interests. Proust and Fontaine explain the formation and distribution of amethyst geodes in this area:

The amethyst geodes observed in the tholeiitic basaltic flow from the Triz quarry at Ametista do Sul (Rio Grande do Sul, Brazil) show particular wall-layering infillings with, from the outside inwards, celadonite, chalcedony, fine-grained quartz and large-sized amethyst crystals. The primary fluid inclusions analyzed in the amethyst crystals yield a 152 to 238 °C The crystallization temperature range. The amethyst geodes are always located in the massive, fracture-free, basaltic part of the lava flows and surrounded by a limited wall-lining alteration halo, the thickness of which depends on the geode radius. The geochemical balances calculated from fresh to altered basalt in the geode environment indicate that the amount of SiO<sub>2</sub> released from the alteration halo is always sufficient to produce the siliceous rims in the geodes without requirement for extraneous silica supply. The results point to a volcanic origin for the amethyst geode infillings through basalt 'autoalteration' by authigenic high temperature hydrothermal fluids. These fluids can originate from (1) unmixing of volatile compounds from melt through pressure release, (2) cooling to supercritical hydrous fluids with 'autoalteration' of the surrounding basalt and (3) migration of the residual hot fluids from the basalt to the geodic cavities through the pressure gradient between the geodic cavity and the rock (2007: 731).

Local mining history is not as extensive as the geological time of amethyst geode. According to the oral history collected, the mining of amethyst geodes began in the middle of the

1970s. In that period, local people just dug out the geodes from their backyards and sold these geodes to nearby big cities. The supply of geodes was quickly exhausted. The mining industry stopped until the middle 1980s, when local people found amethyst geodes hidden in the underground basalt deposit. Then, the mining industry quickly developed and many professional companies were founded.

It is not difficult to figure out what role amethyst geodes play in this town. Many tourism books and websites suggest it is a must-see for crystal lovers. There is also a museum, called Ametista Park Museum, exhibiting Brazilian minerals and local geodes, which also provides a tour of an underground abandoned mining cave for tourists. In the center of this town, there is a church decorated by tons of amethyst crystal and a tourism center decorated by amethyst as well. There are seven shops selling the geodes and other crystal products for tourists. Almost all mining companies are concentrated at the southeast part of this town. By the side of the factory area, there is the town cemetery. The form of tombs in this town is unique. Local people just called it *túmulo* which means tomb in English. Each tomb looks like a small house for a family. One side has four or five cells for coffins, and the other side functions as a living room decorated with photos of the deceased. One can find that many local people use pieces of a broken amethyst geode to decorate their family's *túmulo*.

There are around 250 mining companies of varying scales in this town. There are over 1200 mining laborers, and most of them are local or from neighboring areas. Usually, people become miners because they have relatives in the industry. Sometimes mining companies also accept temporary workers when they are in a situation requiring large labor forces. Miners work five days a week and typically do not need to work on weekend. Every work day, they start work at 8AM, sometimes earlier, and finish their jobs around 4:30 PM. The mining company provides

food for lunch, which miners need to cook by themselves. Sometimes, miners' wives come to the small building outside a mining cave and cook for the miners or help organize the mining tools. However, women do not conduct mining jobs in the cave. The basic month salary is R\$680 per month. Senior miners could have an extra share when they take down a geode from the basaltic rock. Usually, the share is 20% of a geode's market's price. A novice usually has no chance of receiving this share and only has his basic salary, since they only do the cleaning job of moving out the basaltic waste out of the cave. Sometimes, the foreman of a team may give these novices a little bit of bonus as an encouragement. Letting miners share the value of what they excavated is a strategy of controlling their productivity.

The entrance of the mining area is not by the side of main roads but at the margin of this town. The height of an amethyst geode cave is over 2 meters high and the passage must be over three meters wide for the passing of mobiles. Since basalt is extremely solid, miners usually do not worry about the possibility of a mine collapse. When you look up in the cave, you can see many electronic wires and a giant pipe transporting air into the cave hanging overhead. Outside the cave, there must be some small buildings constructed of wood or concrete. They function as a place where miners can take a rest, place their tools, and store what they just excavated from the cave.

A crystal mining team usually has 5-6 people. One of a team's members needs to have permission to use dynamite for mining. Usually it is the foreman's job. Since almost every mining company is family-based, the foreman is usually from the family and leads the recruited workers' task. The foreman needs to be responsible for maintaining the efficiency of mining.

Protecting miners' health is the obligation of a mining company and the foreman. The foreman needs to have a security check of his miners every morning. Each miner needs to wear a

helmet, heavy clothes, and gloves for protecting the skin. They also need to wear earmuffs and a mask for the noise and dust created by the mining process. Pneumoconiosis was a serious epidemic disease before the 1990s. As for recently, all drillers work with a water pipe. The pipe releases water when the miners drill the basalt rock and takes the dust away, which extremely reduces the rate of pneumoconiosis.

Generally, miners have a similar schedule for managing their jobs throughout a week. On Monday and Tuesday, miners select the direction of mining and use dynamite to explode the basaltic rocks. The most difficult aspect of this job is in deciding how much dynamite is required for each explosion and which direction the explosion should go. Amethyst geodes deposit resembles bubbles unevenly embedded within basaltic rock. The geodes may be distributed throughout a certain layer and the orientation is hard to distinguish.

Half an hour after the explosion, workers start to move the waste pieces of basalt out of the cave. The waste pieces are moved out by the mobiles assembled by miners themselves. Usually, it is a rookie miner's job to clean the cave after an explosion. When they clean the waste, senior miners check the results of the explosion. A part of a geode shell may be exposed on the surface of basalt after an explosion. By observing the surface of the rock, the senior miner, or the foreman, needs to decide whether they can excavate geodes in this round or if they will need another explosion. Sometimes, a geode with good quality would be damaged by the explosion, and it becomes an inevitable loss. The exposed shell of a geode is usually dark green. When part of a geode's shell is exposed on the basaltic surface, miners will also drill a hole through the shell. If there is no such exposed part of a geode's shell, the miner will use a drill to try to drill holes on the rock surface. When a drill suddenly receives no feedback from the rock surface and passes through, the drill has then drilled into the hollow part of a geode.

After making a hole through a geode embedded in the basalt, the miner will stretch an electric wire equipped with a small light bulb into the center of the geode. Some companies tried to use an inspection scope to do this, but they later found that that the LED light on the top of the inspection camera could change the crystal's color on screen. This action allows for a quick check of the geode's value. By the faint light and limited view, the miner needs to decide whether this geode is valuable enough to be dug out. If the geode is found to be not valuable enough, the miners will not deal with it, and it will be destroyed in the following explosion. A broken geode embedded in the rock may be taken as long as it has beautiful crystal teeth. Otherwise, if its crystal teeth are not beautiful or the color is pale, the miners do not extract them either.



**Figure 4: Mining an amethyst geode**

Before a geode is dug out, sometimes the owner of a mining company may invite middlemen to take a look. Usually, only buyers who had a very good relationship with the mining company have this privilege. By checking the quality of a geode through a small hole with a faint light bulb, buyers need to instantly make a judgment about whether or not this geode is acceptable. Actually, it is quite risky of an investment to make, since the real quality of a geode cannot be distinguished until it is cut in half. Even though the buyer checks the quality by taking a look, the quality of the geode is still uncertain. The hollow part could be smaller than predicted, or the tooth may be not as shiny or colorful as they thought. Thus, the middlemen could request the seller to offer a lower price for taking the risk.

The time to extract a geode down depends on its volume. Usually, a small geode will be taken on the day of the explosion, and miners will have another explosion after they dig all geodes out of the rock. If it is a larger geode which requires a longer mining job, miners still try their best to finish their job before lunch time on Friday, because some illegal miners may break the lock on the cave door and dig them out on the weekend.

After a geode is extracted from the basalt, it will be moved to the building outside for temporary storage. The foreman will again check and identify the quality of each geode. After the evaluation process, the mining company needs to pay the miners their share, no matter what the real quality level of a geode is after the cut. It is an agreement among the miners, the foreman and, the mining company. This agreement also applies to the transactions between middlemen and a mining company.

The value of an amethyst geode is decided upon by multiple factors: volume, the color of crystal tooth, the size of crystal tooth, and uniqueness. Besides the size of a geode, the primary factor is color. Geodes with darker amethyst usually have a better price per kilogram than one

with pale amethyst. The size of the crystal tooth is also a factor. If the tooth is too big, the price may be not good.<sup>6</sup> If a geode also has a different sort of crystallized mineral on its crystal tooth, such as calcite, the price will also increase. However, all of these factors are ascertained after a cut. Buyers need to take the risk of potentially buying a geode without good quality and with market value less than the asking price. In Soledade, crystal companies also understand that each country's market has its own preference and likes different types of geodes. However, this is not a very important factor in Ametista do Sul.

Mining company owners usually have the richest information from the front-line markets and know about changes in market prices. Running a mining company also requires knowing each buyer's contact information and what type of geode they may prefer. For example, Rudi, a manager of a mining company, RDC Pedras de Irmãos Capra, told me that his primary client is the Germans, the second one is the Italians, and the third one is IAS. He noticed that IAS prefers to purchase geodes which are middle sizes, not more than 100 centimeters high, and with dark purple color. In comparison, buyers from Italy and Germany prefer to buy larger geodes because there are more collectors or museums in their countries. They also prefer to buy amethyst geodes according to their uniqueness rather than its volume.

Rudi's company is one of the oldest mining companies in Ametista do Sul, and he presently owns two amethyst geode mines. There are over twenty people working in his company and eight are from his family. Rudi's company can be divided into two areas: one for conducting basic processing of geodes, and the other one for storing these products. The processing jobs consist of cutting them in half, beautifying the surface, and painting concrete on the geode's back. A geode which is newly extracted is similar to an egg with a dark green shell.

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<sup>6</sup> Consumers usually like an amethyst geode with small amethyst teeth rather than large ones. It is because the larger teeth usually have paler color and contain impurities.

It needs to be cut in half before the company can decide upon its market price. Cutting a geode in half requires experienced experts to decide the orientation, since this will totally determine a geode's value. A perfect cut should cut the geode exactly in half, producing two perfectly symmetrical pieces.

A skillful and experienced worker could perfectly cut a geode in half without damaging the value of a geode. However, even an experienced worker still has a possibility of cutting a geode with the wrong orientation. It is common to see a broken geode because of a failed cut. Since it is pretty risky process, a company's owner may like to monitor the process of cutting or conduct the job on his own. Sometimes, when it is extremely difficult to make a decision regarding where a geode should be cut, an experienced worker will need to direct a discussion about it and let the owner of the company make the final decision.

Secondly, the geode must be beautified, since at least one half of a geode must have a hole on the shell due to the inspection process in the cave. There, it is necessary to make it up before it is sent to the market. The material of making up is from the broken pieces of other amethyst geodes. A skillful worker needs to use broken pieces with similar color and size of the crystal teeth. Workers need to make up the shell first and then use glue to fix the teeth on. Sometimes, a geode may be broken into two or three pieces, especially when the geode is too large. In this situation, in addition to using glue, it is also necessary to use steel bars and cement to bundle them together on the back side.

The last step is to paint cement on the back shell of a geode. Jun-Yang told me that the outmost layer of a geode is easily weathered, and it is necessary to use the cement to protect the

geode.<sup>7</sup> After the cement becomes dry, some companies will paint it with dark green color which is imitates the color of the shell when it was just taken from a basalt cave.

The waste basalt has become an important environmental issue in Ametista do Sul. Tons of waste basalt is produced every day and all of the waste is placed outside the cave or poured into the nearby valley. It negatively influences the natural landscape. Jun-Yang told me that local government wanted to use the waste basalt to produce bricks. However, the quality of these bricks was not as good as they expected. Consequently, the waste issue is still unsolvable.

Jun-Yang's role in this city is to purchase the geodes for IAS. Compared with most of Taiwanese buyers who purchase goods from the wholesaler in Soledade, Jun-Yang tries to purchase geodes at their origin. By living in Ametista do Sul, he often receive early morning calls from Rudi or other mining companies' bosses inviting him to check a geode still within the rock in a mining cave. It is common for him to check a geode's quality at 6:00 AM before the miners start to work. He told me that Taiwanese consumers prefer middle sized (100 cm) geodes with a deeper pit, so he needs to do his best to buy these products. However, this type of geode is really hot on the market and every middleman prefers it. As a result, he needs to spend much time maintaining the relationships with local mining companies. For example, he needs to play bocce games with mining company owners on the weekends. Bocce games become a sort of social occasion for local people, especially for those running mining companies and middlemen. Every Friday night they get together at the activity center and play the game. Usually, only elders of mining companies can join the game, but they may also invite middlemen to play with them.

Almost 90% of products from Ametista do Sul will be sent to Soledade, a city famous for exporting precious and semi-precious stones in the middle of Rio Grande do Sul. Almost all

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<sup>7</sup> This also becomes a strategy to add weight on the commodity. It will be discussed in following chapters.

mining companies in Ametista do Sul have an office in Soledade or have at least one cooperative company over there. In the late 1980s, IAS and other Taiwanese jewelry companies bought most of the agate material in Soledade and imported them into Taiwan. As this city is famous for diverse sorts of semi-precious and precious stones, when Taiwanese importers or businessmen from other countries travel there for business, they also like to take advantage of this opportunity to purchase other sorts of crystals. Consequently, mineral companies in Soledade also collect crystals and other sorts of semi-precious stones.

Similar to other wholesale centers, dealers selling semi-precious in Soledade usually do not allow clients to only pick the items they like and prefer to sell goods in which upper level goods are mixed with lower level ones. Dealers usually classify amethyst geodes into three levels if buyers want to buy small amounts. When buyers want to buy a large amount, sellers usually mix geodes of different levels. This is a strategy to avoid having no sale of lower level geodes. However, if the buyers insist they only want to purchase a large number of upper level geodes, the prices will be much higher or the seller will reject this business. The amethyst geodes which undergo the transaction process will be put into iron barrels; the insides are filled with shredded newspapers for protecting the goods. The numbers of geodes within an iron barrel depends on the size of the geodes. Usually, an iron barrel can have 250~300 kg of geodes. I also saw a standard shipping container with 20 tons which was filled with geodes and shredded newspapers, but such a case was rare in my fieldwork.

### 3.3 CURVELO AND INIMUTAB: WHITE QUARTZ AND GREEN-PHANTOM QUARTZ

Curvelo is a city in the middle of Minas Gerais State, and Inimutaba is a small town 10 minutes east of the city. According to geologists' research, the State of Minas Gerais is the largest producer and exporter of gemstones in Brazil and is responsible for 74% of the official production, which includes imperial topaz, beryl, tourmaline, spondumene and brazilianite (Barreto and Bittar 2010). In the 1980s, this area was famous for the production of silicon sand. Presently, Curvelo is famous for its production of hyaline quartz crystal and green-phantom (chlorite)<sup>8</sup> crystal. The richness of semi-precious stone minerals is one of the reasons Chiu-Shen Qien selected Curvelo for developing his business.

In past twenty years, the landscape of Curvelo has been changed a lot in response to the crystal business. Presently, there are many crystal dealers' storehouses along the road in the southwest area of Curvelo. Regado, Chiu-Shen's secretary, told me that there were no middlemen's storehouses built along the road. In the late 1980s, the factory which was located at Inimutaba and produced silicon sands closed just around the time when Chiu-Shen and his brother visited the city. A lot of factory workers who lost their jobs in that period became crystal miners.<sup>9</sup> After that, many crystal storehouses run by middlemen were built along the roads in southwest Curvelo. .

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<sup>8</sup> Chlorites are a group of phyllosilicate minerals and usually found with hyaline quartz crystals. Many of them have green ingredient inside and looks like a crystal covering other crystal layers, so that is also called green-phantom. To miners and middlemen in Curvelo, this type of mineral is called *lodu verde*. Chinese and Taiwanese translate its English named and just call it *luyulin*.

<sup>9</sup> My informants in Inimutaba told me that almost 1300 factory workers lost their jobs in that period and transformed to become crystal miners. But the accurate number is difficult to find.

In this area, there are four large middlemen's storehouses. Compared to the middlemen in Inimutaba, middlemen in Curvelo prefer to collect diverse sorts of crystals to suit the buyers' demands. In addition to middlemen's storehouses, Chinese buyers also concentrate on the southwest side of Curvelo. Compared to Chiu-Shen, who has settled down at Curvelo, Chinese buyers usually choose to stay in a hotel or rent a house when they stay in Curvelo. Along the road BR135, there is an area which is called "*bairro da chineses*" (neighborhood of the Chinese). Some Chinese buyers who have become rich through their crystal businesses like to rent houses long term over there. In addition to these storehouses, there is also a custom broker in this area who deals with the relevant paperwork for exporting crystals and other sorts of semi-precious stones.

There was no official statistic about the number of miners in this area, since most of the crystal mining jobs in this area are all under the table and there is no regulation forcing miners to register their miner status. Furthermore, miners often move among Curvelo, Inimutaba, Corinto, and other neighboring cities; where they live may differ from where they mine. However, according to local crystal middlemen's calculations, the present number could be 1500-2000 and increasing.

Mining in this area is usually conducted by individuals rather than by companies. Miners may work in pairs, and a team is rarely over five people. The exploration is the most difficult part. To independent miners who have no contract with middlemen and landlords, they usually need to illegally enter some private land or land belonging to the state in order to find the exposed crystal vein. If miners find a crystal vein in a field, then they have to illegally enter into these for a period until they excavate off the crystal vein. Even though most of these lands are extremely vast and landlords may not regularly patrol their lands, miners still have the possibility

of encountering them. Sometimes, the landlords whose lands are invaded will use rifles or dogs to expel these crystal miners. All miners who I interviewed had experienced being pointed at by landlords' guns.

Some landlords who understand the local crystal market may like to directly work with miners since they do not want to pass through the complicated process of applying for a mining concession. For examples, Jun Yang took me to visit an open-air crystal mining area hidden in a private land. The landlord put a sign on the gate of this land: "Man R\$ 10/Day; Woman R\$ 5/Day". But the ratio of legal mining is extremely low. All middlemen told me that there are no legal crystal mining projects in this area.<sup>10</sup> Because of this, most miners only use basic tools, such as shovels and pickaxes, to avoid getting the attention of police and IBAMA (*Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis*, or Brazilian Institute of Environment and Renewable Natural Resources).

Local miners usually go to work in the early morning, even before the sunrise, for multiple reasons. First, their mining fields may be far from Curvelo and Inimutaba. The hyaline quartz crystal and green-phantom crystal in the nearby area has almost been completely extracted, so miners need to find crystal veins in other nearby areas. Recently, the field of the southern city, Paraopeba, has become the miners' target, and many miners from Inimutaba and Curvelo have tried to excavate crystals over there. Secondly, as they need to excavate the crystal in an open-air field, miners prefer to start their daily work before the temperature is too high. Thirdly, going to work early also allows them to easily avoid encountering the landlords and the resultant problems. These independent miners also finish their daily jobs without a fixed end

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<sup>10</sup> According to the latest information from my informants, this situation is changing. From the end of 2012, the governments of Minas Gerais and Bahia have started to push local middlemen to organize union or association in order to regulate the illegal mining. It's influences on miners and crystal transaction is still unknown and will be my future research topics.

time, but most of them like to go home around 4PM. Sometimes, if they cannot find an exposed vein, they may just go home and then come back to search the other area the next day. When they come home with crystals, they also need to spend a while to take off the undesired part of each piece.

Miners usually learn how to mine from their families. Fathers or other elder male relatives usually bring their young boys to take part in the mining jobs. This causes male miners to step into mining industry very early. In order to understand the impact on teenagers, I interviewed the president of the public school in Inimutaba, Mr. Adelmilton. He informed me that most male teenagers will drop out from school if their fathers are crystal miners. In total, this school has almost 800 students, and there are 120-150 students from miner families every year. Almost all boys from miner families decided to drop out from school when they are thirteen years old, and the girls usually choose to stay in school in order to continue their education. These boys go to work with their father and have their own profit share when they have enough strength to do mining job. Since making money by selling crystal is relatively easy, most of these boys select not to back to school again. Mr. Adelmilton worried about these boys' futures since the market is hard to predict and no one knows what will happen ten years in the future.

How easy is it to earn money with this crystal mining job? A first year middle school teacher's monthly salary is R\$1200, but a miner could have the opportunity to earn that in one week. Even though the income is not stable, it is still relatively higher and they do not have to pay taxes since all transactions are under the table. That is the reason many local people quit their original jobs and choose to become crystal miners. During my investigation period, I met three miners; one worked in a glass factory and two were hydropower mechanics, and they all told me that their present income by selling crystal was much better than their previous income.

However, as local middlemen and Chiu-Shen told me, young miners usually don't know how to manage their money and usually do not have a long-term financial.

Miners' subsistence depends on the crystal market, so they have been very sensitive to its change in past twenty years. Many miners and middlemen told me that there used to be no market for green-phantom crystal at all. Davide, a middleman who was also a miner many years ago, told me: "Before, we only excavated white crystals and knocked out the green parts since the middlemen did not buy it. Now, the market has changed. The green ones have become more valuable than white ones. I think the Chinese market is one important factor." Some miners also told me that if they see hyaline quartz crystals and green-phantom at the same time, they only take the green ones, which have higher value.

Chinese buyers from Donghai have become the most dominating buyers in this area. According to Chiu-Shen and Jun Yang's calculation, there are always 20-30 Chinese buyers staying in Curvelo for crystal-related business. Every year, they come to Brazil after the Chinese New Year and then come to Curvelo to purchase crystals. They usually stay less than three months at a time.

Chinese buyers usually form small circles for exchanging information and have their own social lives. Some of them have a good relationship with the Qian family. For example, Lan-Ai Yin's first travels to Brazil in 2007 were to help a crystal dealer in China. During that time, she could not speak any Portuguese and had difficulty conducting her business, but she still needed to stay in Curvelo for three months. When the Chinese New Year came, she had no place to go and could only cry in front of the hotel where she stayed. Chiu-Shen Qian and his son saw her crying when they drove through Curvelo, and they invited her to enjoy a dinner at home with them. Since that, Lan-Ai became a Qian family friend. Later, Lan-Ai started her own crystal

business in 2009 and then came to Brazil once or twice every year. Through the Qian family and IAS's assistance, she can apply for a business visa and stay in Brazil longer. In my fieldwork period, I also met other Chinese buyers from Donghai who came to visit the Qian family, such as Min Dai and Xiao Yang. Since the Qian family plants a lot of Asian vegetables in their yard, their Chinese friends usually come to pick some for cooking or making Chinese foods and dumplings.

Except when buying crystals, most Chinese I knew of or I heard of did not fit into the local communities of Curvelo. They preferred to stay at the houses they rent and use the internet to watch free TV drama series online. Their purchases rely greatly on their drivers, because they cannot drive in Brazil and need to go different places. Thus, there are more or less 40 drivers working for Chinese crystal buyers in Curvelo. Even though they do not have formal contractual relationships with Chinese buyers, they usually work with those with whom they are familiar. Sometimes, if two clients come to Brazil at the same time, they will recommend other drivers for a job they could not take. In addition to driving, drivers need to collect information about the middlemen's products' conditions. Most middlemen have drivers' phone numbers instead of the Chinese buyers' phone numbers. This is reasonable, because Brazilian drivers know the Chinese buyers' contact information and always stay in Curvelo. Thus, middlemen often inform these drivers that they have new goods for selling and drivers then inform their employers.

Each Chinese buyer may have his or her own purchase preferences. For example, Min Dai and Chao-Xu Lin like all kinds of crystals, but Xiao Yang only focuses on green-phantom crystals. While Min Dai and Chao Xu Lin drove to some cities far away from Curvelo for diverse sorts of crystals, Xiao Yang only spent his time on looking for green-phantom crystals. This is because their partners and clients differ in Donghai and need specific types of minerals.

However, all of these Chinese buyers like to buy big pieces of crystal for their potential value as sculptures.

The Chinese call the transparent part of a crystal “*rou* (meat)”. I often heard them complain that “these all lack meat,” which meant that they thought the crystals lacked a transparent part or that the transparent part was not big enough. I remember that Xiao Yang showed me a large piece around 12-inches high, 7-inches wide, and 5-inches thick and told me, “Look at this. It has a lot of meat. I will make a lot of money off of this.” He said that he spent US\$600 on this piece but he estimated that it will be sold for over US\$2000.

Middleman is called *atravessador* in Portuguese. Middlemen’s role in Minas Gerais differs from those in Ametista do Sul. Middlemen may have different strategies for collecting goods. If a middleman’s business has been developed into a big scale and has enough capital, miners may bring their collections to these middlemen’s storehouses for selling. Some smaller middlemen may directly go to miner’s residences to buy what they like to collect. The latter is a strategy usually used by a new middleman who has just stepped into this business, since he has not yet developed a mature network of miners. Usually, a middleman needs at least 40 miners to support his business in order to have sufficient goods to respond to the demand.



**Figure 5: A crystal storehouse in Curvelo. The left is the middleman, the middle is miners and their families and the right is the buyers from Taiwan and China.**

Having stable sources is the first concern of middlemen. Since there is no contract existing between miners and middlemen, miners could just choose a middleman who pays more than others. This causes competition among middlemen, and they all need to find a strategy to maintain their relationship with their miners. Some middlemen actively provide the miners tools, such as shovels, pickaxes, or small hammers (for removing the waste part on a mineral). All miners also know that they can borrow some cash from middlemen and they can provide crystal in return. If the loan is large, middlemen also allow miners to have an installment plan. By this, miners can have income and make repayment at the same time.

Many middlemen were crystal miners before. Since they already have enough knowledge of mining and have a certain understanding of the market mechanisms, they choose to give up

their mining jobs. Alternatively, when a miner is over forty years old and his health condition does not allow him to mine further, he may also consider becoming a middleman. However, not every middleman is successful. My informant Valte, one employee of IAS, told me that he knew many people who tried to become middlemen in Inimutaba but failed. Most of them failed because they could not catch the fluctuations of the market.

Each middleman has his own way of organizing his space. Here, I want to provide an example of a middleman named Vinicio. Through this example, we can have a better understanding of how a middleman runs his company and its relationship with miners and buyers.

I went to this middleman's storehouse with Lan-Ai Yin and her nephew Chun-Feng Yin. She and her nephew arrived at Curvelo on May 10<sup>th</sup> and quickly started their purchase job. I joined their purchase and used this opportunity to conduct participant observation. On that day, their business visits were only in Inimutaba. In the first storehouse at which they arrived, the middleman was not there and there were only a few workers were cleaning goods. Later, they drove to the Vinicio's place. Before we entered, we saw people in a line waiting for Vinicio to purchase their crystals.

Vinicio's place could be divided into four areas: transacting, cleaning, classifying, and knocking out the needless. In the transacting area, Vinicio checked what miners brought to him. He used a small hammer to get rid of the needless part of the crystal. When he did this, the miners' faces had obviously unhappy expressions, since the miners usually had already done this at home. Each of Vinicio's knock on the goods just meant that they would earn less today. However, I did not hear any argument. Regarding the price, a green-phantom is generally more expensive than a hyaline quartz crystal of the same size.

After Vinicio bought the crystals from the miners, he moved all to the table behind the transacting area. There were four women working there. Their job was quite similar to what Vinicio did when he first bought the crystals. They checked the crystals again and used a small hammer to knock off the needless part of each crystal. After finishing this, all crystals were moved to the cleaning area. Over there, the workers cleaned off the dirt and dust on the minerals with a powerful jet of water. Then all crystals were moved onto a table by the side. On both sides of the table, there were three rectangular plastic baskets on the ground. This indicated that all goods are divided into three levels. One worker on each side checked the quality and volume of each crystal and placed them into different baskets according to each one's level.

The basic standard of classifying hyaline quartz and green-phantom crystals is according to each crystal's ingredient, size, and transparency. Basically, the price is not high when a group crystal is small and only good for making beads for jewelry. If it is a large piece, indicating potential use for sculpture, the miner could bargain a higher price. The price of a large piece could be multiple that of small pieces. Therefore, every miner hopes to dig out large pieces rather than to collect many small pieces at one time.

There are different types of middlemen. Some middlemen collect and sell all kinds of crystal, but some only deal with one or two sorts of crystals. It depends on the capital a middleman owns. Some sorts of crystal are pretty rare and expensive, which people who are new to this industry could not manage. Vinicio is the type who only focuses on green phantom crystals and hyaline quartz, which are relatively cheaper.

Lan-Ai's visit to Vinicio's storehouse took her one hour. During this visit, she checked all goods which Vinico collected from miners, but she could not find goods meeting her demands. After this visit, she also went to other middlemen's storehouses but, again, could not

find what she needed. Thus, she decided to go to north the next day to try to buy some rutiled quartz in Oliveira dos Brejinhos and Novo Horizonte, Bahia.

It is interesting that Chinese buyers do not try to directly buy crystals from crystal miners. In my local fieldwork, I joined Chinese buyers' purchases many times and they only tried to do business with middlemen and never thought of the miners. Sometimes, Chinese buyers and Brazilian miners would come across each other outside of a middleman's storehouse, but they did not have any interaction with each other. My Chinese informants told me that miners also do not like to do business with them. To them, it is also more convenient to purchase crystals from middlemen.

I would like to say that the *atravessador's* job is not only to collect crystals from miners and then sell them to buyers, but also to act as a mechanism that coordinates the diverse demands from the miners and the buyers, and the role has become even more important now that Chinese buyers have become the most important buyers. To local miners, buyers from China or other countries are extremely unpredictable. Basically, Chinese buyers from Donghai came to Curvelo seasonally, but they could not come back if their domestic businesses fail. Otherwise, Chinese buyers are well known for being fastidious and like to kill the price. If a miner is not sensitive to the fluctuation of the local crystal market, Chinese buyers will try their best to request a very low price which might be much lower than the average market price. Doing business with middlemen helps local miners avoid these issues.

Chinese buyers also prefer to do business with middlemen for efficiency. Chinese buyers usually come to Brazil once or twice a year and stay in Curvelo for one or two months. Most of them came to Brazil as independent buyers rather than purchasers of large corporations, so their

capital is limited.<sup>11</sup> To them, it will be inefficient if they spend time on building their own mining team or connecting with local miners. Moreover, from Chinese buyers' perspectives, they think these miners do not understand what they need and may not bring them enough crystals.

Because Chinese buyers and miners respectively have their own concerns, the *atravessador* becomes a necessary mechanism to coordinate the two sides. On the one hand, it promises miners that their products have a place for selling and that the price will stably rise. On the other hand, it also provides efficiency when Chinese buyers come to purchase what they need.

### **3.4 OIIVEIRA DOS BREJINHOS AND POÇOS: GREEN RUTILATED QUARTZ AND QUARTZ**

Oliveira dos Brejinhos is a town in the middle of Bahia State. According to geological reports, the State of Bahia produces mainly emeralds, amethyst and aquamarines (Barreto and Bittar 2010). IAS noticed this city's superiority of location and then decided to have an office here for managing local business in 2004. Not coincidentally, the other Taiwanese company, Stoneking Mineral, also has an office in this town. The two companies basically do not have any interaction with each other even though both have Taiwanese bosses.

Kuo is the manager who deals with IAS's local business, including mining projects and looking for potential crystal mines. He usually interacts with local miners and asks them about

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<sup>11</sup> In 2012, one corporate in Donghai, called Jinmiao Corporate, supported by investors from Beijing, started to send many experienced crystal purchaser from from to Brazil. In Curvelo, they were called *gaviza azul* (blue shirts) since they always dressed in blue uniforms. Even though they had abundant capital, they only focus on purchasing crystal instead of investing in mining.

their mining experience. His wife, Emanuela, who was an elementary school teacher, is also working for IAS as an accountant now. She cooked for us during our stay.

The second day of my stay in that town, Kuo took Jun-Yang and me to visit a quartz mine cave located in a hill of the town's south side. The purpose of this trip was to let Jun-Yang check whether the mine cave is worth an investment. I also used this chance to experience how IAS and local people search for a crystal mine.

The landscape reminded me my travel in Arizona filled with bushes, rocks and cacti. En route, we met a man who was searching for a crystal mine. This man only brought one shovel and one pickaxe and as headed down to search for crystals. Kuo went to greet, and they had a conversation behind the bush. Kuo then came back and told us that the man is a professional explorer searching for a crystal mine and heard that this area still has some crystal good for mining, so he came to have a try. Kuo told us that it is common to meet people searching for a potential crystal mine. These searching jobs are illegal since it involves invasions the landlords' private land; however the land is too large and the landlords cannot monitor every corner of the land. As a result, many landlords know their lands may have crystals after these illegal miners finish their jobs and leave the empty cave without backfilling.

After another minute of walking, we passed through a breach in barbed wire fence and had walked for 15 more minutes. Then, we climbed a large rock. By the side of the large rock, there was a crack which was the entrance of the mine cave. The cave was funnel-shaped and 8 meters deep into the ground. Kuo led us to clutch the rope and rappel down to the cave's bottom. The entrance was the only vent of the cave, so there was poor air circulation inside. This caused the temperature inside the cave to be very high, especially the outer rock had been exposed to the sun for a long day. The air was filled with a disgusting stench. Jun-Yang told me that was the

smell of bat droppings. My body temperature rose quickly, and I could not stop sweating. It is difficult to imagine how a miner works in such an uncomfortable environment.

Kuo used a powerful flashlight to illuminate the cave and explained. According to the scale of the cave constructed by manual force, the mining process may take over half a year. From what he heard, the illegal miners dug out a very large piece of green-phantom crystal and earned a lot by selling that. Kuo led us to step in the deepest corner of the cave and used the flashlight to illuminate the rock. What was surrounding us was all white quartz with perfect white color, good for industrial purposes. Jun-Yang checked the quality of the quartz and had a satisfied smile on his face, and he told Kuo that the quartz's quality is good and tries the best to obtain the mining contract with the landlord.

During the period of my visit, IAS was also busy mining quartz and green rutilated quartz, which is also a sort of semi-precious stones, at two different sites. It is obvious that the mining process and miner's lifestyles differed from each other. IAS's quartz mine was located at another hill of Oliveira dos Brejinhos. Since the deposit was pretty thick, the use of dynamite and heavy machinery was necessary. Due to the inconvenience of transportation, all miners need to stay in the mining area five days a week. Thus, they built a shelter by the mining site. Every Monday, Kuo transports food materials and water to them. However, the miners rely upon bacon they make themselves as the source of protein, since they do not have enough power for a refrigerator. They hang the salted meat on tree branches to prevent the dogs from eating it. In the shelter, they have basic bedding. Usually, they start work in the very early morning, just like the miners in Curvelo. They finish their daily mining job around 4PM and then use the time before the sunset to divide the quartz according to their color and size.

In a small nearby village called Poços, IAS was also mining for green rutilated quartz. This area is a flat terrain. Since most green rutilated quartz is deep underground, mining it requires heavy machinery to damage the rock and to dig vertical mining holes over four meters deep. When I visited, there were over 15 mining holes in that mining area. Miners at the bottom were excavating, and the waste earth was lifted by pulleys and put down on the side ground.

IAS built a house for its miners. In the house, there were bedrooms, bathrooms, a kitchen, and a living room with a TV. Miners also planted some vegetables in front of the house. Kuo brought food materials from Oliveira dos Brejinhos every two days. Compared with others miners I knew, the quality of life of these miners were much better, and it may be the reason why they liked to work for IAS.

Both mining teams were from Minas Gerais, and all miners have worked for IAS for a long term. Even though they do not have a contract with IAS, but they come to work for Chiu-Shen when they receive a request. Miners all have one month of vacation every year. IAS arranges for them to have this vacation in the summer, which is the rainy season and dangerous for mining crystal. In this period, miners usually go home and do some agricultural jobs.

In Poços, there was also an argument that happened between IAS and an old man, Pedo. Pedo was IAS's local partner who used his name to apply for the mining concession from the government. Chiu-Shen promised him that he could have a share of the products of green quartz from the mining field. One day, Jun-Yang told me that he needed to have an argument with Pedo since he sold the green quartz without informing him or his father first. This broke the agreement and may bring negative influence on the employee management. In the end, Pedo did not show up and the issue could not be solved before we left. Through this, it was obvious that IAS and Pedu had different attitude to the crystal product. Their social relationship is constructed on the

production of the green rutilated quartz, and as such the relationship could also be damaged by this.

### 3.5 NOVO HORIZONTE: RUTILATED QURATZ

Novo Horizonte is a small town in the northeast Bahia State which requires four hours drive from Oliveira dos Brejinhos. Chinese buyers usually call this town “*taijinchen*”, or “the city of rutilated quartz”. Rutilated quartz is a sort of crystal with fine, embedded needles rutile, a mineral made up mostly of titanium dioxide. It looks like golden hairs or needles embedded inside a crystal, so miners and middlemen just call this *cabelo rutilado* (rutilated hair). The quartz with rutile inclusions are usually grown from the pegmatite or metamorphic rock fissures. This sort of mineral can be found in its town’s territory within a radius of two hundred meters. Since the rutilated quartz has very good price in China’s crystal market, there are always 30-50 Chinese buyers from Donghai staying in town and waiting to purchase it. In addition to rutilated quartz, this area also produces hyaline quartz and citrine. IAS set up an office here in 2000, and Jun Yang was the manager for the local business. However, IAS retreated from here in 2008 because of more and more competitive business.

The mining of rutilated quartz not only brought Chinese buyers to town but also changed the landscape. On a nearby mountainside area, I witnessed that there were plenty of *barracão* (tent), which is where miners have rest. Jun-Yang told me that there were only 50 tents on the hill in 2005, but there were over 200 tents in 2012. Assuming 5-6 miners for each tent, there were over 1000 miners working underground for excavating rutilated quartz at the same time.

Mining in this area is conducted by teamwork instead of by independent individuals. The mining team needs to become subcontractors and share the benefits with the landlord. The leader of each mining team is called *chefe de garimpo* or the chief of mining. He needs to purchase the mining permission of a specific area from the landlord who owns the mining concession from the state. In fact, it is also risky to choose a land for mining since the productivity is unpredictable. For example, Wonderçon, a mining team leader who worked for IAS at Novo Horizonte eight years ago and became a mining team leader in 2008, told me that he bought the mining permission from the landlord and recruited his own team. Even though there is no formal contract documentation between the landlord and him, he needs to pay the royalties to the landlord every year. Otherwise, the landlord also has a 10% share of the benefits. However, in the first one and half years, his team could not find any vein of rutilated quartz and until they had some progress in 2012. By estimating the current price of rutilated quartz, Wonderçon expected that he could start to have profit in the second half of 2012. Even though the profit would not be guaranteed, Wonderçon just smiled and said: “it is mining.”



**Figure 6:A vein of rutilated quartz and a crystal miner in Novo Horizonte**

Mining rutilated quartz can be done in ways: digging a vertical well from the ground or building a horizontal mining passage from the mountainside. Compared to mining in the other areas mentioned above, the excavation job here is relative dangerous for the geological condition. The pegmatite rock is not as solid as basalt which seriously influences the mining process. First, the passage is quite narrow and is only one meter wide. This is because the mine will easily collapse if the passage is too wide. Furthermore, it is also impossible to use piping to transport air into the mine; miners also need to drill holes from the ground to the mine passage in order to maintain the air circulation in the cave. Third, miners cannot rely on heavy machinery and dynamite, also in order to avoid collapse. This enhances the difficulty of mining since they

can only use basic tools. Fourth, they also cannot work in rainy days or a raining season when the possibility of collapse is extremely high. Moreover, the dust caused by the mining process is filled with silicon dioxide, which may cause pneumoconiosis in the long term, so it is necessary to wear a mask when a miner works inside.

Except for local miners, a lot of miners are from nearby cities, even from other states. From Wonderçon's saying, in the period of my visit, many miners who were mining for emerald moved to this area from other cities of Bahia since the government banned the illegal excavation of emerald mines. After a daily job, most miners just sleep in the *barracão* to save money. On the weekend, they will leave the mining area and visit the city or go to their friends' homes in town.

In this town, dealers selling rutilated quartz could be professional middlemen or each mining team's leader. Jun-Yang told me that only few leaders of mining team did business with Chinese buyers since they need to spend a great amount of time leading mining jobs. In contrast, local middlemen focus on the transaction of crystal. There were more or less twenty middlemen in this area. Their main job is to collect what mining teams excavate and sell these products to Chinese buyers in town. Therefore, they need to go to the mining areas to collect rutilated quartz and try to find buyers in town.

Compared with those in Cuvelo who only stay one or two months, Chinese buyers in this town usually choose to stay longer because the product is extremely rare and valuable in China's crystal market. Most of them rent rooms in one of the two local hotels and few rent houses in town. In addition to buying foods from local markets and grocery stores, Chinese buyers also rely on the food materials which are ordered and transported from the Chinese supermarket in San Paulo.

Wonderçon informed me that the Chinese are not allowed to enter into the mining areas. He explained: In 2010, there were around 50-60 Chinese buyers staying in Novo Horizonte and they kept announcing that they needed more rutilated quartz. The production did not meet the demand since the Chinese buyers were too many. In particular, the large piece which is good for carving sculptures was extremely rare, so Chinese buyers even entered into the mining area to try to directly to buy crystals from the mining teams. This caused some fights between Chinese buyers, even between Chinese buyers and crystal sellers. Because of this, all crystal dealers formed an agreement that no Chinese were allowed to enter the mining area and all business needed to be conducted in town. They decided to have an auction for solving this problem. In mining team leaders' mind, this would be also a good strategy to manipulate the price of the crystals by making Chinese buyers bid with each other. However, after conducting the auctions a few times, crystal dealers noticed that this strategy did not work anymore. This was because the Chinese buyers also formed an agreement that they set up a standard price when they saw the crystal and let each buyer takes the auctioned crystal in turn. In the auctions, those Chinese buyers spoke dialect to communicate with each other and prevent Brazilians from knowing what they were communicating about, and the selling price was not as ideal as their original expectations. After a while, local dealers stopped the auctions since they could not achieve their original goal of manipulating the price.

Recently, the crystal sellers had changed their strategies. Instead of facing all buyers at the same time, they invited one Chinese buyer at a time to see the goods and they let them offer a price for the rutilated quartz. After knowing how much the buyer would like to pay, the dealer allows the buyer to depart and invites another buyer to come and offer a price. The dealer informs the next buyer of the price given by the previous buyer, in order to raise the offer. The

dealers would repeat this process until the price cannot be raised any higher. Compared to a collective auction gathering all buyers, this strategy costs more time, but the final price is better for the sellers.

### **3.6 CRYSTAL MINING AND TRANSACTION IN BRAZIL**

In above sections, I have presented how the local crystal mining industry and transactions have been developed in each area of crystal mining and transaction. This is definitely a result of globalization, in which we see that Brazilian crystal mining has been an important part of the global commodity chain and that this chain also influences the local societies. In each location, not only local miners and middlemen but also average people, all need to adapt to the change caused by this global commodity chain.

Anthropologists have claimed that the mining industry may bring social issues. It is obvious that the most direct impact is on economic dimension. As a subsistence strategy, mining relies greatly on natural resources which will be exhausted one day. I quite worry about the miners' lives in five or ten years. Since all these miners heavily rely on the natural resources of crystal, they will encounter an economic crisis when no more crystals can be excavated out. Presently, they are enjoying the bubble economy brought by the crystal market in China, but the future of the market is hard to predict. Min Dai, the Chinese buyer from Donghai, told me that the price of crystal is almost as expensive as that of gold, but crystal cannot replace the financial function of gold. Thus, he predicted that the bubble will break in near future.

Marieke Heemskerk (2009) tries to answer the question "why do people become small-scale miners?" By studying gold miners in the Suriname rainforest, Heemsekerk argues that it is

because miners' greater tolerance of risk increases the duration of a person's mining career. His qualitative data suggests that the occupational choices are primarily shaped by local barriers to human capital development and by national economic volatility. Furthermore, given their marginal position in society and the multitude of mining risk mitigation strategies, it is questionable whether gold mining exposes the Suriname forest people to greater risks than other subsistence alternatives (2003: 267). I would not deny that attitudes regarding risks may decide whether people become crystal miners or not, but my ethnographic data indicates that the economical mechanism of mining and the booming market of crystal are also important factors pushing people to become crystal miners.

Crystal mining, or any sort of mining, is a sort of economy based on selling miners' labor force and miners directly receiving the payments from what they mine. The immediate reward for physical force is lucrative and tempting when the market is booming. In miners' eyes, crystals represent economic value and compensation for their physical hardwork and exertion in mining. A lot of miner informants told me that they could spend four fifth of what they earn drinking alcohol per week. This issue is more serious in young miners, and a married miner who has his own family may change this attitude because of his responsibility to family.

I would like to say that crystal miners in Brazil are imprisoned into a trap constructed by cash. Since it is easy to make money by mining and selling crystals, miners lack a long term financial program. There are also other exterior factors. For example, almost all miners have no interaction with banks since they do not like the Brazilian bank system's high service fees and presume the bank system is not an efficient institution of property management.

By interacting with miners over 20 years, Chiu-Shen told me that all miners are looking for "*caldeirão*" (cauldron), which means a giant cluster of crystals or ore body. By distinguishing

the direction of “*veia*” (vein), the deposit, miners may have a chance to find such a giant cluster of crystal and could make a great profit off of it. However, it is extremely unpredictable without better technology. Average miners only rely on their experience and fortune to look for it. Just like Sahjin, a miner in Inimutaba, said: “*garimpo depende sorte* (mining needs fortune).” He had an experience in which he only found very few green-phantom crystals for three consecutive months and needed to borrow money from the middleman for living expenses. However, in the period of my fieldwork, he could earn \$900 per week, which is more than his siblings working in factories earn.

This corresponds to Chiu-Shen’s saying: “these miners are ‘rich for one day but poor for one year’. “Mining is like using drugs. The feeling of digging out a big piece is really addictive. Miners are easily addicted to it.” In general, miners in different areas all have this expectation of finding a big piece. As long as they could find a *caldeirão*, they not only resolve their financial problems but have a chance to become extremely rich immediately. They enjoy the sense of accomplishment from mining a *caldeirão* and willingly accept the relatively poor days. It also corresponds to Theije and Heemskerck’s saying about the gold miners in the northern Brazil: “once you are captured by the *garinmpo* (mining), you cannot leave again (2009: 20).”

Chinese buyers from Donghai are the most important factor in causing the recent changes in the crystal market in the past five years. Because of them, Brazilian crystal has been transformed from a “buyer’s market” into a “seller’s market”. Before, when only a few Taiwanese and other foreign buyers were purchasing, the crystal was oversupplied. After the 2007, when more and more Chinese buyers entered into the market, crystal product has become in a short supply and the price has been rising. IAS has gradually retreated from the crystal market since 2007 because of the increasingly competitive market. Chiu-Shen informed me:

Before, transacting crystals brought me profits. The price we sold was multiple times higher than the purchase cost. However, we did not necessarily earned a lot. IAS is a company and I have to pay a lot of bills to run it. Those Chinese buyers only come to Brazil for few months, and their cost is much less than mine. The Donghai people could give higher prices than me. But I cannot do that. Donghai people will buy crystals if they can have 10% profit, even lower. Sometimes I wonder if they know how to do business.

Even though Chinese crystal buyers' influence on the global economy may not be as serious as some multinational mining corporations (Ballard and Bark 2003), the capital which they bring into the market is still determinative of the market. It is obvious that the competition among Donghai businessmen has changed the Brazilian crystal market, even miners' lives.

In terms of materiality, it is obvious that we should not just generalize all sorts of crystals' mining and transaction and claim that they constructed the same materiality as the people associated with them. Miners, investors, landlords, Chinese buyers, Taiwanese buyers, even the state all have their own ways to interact with the mineral. Even though they are not geologists acknowledging crystals with scientific training, they have developed their own pragmatic knowledge of it. Furthermore, each group's interaction with crystals has formed a specific field (Bourdieu and Johnson 1993) and influences the other groups. All of them shape the material culture of crystal on the initial end of the GCC which produces *fengshui* commodities.

Miners need to deal with diverse sorts of geological conditions in order to successfully complete their jobs. The same sort of mineral may have different vein directions or appearances within the rock in different areas due to the local geological conditions. Miners' knowledge about each sort of crystal is constructed by the mining process. They need to know how to observe and distinguish the orientation of the vein or deposit, as well as how to pick the correct

tools and efficiently use them to accomplish their mining tasks. That is to say, their local knowledge of crystals is not based on reading from a book, but on interacting with it with their physical bodies.

By viewing a transaction as a social interaction happening between people and goods, an individual mineral feature of a crystal, such as volume, ingredient, and transparency, may already determine its potential interaction with people. If a piece is rare, large and transparent, and has rare inclusions, great potential market value may already be implied. An amethyst geode out of the mine is already close to the finished product, but other sorts of crystals would not be sold with only a few pieces. For example, large pieces of rutilated quartz or green-phantom crystals pieces are pretty rare to Taiwanese and Chinese buyers, and it is inefficient and uneconomical to transport one piece. Therefore, shipping a few large pieces with many small pieces with a large amount becomes a reasonable strategy.

Furthermore, each site's crystal transaction is indicative of its geographical specialties. In Ametista do Sul, most of the buyers are from Soledade, Rio Grande do Sul, and most products are transported to the same city. Alternatively, the corporations in Soledade invest in the mining business in Ametista do Sul. However, crystal businesses in Curvelo, Oliveira Novo Horizonte, and Oliveira dos Brejinhos more often rely on middlemen.

Brazilian miners and middlemen usually do not have clear understanding of Taiwan or China. Their only experiences with Asian people occur when selling their crystal products to them. When I asked them, "do you know why the Taiwanese or the Chinese buy these crystals?" they gave me different answers. Some of them told me that they heard Asian people believe that the crystal has special energy. Others told that it is for making jewelry. I also asked them whether had they ever heard about "*fengshui*", or the Chinese custom which uses objects to

gather good luck, they also had no idea about what I was talking about. Regardless, they already built a communal sense that the Chinese and the Taiwanese really like to purchase crystals than other mineral.

The Taiwanese and the Chinese's purchase of crystal in the past twenty years had definitely changed people's ideas regarding to this sort of mineral in each site mentioned above. Local people increasingly understand that Chinese people really like these transparent crystals rather than other sorts of minerals. Chiu-Shen told me a short story about it. It happened when he just began his crystal business and traveled around different areas. One day, when he traveled to a small town, local people told him that there was a beautiful and large, 53 kilogram crystal in town. He spent the whole day in waiting for someone to bring the crystal to him. However, in the end, it was only a large piece of white quartz without transparent crystal and not worth of investment. He tried to explain that what he needed was transparent crystal, but local people could not understand why he needed that. Chiu-Shen and Jun Yang both told me that now, all Brazilians who do crystal business understand what sorts of mineral the Chinese and the Taiwanese like to buy. Moreover, I also met with some crystal middlemen in Curvelo and Poços, who my informants had never touched with before, directly came to us to invite us to give a look at crystals they collected for sale. Jun-Yang explained that local crystal dealers have formed stereotypes about the Asians and assume them all came to Brazil for buying crystals.

Crystal buyers from Taiwan and China also changed what miners prefer to mine and what middlemen like to collect for selling. Many sorts of crystal which miners previously did not value have become very expensive in the Brazilian market. Before the end of the 1990s, green-phantom crystals were not taken by miners in Curvelo. To miners, at that time, the green ingredient was just green mud which reduced the value of a piece of a crystal and miners

preferred to knock off the green parts and keep the transparent parts. At a middleman's place, Jun-Yang pointed at the ground with green spots and told me that all of the green were the green parts of green-phantom crystals. This also happened with rutilated quartz as well. Kuo and his wife told me that miners in Bahia just knocked off the parts with rutilated of a piece of crystal and sold the remaining transparent part. Now, many miners regret that. It embodies the idea of "glocalization" in which local people not only change their attitudes to mineral because of the global commodity chain, but also develop a new economical and social mechanism based on the existing mining industry to adapt to it.

I wonder whether "the discourse of energy" is important to miners in each mining location. In my questionnaire, I listed questions such as, "Have you ever heard the saying 'crystal has energy bringing good luck?'" and "Do you believe that crystals have special energy which brings good luck?", and asked them to all of the middlemen and miners who I had chances to interview. Most of my local informants gave me negative responses, except for about four miners, who told me that they heard that saying before and were informed that crystal could possibly bring them some good luck. They heard about the "energy" discourses on crystals but they never cared about this. In terms of materiality, this indicates that the local people in the transactions mainly focus on the economic aspect. In fact, not just Brazilian miners and middleman, but crystal buyers from China and Taiwan better stress the importance of its economic value than other aspects.

#### **4.0 CRYSTAL PROCESSING AND MARKET IN CHINA**

When the container arrives at Guangzhou Port via ocean freight, the Brazilian crystals also start to face another stage of their “social life”. This stage is about how they interact with China, which is experiencing rapid social change. Before crystals become the final commodity and are sold in the market, they need to pass through the stage of processing and encounter workers and dealers. After 1987, the economic reform not only caused economic development but also brought the movement of countless populations from the countryside to urban areas and factories in the southeast coast. Guangdong and other coastal provinces have become the “world factory” where migrant workers experience “modernity”. Most anthropological research on Chinese factories and the processing industry on the southeast coastal areas claim that this movement shows globalization’s impact on migrant workers’ social lives (Pun 2003, 2005a; Zhang 2006) and the ideology of neo-liberalist practice on contemporary China (Kipnis 2007, 2008; Ong and Zhang 2008; Pun 2008).

I do not deny the propositions and conclusions of these studies, but I would like to claim that most of the previous research did not pay attention to the interactions between workers and the material used in the processing, nor to the material culture shaped by this interaction. From the perspective of material culture, processing could be viewed as a sort of social interaction between subjects and objects. Processing does not only involve changing the shape of a material, or assembling parts into one. Processing locates these workers at a position on a GCC and gives

them a chance to touch the foreign materials. Following this, in addition to discussing the issue of *dagong* (working as an employee for capitalists), I will discuss more about the cultural and social meaning of *jiagong* (processing) in this chapter.

Further, I will also discuss the intertwined complexity of workplaces and marketplaces of crystals in China. I do not merely treat the workplace as an organizational arena, where employment relations, labor processes, occupational culture, and identities formed, or a political site for state-sponsored clientelism and ideological and political control (Lee, 2007: 1). I prefer to treat the workplace as a space for the interaction between people and crystals. I pay particular attention to how people interact with this object in different ways and how crystals differently construct people's lives and concepts in various contexts. I do not treat factories, shop floors, and production lines as simply where workers manufacture products, even though that is their original purpose. In contrast, they are where people interact with crystals and semi-precious stones in specific ways. They are also social spaces constructed by the interactions between subjects and subjects, or subjects and objects. Likewise, I do not treat market places just as spaces governed by the economic mechanism of supply and demand. Instead, I, inspired by Bestor (2004), treat it as a place framed by social relations and the crystal's materiality.

My strategy is to present a commercial and industrial network surrounding the processing of crystal, including IAS in Huadu, the processing factories in Heifong, the crystal market in Liwan Plaza, and the crystal sculpturing industry in Donghai. These exemplify the multiple forms of the material culture shaped by various types of interaction between subjects and crystals.



**Figure 7: The fieldsites in Guangdong Province**

#### **4.1 HUADU, IAS JEWELRY CORP. AND ISTONE**

The IAS Jewelry Corporation is located at Huadu Jewelry Processing Zone (HJPZ). As I mentioned in Chapter 2, this zone is a specific processing zone for Taiwanese enterprises and was built with the economic development of Pearl River Delta. HJPZ is located at the west of Huadu District and this district is the most northerly administrative district of Guangzhou City. Like other processing zones in Guangdong, this processing zone embodies a party-state market complex. In the main management building, there is an office of the chief manager, Xia Po, assigned by the local Communist Party Office. This position's job serves to the enterprises in this zone and coordinate enterprises, city governments, and the local party offices. On average, the whole zone has over 15,000 workers. As other industrial areas in Guangdong, the majority of workers are migrants from other provinces, especially from Hunan, Jiangxi, Guizhou and

Guangxi. However, the number of workers has fluctuated and became unstable recently. While the Chinese government requested that enterprises provide higher and higher salaries and guarantee workers' insurance, workers nonetheless have become more hypercritical of their jobs and like to change their occupations more than before. Moreover, when the economy of the inland provinces was developing and providing good job opportunities and lower living costs, many migrant workers chose to go back to where they were from. This was obvious in my fieldwork of February, 2012. I went to IAS just after the Chinese New Year, and my informants told me that many migrant workers in HJPZ quit their jobs and chose not to go back to Guangdong. Almost all factories in HJPZ encountered the issue of labor shortage and had posters for recruiting new employees in front of their gates.

In the following sections, I will discuss the production of crystal products of two corporations: IAS Jewelry Corporation (IAS) and iStone Corporation (iStone). The comparison will indicate the diverse social lives associated with the production in HJPZ.

## **IAS**

IAS has 20 ha of land in HJPZ. On its own land, IAS built one headquarters building for business and residence, four factory buildings, and one staff dormitory. After moving from Xiamen to Guangzhou in 2007, IAS's ended the jewelry production line and focused mainly on selling crystal materials to downstream factories. My first visit to IAS was in 2009. In that period, Shu-Mu Qian was still optimistically planning to build more factory buildings on his own land and to recruit more employees for producing crystal jewelries. However, all these plans were suspended in 2010 because of multiple factors, such as the more rigorous Labor Law and the global financial crisis.

Shu-Mu Qian's two sons were my key informants when I was in Guangzhou. In the past five years, he arranged for his elder son, Jun-da, and younger son, Wei-Chi, to learn how to manage this corporation. Jun-Da was in charge of the interior business, especially of the accounting aspect. Otherwise, Wei-Chi was responsible for the public affairs, in which he needed to join all social activities organized by local Taiwanese business associations or government institutions. In addition to the Qian family, the other key informant from this factory was Jian-Pin Song. As other workers in the factory, he came from Hunan and started to work for IAS when its factory was in Xiamen, Fujian Province. He was an electronic mechanic and came to IAS through a friend's referral. Since he was loyal and hardworking, he became the manager of the corporation in 2007. Basically, he dealt with all affairs except production. When I knew him in 2009, his wife, son, and daughter were still in Hunan. In 2011, he brought them to Huadu and lived together in IAS's dormitory building. Since the living cost in Guangzhou is much higher than in Hunan, his wife also ran a small shop selling drinks, snacks and daily necessities in the factory in order to supplement the family's income. His daughter was in third grade of elementary school and his son was going to enter kindergarten. Because they did not have the "hukou", the legal household registration statuses of Guangzhou City, they couldn't enjoy the same social welfares as local citizens and their descendants only had permits to go to the private schools constructed for the migrant laborers in Huadu.<sup>12</sup>

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<sup>12</sup> While Jian-Pin Song's children could not go to public school because they did not have "hukou" of Guangzhou City, Qian family's third generation children can go the best public school in town. This has become an important issue in China's coast areas. Relevant studies could be seen researches conducted by Jie Dong (2010), and Yuanyuan Chen and Shuaizhang Feng (2012).

## The Social Relationship in IAS

Compared to other corporations and factories in the same processing zone, IAS's employees were extremely few. In my 2012 fieldwork, there were only 22 workers in this factory and most of them were from Hunan Province and have, to some extent, kinship relationships with each other. I could even draw a genealogical chart to map out their relations. This is because Shu-Mu had one second wife from Hunan who referred many workers to IAS when the factory was still in Xiamen. After that, more and more workers utilized social connections to become employees of IAS. Their average education level is middle school, or lower, and they had no specific professional skills before they worked for IAS. Even though the quantity of employees is less, there is still a labor division based on gender. Male workers' main job is to deal with "heavy jobs" and females deal with "light jobs". I will explain further in next section. Due to the difference of pragmatic work content, in 2012 the male worker's average salary was RMB\$ 2500 and the female's average was RMB\$ 2200.<sup>13</sup>

Among these workers, there were 12 families living in the dormitory building of IAS who formed a small living community. They did not only help each other in their daily lives; after the regular daytime work, playing poker games or *mahjong* together became their main leisure activities. Their children also played together and went to the same elementary school. In the area of HJPZ, IAS may be not the corporation giving the highest salaries, but workers receive many material comforts. Shu-Mu does not charge rent for the dormitory and workers only need to pay for their own water and electricity bills. Additionally, the corporation also provides sufficient budget for each worker's diet. Workers can use the kitchen on the first floor of each dormitory building and cook for themselves. Compared with other factories' workers who prefer to live in cheap apartments with other workers outside of the factory, IAS's workers all choose to

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<sup>13</sup> According to the data I collected, IAS's basic salary had increased 40% since 2009.

live in the dormitory. This is because most of them already have their own families, and it is much cheaper to live in the dormitory and enjoy the material comforts provided by the corporation. The ages of the workers are between 36-43 years old. Most of them had stayed in IAS for over ten years and settled down in Guangzhou. Even though they still have homes in Hunan, but their lives are more tied to Guangzhou. This differs from the “transience” feature of migrant workers, a characteristic which Pun Ngai (2004) used to describe workers in economic development zones.

Before every Chinese New Year, all of these migrant workers return to their hometowns for family reunions. As average migrant workers, factory workers in IAS did not have the option of going back to their hometowns and becoming farmers again. They say that they may go home for helping with agricultural production. The main problem is they have no more farms in their hometowns. As the trends of modernization and industrialization have extended from the coastal areas to inland provinces, most of their lands have been sold or expropriated. Going back to their hometowns means that they need to begin again with a blank canvas. If they go back to their hometowns, they will encounter new challenges because of the industrial development and lose the opportunities which only belong to stronger youths. Factory workers’ expectations of the future have been exhausted, but they have no place to return.

IAS’s workers may have a greater monthly salary but they have no chances for a promotion, while other jewelry factories have an efficient system for managing workers’ productivity and a mechanism for employees’ promotion which gives preferences toward higher education levels. IAS provides a relatively comfortable and less competitive environment for these laborers. When these employees stay longer in the factory, they have less chance to leave the factory.

In consideration of management efficiency, Shu-Mu assigned Jian-Pin Song to be the manager and Chan-Wu Peng to be the factory director, because neither belongs to the kinship group, even though they are from Hunan as well. Even so, the management of IAS still has no evidently bureaucratic characteristics, as there are not a lot of workers. The management methodology differs from other larger factories with many employees, and the social interactions among employer, managers, and employees suggest closeness. Every day, the factory director receives orders from Shu-Mu and then leads work in the factory. There is no concrete production line in IAS, as there are only 10 men and 6 women whose job descriptions are production related. Some lazier workers choose to do the guardian job for the factory. Shu-Mu does not want to kick anybody out and tolerates this, but he insists that every worker has no excuse and needs to follow his orders when there is a big business order coming. Shu-Mu is not only a boss but also a patrilineal leader who has a different family name. Even though his political power has been constructed by his capital, he plays his leadership in this small “lineage village”.

In coastal areas, migrant workers are usually subjected to exploitation from the factory, since they do not have official status required to stay in the urban area. These workers’ rural registered status restricts them from normally living and working in the cities without official approval. In turn, their ambiguous legal status in the cities makes them vulnerable to forced and bonded labor (Carrillo and Goodman 2012: 3). Compared to this, IAS embodies how a patriarchal institution provides protection as traditional villages for workers in a factory. Relatively, workers in IAS gain better economic security but also have lost their mobility. The tricky part is that this security is still constructed on the relationship between employees as well as the management of labor resources. IAS also hides an uncertainty while it was under Shu-

Mu's despotic management. Shu-Mu owns the right to lay off anyone immediately or change the management policy and no worker dares to challenge him.

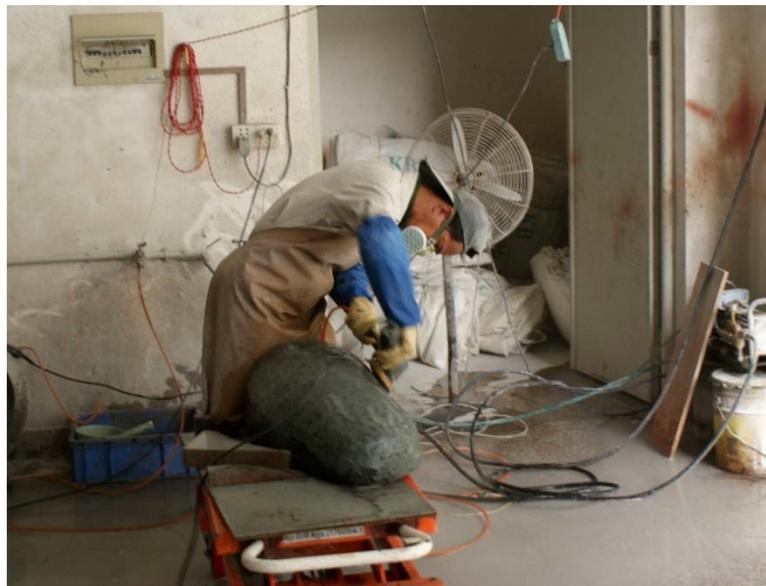
Pun claims that aloneness is an important feature of Chinese migrant workers and the process of entering the factory at the beginning was a process of individuating the self, letting the individual realize that the factory had recourse to nobody but itself (2005b: 9). I argue that IAS provides a contrasted example in which workers also build their relationships in a factory and may settle down in a long term. Having a family in the factory and living with other workers and their families in IAS created an illusion of living in a hometown. They are not just *tongxiang* (people who come to the same hometown), but have also built a new identity constructed by their collective life experiences in the same space. They consider themselves as a family. However, it looks more like a lineage village described in Maurice Freedman's ethnographies (1968).

### **The Business and Production of IAS**

IAS's main business is to import crystals from Brazil and sell them to jewelry processing factories in Huadu and Heifong. By working with his brother in Brazil, Shu-Mu imports the crystal materials from Brazil to Guangdong. Diverse sorts of minerals are imported, including green hair crystals, rutilated quartz, green quartz, and rose quartz.

Among these mineral materials, the green quartz, or *donglinyu* which he imported as a jade alternative, became an important raw material for iStone. Between 2000 and 2010, IAS also imported diverse sorts of crystals for factories in Heifong. Ten years ago, Heifong was in the incipient stage of developing the jewelry processing industry and lacked raw materials, techniques, and equipment. Shu-Mu decided to assist some local factories there. He not only provided equipment at low prices and let factories use the raw material he imported first, and

then delayed the cost until profit was earned. Shu-Mu not only helped factories in Heifong develop quickly, but he also constructed close relationships with them. When Heifong had more and more jewelry processing factories and the demand for raw material became extremely competitive, these relationships became important to the developing factories. One Heifong businessman exaggerated the process: “Once, there were all of the factory owners outside waiting for Shu-Mu’s material. When he opened the container’s door, everyone ran into the container and tried to kick down as many barrel inside as possible. Then, you could take the barrels you kick down.” I tried to find proof for this statement, but Jun-Da told me it was exaggerated, though the competition for crystal materials was true.



**Figure 8: A worker conducting shushisuhua**

In addition to selling crystal materials, IAS also conducts some processing jobs for amethyst geodes and rose quartz for business orders. These jobs do not request very high productivity through rigorous management and reflect on the employee quantity and social relationships within IAS. Furthermore, these jobs are gender-specific. Workers usually refer to man’s jobs as “heavy jobs” and to women’s jobs as “light jobs”, since different jobs need various

levels of strength. The difference is embodied in the salary. In IAS, male workers have higher salaries because they conduct “heavy jobs”.

Some geodes may be broken in transportation, and so some workers need to repair them in the same manner as the mining corporation in Ametista do Sul. Since this was a “light job”, female workers were responsible for this. Repair took place on factory building A’s third floor, which stored a lot of broken geode pieces. After examining the color of the geode’s crystal teeth and the scale of the crack, the workers searched for suitable pieces for repairing the crack. Sometimes, a crack may need two or three small pieces. Then the worker uses glue to fix the piece on the crack or uses forceps to place some crystal on the bonding margin.

In addition to the repairing, IAS usually chooses some top class geodes to give extra processing. This processing is by “resin plastic” (*shushisuhua*), which is for decorating the geode’s shell and provides advanced protection. Since each geode’s weight is at least 30 kilograms, applying resin plastic is a “heavy job” and is always conducted by male workers in the factory. I recorded the procedures in my 2012 fieldwork. The first step is to modulate the “resin”. The specific resin for this process is mixed with green dye, black dye, and ground rutilated crystals (or ground garnet) left after other processing jobs, and hardener. After mixing them well, the worker applies them to the geode’s back and covers all cement surfaces made in Brazil. After that, the geode needs time to dry. In order to accelerate the process of drying, workers may use an industrial dryer, which looks like a hair dryer but releases heat up to 300 °C.

Later, the worker uses a grinding wheel to polish the back of geode with a resin plastic shell. According to the abrasive grain made of corundum, the grinding wheel can be divided into different levels: coarse, medium, fine and very fine. The polishing process begins with the coarse abrasive grain to grind out the uneven surface. Gradually, the worker exchanges the grinding

wheel for one with finer abrasive grain until he gets to the finest grain. After this step, the worker also needs to apply wax on to the back surface.

Rose quartz seat is another main product of IAS even though the annual output is very little, 30 pieces annually, more or less. Since each raw rose quartz is very large and heavy, it needs to be moved by carts or some machines. Because of this, processing it is a definite “heavy job” in IAS. The first processing step is to cut the raw rock to a suitable size. By lowering the pivoting arm, the worker uses the abrasive saw with a cutting wheel to cut the rose quartz to a suitable volume for a seat. After the cut, the rock also needs to be polished and be waxed to create a smooth surface. Then, the main pieces will be placed on a wooden base with wheels as a finished product.

IAS also uses amethyst geodes and yellow crystals to produce tea tables. A processed amethyst geode is placed in a round glass base and yellow crystal pieces are placed surrounding the geode. Then a larger round glass is put on the base as a tabletop. The appearance of geodes used for this product differs from what people usually place at home. People usually like to buy geodes which are smaller and look like a standing letter “A”. In contrast, the geode’s shape of this table is more like a giant bowl decorated with amethyst crystals inside.

In IAS, the workers’ understandings of and attitudes toward crystals have also changed because of their work experiences. Before working for IAS, these employees had never touched, or even heard, about crystals. They told me that they did not know why people in Taiwan or other countries liked to buy them. After many years of working, they gradually understood that the Taiwanese buy their products for *fengshui* purposes, but they still did not really understand the reason. Jian-Pin Song told me, in their countryside hometown, that people still practiced *fengshui* for constructing houses or tombs, but never with crystal. I asked them whether they

would buy what they produce, such as amethyst geodes and crystal seats, if they would become rich. These workers all gave me negative answers. Wei Huang, one worker conducting geode processing, told me that they would prefer to spend more money on his children's education or use the money to improve his family's life rather than buy useless crystals.

However, in the middle of February 2012, one of Shu-Mu's friends, Yi Fong, passed away and left many goods in IAS's storehouse. Since Yi Fong was still greatly indebted to Shu-Mu, Shu-Mu tried to sell Fong's goods which were left in IAS's storehouses. Many female workers went to pick some crystal jewelry from the remaining goods for themselves since the prices were cheaper than the average on the market. However, even though there were some big crystal balls or crystal adornments, no man or woman in the factory wanted these. From my view, except for the factor of expensive prices of these large adornments, many workers were more willing to buy jewelries if they were not involved into the production process. Moreover, they had better sense of these jewelries' decorative value than of other crystal products which claimed to own *fengshui* properties.

## **iStone**

On the same street within HJPZ, iStone provides an extreme contrast with IAS. As I mentioned in Chapter 2, this enterprise is led by a Taiwanese entrepreneur Mu-Chin Su and his son I-Fang Su, and its brand name has become a well-known jewelry brand in China. Its main product is jade jewelry, but it also produces jewelry products composed of crystals. Since it already has over 1,000 franchised stores throughout China, maintaining stable sources of raw mineral material is especially important to iStone, and IAS is always its one important partner for supplying raw material.

During my fieldwork in 2012, there were over 600 employees working for the enterprise. Among them, 80% were working for the production lines in six factory buildings and 20% were working for designing, marketing, human resources, accounting, purchasing, and other management jobs in the management building. Just like IAS, the majority of workers on the production lines were migrant workers from neighboring provinces. Comparatively, the production line workers' average age was much older, and they generally had a lower educational level. In order to enhance productivity, the specialization and labor division was designed well and strictly implemented. On the production lines, workers only need to accomplish the jobs assigned by the managers or team leaders, such as cutting and polishing. In contrast, many young people who just graduated from local universities decided to join this company's design and marketing departments.

As an enterprise with a lot of employees, iStone has a well-constructed promotion system and rules, and these have influenced how workers interact with crystals and minerals. My informants in iStone told me that workers who have better work performances will have more opportunities to become team leaders after the monthly or seasonal evaluation. This encourages productivity and efficiency in workers and also prepares potential cadres for the new production line with the growth of sales. However, this also implies that the vertically social relationships in this enterprise are also based on people's productivity, and to maintain or enhance productivity becomes the moral rationale in this field. When productivity drops, the employees also need to be responsible for the loss of business and to accept the subsequent change of the social relationships, such as layoffs or transferring to other departments. Following this, on the production lines, workers' attitudes toward crystals must involve concerns of productivity. They need to accomplish the assignments on time, but preferably ahead of the schedule.



**Figure 9: Workers conducting simple carving in iStone**

iStone's production mode is not unique and we can find other enterprises in Huadu which also have similar management strategies and production lines, such as Pohe Jewelry, which is famous for manufacturing obsidian products, and Xiaolu Jewelry, which is famous for manufacturing dzi beads. Importing foreign minerals, processing minerals into goods by migrant workers, and then exporting to foreign markets or domestic markets is the basic business model. In addition to Huadu, Heifong, Shenzhen, Dongwan, even Donghai all follow this mechanism. The only differences are their scale and their products.

In addition to promoting its own jewelry brand's reputation and market, iStone has also been working hard to develop its own tourism business. In front of their factory area, iStone had built a Mineral Park, a theme park combining a mineral museum, a restaurant, and a garden with many stone sculptures. Moreover, Mu-Chin Su has also tried to work with other Taiwanese enterprises in HJPZ to transform the industrial zone into a tourism spot. His purpose is to use the

development of tourism to enhance the reputation and brand image of iStone in China, and lead other enterprises in HJPZ to earn prosperity together. The other jewelry enterprises in HJPZ have followed along due to increasing competition from Heifong and Donghai, which has led them to explore new ways to obtain profit. The enterprisers expected that their corporations could be transformed from “processing industries” into “culture and creativity industries”. For this purpose, iStone, in 2012, led other jewelry enterprises to hold the First Huadu International Jewelry Festival. They all wanted a grand public activity which could attract local people and tourists to visit their factories and consume what they produce.

IAS and iStone provide totally different sorts of professional careers and lives for their employees. What do employees in each corporation think of this difference? In September, 2012, the two enterprises' employees had a chance to interact with each other. For the First Huadu International Jewelry Festival, iStone assigned eight female employees to IAS as the narrators for the exhibition of crystal sculptures and amethyst geodes, since IAS lacked the suitable human resources. In iStone, these ladies worked in the packaging department and the distribution department. Before the festival, I was responsible for training these ladies on how to introduce each sculpture and geode. They also had chances to interact with IAS's employees and understand the different remunerations between the two enterprises. Compared to iStone, IAS provides a more stable environment but lacks the potential of promotion. In contrast, iStone provides the opportunities for promotion, but life was more challenging than in IAS. I asked the women: if the two companies provided the same salary, at which one would you prefer to work: IAS or iStone? Their answers were quite different. Some ladies who were already married and had a child preferred to come to work for IAS for a better feeling of security, but two young

ladies who just graduated from the schools expected to have more opportunities and wanted to become one of the cadres of iStone.

## **4.2 KETANG TOWNSHIP, HEIFONG COUNTY**

Heifong County is located in northeast Guangdong Province, and Ketang is one of its townships under the rule of Shanwei City. According to the government's calculation, this county's average production value of jewelry is up to RMB\$ 16 million (US\$ 3.2 million) and over 50,000 tons of mineral products.<sup>14</sup> Before the 1980s, its most important subsistence strategy was fishing, so the majority of residents were fishers. After economic reform in 1978, a lot of local young men went to Pearl River Delta to find job opportunities. Most of them became workers in jewelry processing factories owned by Hong Kong businessmen. In the middle of the 1990s, many of them chose to return to Heifong and bring back the equipment and techniques to their hometown as well. Gradually, the jewelry processing industry developed, and most firms and factories were concentrated in Ketang Township. After 2000, Ketang became the most important area for processing crystals and semi-precious stones for the global market of crystal and semi-precious stone products. In addition to crystals and semi-precious minerals, Ketang also has factories producing products made of jade, pearl, and artificial gem-stones. Some jewelry processing factories that fill export orders in Dongwan and Shenzhen also came to Ketang to order or purchase semi-manufactured jewelry products.

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<sup>14</sup> See news report: <http://big5.chinanews.com:89/gate/big5/www.gd.chinanews.com/2012/2012-03-14/2/182790.shtml>



**Figure 10: Female workers in Heifong**

A building of the Jewelry Trade Market was also constructed in the middle of Ketang. Its original expectation was to replace Liwan Plaza as the largest jewelry trade center in Guangdong Province. However, Ketang's location is far from Guangzhou, at least 4 hours' drive from Guangzhou Airport, so most buyers still choose to go to Liwan Plaza to complete their purchase jobs. However, some buyers notice the price difference of goods between Liwan Plaza and Heifong and go to the latter to purchase goods due to cost concerns.

With the development of the jewelry processing industry over ten years, some small workshops became large factories. In my fieldwork of 2010 and 2012, I visited one of these factories. Yi-Chi Zhuo, the manager of the Yi-Chi Jewelry Corporation,<sup>15</sup> was one of the young men who went to the Shenzhen Economic Zone and worked for jewelry factories. He came back to Heifong in 1999. By working with his relatives and receiving help from Shu-Mu Qian, he built his workshop in 2000, which gradually became one of the largest factories in town. In his

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<sup>15</sup> The informant and the company's names are pseudonyms.

factory, most workers were local, but recently a few migrant workers from other provinces also joined the production lines.

Compared to iStone and the other factories I visited in Huadu, Yi-Chi Jewelry had quite similar equipment and production lines, but its scale was much smaller and the workplace was relatively darker and dirtier. Before stepping into the factory building, I already heard the shrill noise released from the ultrasonic puncher and saw the waste materials accumulated along the factory's outer wall.

Within the factory building, which had an L shape and four floors, there were over 120 employees working. The first floor was for cutting raw crystals. Workers used the saw to cut the raw material to suitable sizes for the subsequent processing procedures. In addition, the first floor was also responsible for receiving raw materials and moving finished goods onto trucks, so only male workers worked there.

The second floor was for modeling and carving. For modeling, a worker needs to put the raw crystal into a grinding machine. The machine applies emery with water to make crystal cubes become crystal beads. Some larger pieces of crystal materials were chosen for making small sculptures. In the carving area, workers used the engraving machine to carve crystals to become the shape of Buddha or small animals. Each piece was no bigger than 10cm×8cm, and every worker needed to fully focus on the carving process.

The third floor was for punching and polishing. The polishing machine also utilized emery. The workers pour the beads into the machine filled with emery fluid. The emery used for polishing is much finer than that of the grinding stage. After that, if the products were to be made into jewelry beads, then they would be moved to the punching area. The punching process uses the ultrasonic punching machine. The worker first needs to place all beads on a round plate.

Since there are a lot of hemispherical recesses on the plate, the beads are fixed. Then the worker moves them into the machine for punching.

On these two floors, workers all needed to wear masks in order to avoid the issue of pneumoconiosis. Additionally, the carving area was also equipped with a powerful exhaust fan. As Ketang has become well known for jewelry production, local health inspection units often come to large factories to examine the work environment. The factory also wants to avoid unnecessary medical issues. Requesting that workers wear masks and use exhaust fans became necessary to these factories.

The fourth floor was for concatenating. Compared to other floors, this area was much quieter and brighter, since there was no noisy equipment operating here. There were over forty female workers working in this area. In the front section, female workers were checking the beads punching results. If there was not a hole on a bead, they needed to pick it up for another punching. The beads without defects were moved to the back section. In this area, female workers used red threads to concatenate them and tied knot for each string. Usually, each string had twenty to thirty beads.

Most workers live in the dormitory provided by the factory. The factory also provides food for these workers. The factory's management already had the apparent features of specialization and bureaucracy. On a board hung on the wall by the entrance of each floor, progress made on the working plans and goals were listed to remind everyone of the production schedule. In each section of every floor, one team leader is responsible for monitoring each worker's job in order to maintain the efficiency of the production line.

Compared to larger factories in Huadu, the issue of pneumoconiosis is similarly significant in Ketang. While the local people had no enough understanding of this medical issue,

pneumoconiosis was common between 2000 and 2008, which is when it came to the attention of the government.<sup>16</sup> Presently, all large factories already equipped exhaust fans to match government regulations. However, many small or temporary workshops where people work for part-time jobs do not have this equipment, and workers are exposed to an environment filled with harmful dust produced by grinding crystals or other minerals. Two meters away from Yi-Chi Corporation, there was a shanty which served as a temporary workshop. In the shanty, I also witnessed four part-time workers who did not wear masks and just grind the crystals in front of them.

In addition to producing beads or parts for jewelry, there are also factories for crystal adornments in Ketang. Since the market of demand of crystal adornments is smaller than the demand for jewelry materials, the amount of factories manufacturing crystal adornments is relatively fewer. The main job of these factories is to cut and polish crystal points or produce crystal balls. The most common material is hyaline quartz, and it is for making crystal points. Basically, even though the hyaline quartz excavated from the earth is already in the form of hexagonal prisms, the surface is still rough. The worker needs to use the polishing machine with a very fine grinder to polish them. Other kinds of crystals or minerals usually have no such physical figures, so most of them are cut and grinded to become balls. Some minerals, such as green rutilated crystal, are very fragile and need preparation works. Before the grinding process, workers will prime industrial glue into crystals in order to maintain the structural solidity. After the grinding process, some factories will use the boiling wax fluid to boil the crystal balls. In this process, the crystal will absorb the wax and maintain shining for the long term.

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<sup>16</sup> See Leica Chen's news report, Our Migrant Labors: <http://leilachan.wordpress.com/tag/2006%E4%BA%BA%E6%AC%8A%E6%96%B0%E8%81%9E%E7%8D%8E%E4%B8%AD%E6%96%87%E9%9B%9C%E8%AA%8C%E5%A4%A7%E7%8D%8E/>

Wei-Chi Qian told me that Ketang's crystal and semi-precious stone processing industry was experiencing what Taiwan's jewelry industry had experienced between 1970 and 2000, and reminded him of his childhood of spent in his father's factory. From his point of view, while Ketang's economy relies greatly on the exportations, it may encounter the same challenges that Taiwanese jewelry met in the 1990s.

### **4.3 LIWAN PLAZA**

Liwan Plaza, the largest market of crystals, semi-precious stones, and semi-manufactured jewelry goods in China, is located in the Liwan District, one of the most commercial areas of Guangzhou City. This area is not only where people like to go shopping or where young people like to hang out, but also an area for jewelry consumption. Just adjacent to Liwan Plaza, there is the largest jade market of Guangzhou where local buyers like to buy jade jewelry. Liwan Plaza commenced its business in 1998 and gradually became a wholesale center for clothes and jewelry semi-products. There are over 1200 units in the building and selling diverse sorts of crystal and semi-precious stone products. In addition, there are also stores selling semi-manufactured products made of silver, pearl, gold, and etc.

Theodore Bestor distinguishes "market" from "market place". In his proposition, the first is an abstract economic institution or process. A marketplace, on the other hand, is both a specific geographical place and a localized set of social institutions, transactions, social actors, organizations, products, trade practices, and cultural meaning motivated by a wide variety of factors, including, but not limited to, "purely economic" or "market" forces (2004: 20). Following Bestor's idea, I treat Liwan Plaza as a market as well as a marketplace. Its existence

embodies the operation of market mechanisms. On the other hand, the operation of this specific market is influenced by the composition of people, goods, customs, and other social factors.

### **The Market's Composition**

The backgrounds of shops in Liwan Plaza directly indicate the composition of China's crystal processing industry. In the area of jewelry businesses, there are many shop owners from other countries in addition to those from Guangdong and other provinces. The international shopkeepers are from Singapore, Poland, India, Myanmar, Korea, Hong Kong and Taiwan. They occupied 5% of all shops. Among them, shopkeepers from Hong Kong, and Taiwan are the majority. The local shopkeepers are from different provinces, including Jiangsu, Hubei, Guizhou, Henan, the Chaozhou-Shantou area, Zhejiang, Hebei, Fujian, and Liaoning. Among them, the majority are businessmen from Heifong, who occupied 75%. Also, shopkeepers from Donghai (Jiangsu Province) were around 20%.

Most of the shops selling semi-manufactured products in Liwan Plaza have at least one factory or workshop in Heifong and their business is usually run by people that belong to the same family or who have kinship relations. Their products are transported from Haifong once or twice every week. I visited Liwan Plaza with Wei-Chi multiple times between 2000 and 2012. Since a lot of shopkeepers had business with IAS and Wei-Chi's father, we received introductions from them and it became easier to conduct interviews after their greetings. The shopkeepers' greeting usually began with asking about Shu-Mu's health and then questioning about the crystal materials. Wei-Chi always prepared some betel nuts for these occasions. Accordingly, the shopkeepers also naturally asked Wei-chi for them. My early few interviews did not go well because they presumed me to be a commercial spy for their pricing strategies and

hardly understood what cultural anthropology really meant. After becoming more familiar with me, they allowed me to give them more questions about their ideas of the crystal production, processing, and marketing.

Even though the marketplace is at the hot commercial zone, this is not attractive to the average tourists. Compared to other marketplaces with tourism value, such as Les Halles in Paris, Fulton in New York, or Tsukiji in Tokyo (Bestor 2004), which are famous for selling food products which are important in people's daily lives, Liwan Plaza's main clients are people running crystal shops and selling crystal jewelries and crystal adornments. However, this also embodies Guangzhou's characteristic as a "world factory." As other wholesale centers built for clothes, toys, leathers, or electronics are built for export purposes rather than for local citizens' daily lives, Liwan Plaza's original purpose is also for the clients from foreign countries, including Japan, Taiwan, Hong Kong, and Singapore. Compared with the adjacent Guangzhou Jade Market filled with local buyers who want to challenge their ability to select jade products and tourists who like try their luck fining precious jades, many foreign clients of Liwan Plaza's crystal shop have much clearer goals or plans for their purchases. Like buyers in other wholesale centers, buyers in Liwan Plaza purchase goods for business motivations rather than collection purposes.



**Figure 11: Liwan Plaza**

Each floor concentrates on different sorts of products and provides various selections of goods. The first floor of Liwan Plaza mostly sells semi-manufactured products for jewelry. Buyers can find any sort of semi-precious stones for jewelry purposes on this floor. The second and third floors sell more crystal adornments, carved pieces, or sculptures. These shops are mostly run by businessmen from Donghai. There are also a few shops focused on selling amethyst geodes on this floor without other products. There is also a shipping service center providing shipping services for buyers from other provinces or countries. However, most buyers from Taiwan and Hong Kong prefer to take the risk to bring goods back in their luggage directly unless the goods are extremely heavy. On the third floor, there is also a jewelry appraisal center providing appraisal services for clients, since many shops selling diamonds and other valuable gems and customers need jewelry appraisal documents. In addition to natural semi-precious stones, there are also some shops selling artificial crystals. However, their business is not very good since most buyers come here to buy natural products.

Ideally, each shop should own unique products for sale in order to avoid unnecessary competition, but it is obvious that a lot of shops sell similar products. It is not hard to find that a lot of shops selling crystal beads on the first floor have very similar sorts of goods. Beads made of rutilated quartz and tourmaline were the most popular commodities in this area. The similarities of goods allow the buyers to spend time going to as many different shops as possible to check the products' quality and prices.

The best buying seasons of a year are the period before May 1st, the national holiday, and the week before the Chinese New Year. Since May 1<sup>st</sup> is the first day for a national vacation and overall consumption of the domestic market rises, many crystal shops come to Liwan Plaza to purchase goods prior to this date. During the period of Chinese New Year, the Taiwanese and the Chinese are also more willing to spend money on interior decoration or jewelry. Downstream crystal shops also need to prepare for these demands.

Each shop has effective lighting equipment above or inside the glass showcases in order to make the jewelry goods look shiny and clear. Shops also prepare powerful flashlights for clients who want to carefully check the goods' quality. Usually, however, experienced buyers prepare their own flashlights when they go to Liwan Plaza.

The calculator is another necessary gadget in each shop. The function of calculator is not only for calculation, but also for showing the price or the negotiated price in a shopkeeper's mind. Sometimes, clients also use the calculator to show the ideal price in their minds to the seller. Since Liwan Plaza also has many foreign clients, a calculator becomes an important tool for communication. Thus, it is quite common to see a calculator moving back and forth between a seller and a buyer. Otherwise, each shop prepares a small piece of a black or white woolen blanket. When clients want to check the goods quality, the sellers take the goods out of the

showcase or the safe and place them on the woolen blanket. If the good's color is darker, the seller uses the white one, and vice versa. This is for highlighting the quality of crystals as well.

### **The Interaction between Sellers and Taiwanese Crystal Buyers**

Taiwanese buyers mostly come to Liwan Plaza to purchase crystal semi-manufactured goods for jewelry or *fengshui* objects, and they usually buy less amethyst geodes. For example, Fu-Chen Liang, Shan-Fu Crystals' manager, comes to Liwan Plaza at least six times a year for purchasing what he needs to sell in his shop.<sup>17</sup> Since Liang had a great friendship with Shu-Mu, he is always accompanied by Wei-Chi to Liwan Plaza during his business visits. Every time, before going to Guangzhou, Liang makes his purchase list according to his two shops' business and inventory. On his list, there are also some special items requested by frequent clients of his shops.

With Wei-Chi's company, Liang's purchases became much easier. Wei-Chi led him to the shops whose upstream factories had cooperative relationships with IAS. Due to this, Liang is able to bargain when most shopkeepers have no will to do this with infrequent clients. Otherwise, Wei-Chi also better understands the fluctuation of crystals' prices helps Liang avoid buying crystals that are not worth the price.

One main purpose of my fieldwork visits in Liwan Plaza is to study the interactions between Taiwanese crystal buyers and local dealers. According to one of my informants selling crystal, Hong Zhou, Taiwanese buyers' purchases in Liwan Plaza have greatly decreased since 2008 because of the global financial crisis. At the end of the 1990s, Japanese clients were the majority, and later Taiwanese clients became the majority between 2001 and 2007. After that,

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<sup>17</sup> About the operation of Shan-Fu Crystal, I will give more discussion in Chapter 5 and Chapter 6.

the number of Taiwanese buyers became less and less. Not just the Taiwanese, but also clients from Singapore, Hong Kong, and Malaysia reduced because of the global financial crisis. At the same time, the domestic market of crystal has been gradually opened in China. The structure of the crystal products' market has been transformed from export-oriented into domestic market-oriented.

One Taiwanese purchaser, Xiao Chi Lee, also gave me similar narratives. Lee was a professional purchaser who helped Taiwanese crystal stores purchase crystal products in Liwan Plaza. He also noticed that he encountered fewer and fewer Taiwanese colleagues Liwan Plaza after 2008. The prices of crystal and shop owners' attitudes to clients have also changed with the market composition. Lee remembered that rutilated quartz beads charged RMB\$ 200/ Kg in 2000, but the price with the same quality goods had been raised to RMB\$ 55/g in 2012. While Taiwan's economy became worse in recent years, the quantity which Taiwanese buyers purchased also decreased. This influenced shopkeepers' attitudes to Taiwanese buyers. Before 2008, shopkeepers provided space for Taiwanese clients to bargain. However, the Taiwanese have lost their privileges. Presently, buyers from other provinces have better purchasing capability, and the competition has made Chinese buyers prefer to straightforwardly pay more in order to assure that they have goods for their own business. In contrast, Taiwanese buyers' purchases have become more and more conservative, and they have always hesitated as the price keeps rising.

Lee remembered that he needed to pay a little bit higher when he newly entered this field. He called the money he paid higher as his "tuition". After getting familiar with the business and shopkeepers, he started to know how to efficiently use his time and budget in Liwan Plaza. Lee said:

“A purchaser needs to know the market. Moreover, you need to know some shopkeepers personally and become their friends. If you do not have some shops that you are familiar with, it is hard to purchase really good goods. Most shopkeepers usually hide some goods in their safes for their frequent clients. ... I also understand that I cannot only rely on those shops, and need to find other shops every time.”

A novice buyer needs not only to find which shops are selling the products that he needs, but also to spend a lot of time figuring out the market condition. It takes a lot of time since many shops sell the same products and the price fluctuates with many factors.

When a purchaser becomes a frequent client of some shops and shows his loyalty, these shops start to have the will to give a little bit of discount or show him what they keep for loyal clients. This relationship could improve through a longer term of business interaction. In Taiwan, some crystal buyers told me that they were invited to visit the factories in Heifong by shopkeepers in Liwan Plaza. In these buyers' minds, these visits represented that they not only had the business relationship but also had the friendships with each other.

As a wholesale center, most buyers understand that the best opportunity to have a discount is to purchase a lot once in a shop. When one buyer purchases more, he or she has more chips with which to bargain the price with the shopkeeper. However, this also challenges the buyers' capability of budget control when they encounter price fluctuation. Compared to the transactions of gold or diamond, the price of crystal is relatively unstable and keeps rising. Moreover, it is common that a buyer hardly finds all expected items in one shop. When he needs to make purchases in different stores, he also loses the opportunity to have a discount. All of these challenge a buyer's business strategy and tactics.

Shopkeepers understand well that all clients like to “*shajia*” (kill the price, or bargain). Basically, shopkeepers or dealers in Liwan Plaza like to be nice to every client, but they do not like their clients to insist on bargaining. However, they also know that if they accept every client’s *shajia*, they become meaningless. Therefore, they treat it as a privilege for loyal clients or buyers who have special relations.

The interaction between sellers and purchasers is not only about business, it is also an occasion for exchanging information. Many shopkeepers informed me that they hear a lot about how crystal is used from their Taiwanese buyers and Hong Kong clients. From these clients’ purchases, shopkeepers are also informed about what sorts of crystals downstream customers are looking for and they can share the information to their upstream factories as a reference for ordering raw material. Otherwise, purchasers from Taiwan and Hong Kong also absorb information about crystals and other semi-precious stones. For example, by questioning each sort of crystal’s origin, buyers also learn that crystals are from Brazil, tourmalines are from Brazil and India, and Madagascar produce agate. This information becomes what these buyers share in their own shops in Taiwan.

### **Behind the Market**

Just like other types of markets, the transaction of crystals in Liwan Plaza is definitely determined by the invisible hands, the market mechanism. Markets’ supply and demand, and goods’ prices and qualities, are all factors influencing the operation of the crystal market. While the supply of crystal material reduces and causes the purchase cost to rise, the prices in Liwan naturally rise as well. For example, when the costs of raw material, transportation, and production fluctuate, it must embody the price and influence the market. Otherwise, this market

is embedded in a global economy system. The economy of China and Taiwan, the exchange rate between RMB and U.S. Dollar, and the global economy all influence this market.



**Figure 12: Crystal Buyers in Liwan Plaza**

However, crystal's physical features may also contribute to the characteristics of this market. For example, while the price changes with the size, transparency, and inclusions of crystals, one string of rutiled quartz beads with 8mm diameter may have different prices in different stores for their inclusions. If the crystal has more rutile needles, or the rutile needles are wider, it has a higher price. However, if it is green-phantom crystal, there could be few green inclusions decreasing the visual admiration value. In addition, inventory pressure is lower in Liwan Plaza. Since minerals do not have the potential issues of rot as do foods or flowers, shopkeepers generally less concern with the sales speed. If some goods are unsalable, shopkeepers will prefer to store their goods rather than sell them with cheaper prices. They prefer to wait and sell them when the price becomes better.

To stress the natural beauty of goods and their potential commercial value is a tactic that sellers use to convince buyers. Sellers like to say: "These crystals look great and have beautiful

inclusions. They are good for your business.” I also heard sellers often say “it is the only one” to their clients in order to stress the rarity of their products. This discourse shows that the seller wants to promote an idea that nature could not be reproduced by machine and that you could never find two perfectly identical products in nature. Because of this, some excuses for bargaining are not functional in this market at all. For example, when a buyer claims that the other shop is selling the same rutilated quartz beads with a lower price, the seller would refute and say: “it is impossible to find two pieces of crystal that are totally the same.”; or “these are natural products. They are not made by machine.”

As I mentioned here, the vertical relationship between Liwan and Heifong is clear, but the horizontal cooperation was not common. Wei-Chi told me that the competition for raw material and clients was serious in Heifong’s jewelry’s factories. In my visit to Liwan Plaza in 2009, I heard that the horizontal cooperation was not common in Liwan Plaza. Basically, stalls and shops had no direct cooperation with each other. This tension was more serious when two commercial units were selling goods which are quite similar. However, in my visit of 2012, the situation had changed. The rising competition from Donghai had forced shopkeepers to cooperate with each other.

My last visit to Liwan Plaza in 2012 was joining a business conference of the construction of Guangdong Jewelry Business Association (*Guangdong Caibao Shanhui*). I went there with Wei-Chi and took part in the discussion. Wei-Chi and I were the only two Taiwanese at this conference, and the remaining 20 participants were all Heifong people who have factories in Ketang and shops in Liwan Plaza. The purpose of this conference was to promote cooperation among corporations and factories. Compared to other corporations or enterprises in the Guangdong jewelry industry dealing with gemstones, gold, or diamond, Heifong’s jewelry

industry which focused on the semi-precious stones or other relatively valueless minerals have lower social status. By building this institution, they wanted to enhance their status in the jewelry industry of Guangdong. Furthermore, through participating in this association, some bosses could have a chance to become the “chairman” or “director” of this association, allowing them to enhance their reputation and have more influence in the jewelry industrial field.

During the conference, it was interesting to find that they forced themselves to speak Mandarin rather than Heifong’s dialect which was understandable to Wei-Chi and me. On the one hand, it embodied that the how they viewed their status in the jewelry industry. In their mind, if they keep speaking their dialect, they may lose in the competition with other rising jewelry processing areas, such as Donghai. On the other hand, this also showed their will to get rid of the backward stereotype which people have about Heifong and their business.

Bestor claims that traders and dealers in the market are mundane shorthand for subtle calculations of extremely complex cultural and social trends well beyond the inherent daily fluctuation of marketplaces (2004: 128). Liwan Plaza’s operation working is organized around these minerals and in turn creates and reflects the wider patterns of crystal production, process and consumption that surround this marketplace.

#### **4.4 DONGHAI, THE CAPITAL OF CHINA’S CRYSTAL**

Donghai County is located in northeast Jiangsu Province and 30 meters from the Lianyungang Port. It was called “the Home of China’s Crystal” (*zhongguo shuijing zhixiang*). Before the economic reform in 1978, Donghai had been well known for its production of quartz and diverse sorts of crystals. Since this area had rich quartz mines underground, many farmers had the

experience of selling quartz excavated from their own farms. Due to the rich crystal deposits, there are also national factories manufacturing crystal glasses and crystal cups. When Chairman Mao Ze-Dong passed way, his crystal coffin was also produced by quartz produced in Donghai. Nowadays, Donghai has earned the reputation as “the Capital City of China’s Crystal” (*zhongguo shijin zhidu*). According to the official statistic, there are around 200,000 people working for the crystal industry in this area and the annual market sales of crystal in this area is over RMB\$ 5,000,000,000.<sup>18</sup> Among the workers, the majority are local farmers who became factory workers or conduct part-time jobs for processing crystals and minerals. Presently, the main type of product in Donghai is crystal sculpture. Local factories also manufacture crystal beads and balls for the market at Liwan Plaza. When I conducted my fieldwork in Guangzhou in 2010, I already heard many people discuss about Donghai and inform me that Donghai had the best skill for grinding crystal chucks into balls.



**Figure 13: The fieldsite in Jiangsu Province**

The most obvious difference between Donghai and other processing areas of crystals is that Donghai is a concentrated place for trading raw crystals and producing crystal sculptures. In

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<sup>18</sup> See *Donghai Crystal* 2011 (1): 13-18.

the following sections, I will respectively discuss the operation of the local crystal market and crystal carving workshops.

### **Crystal Markets in Donghai**

Niushan Township, the city at the center of Donghai County, is the business center for crystal transactions and crystal sculpturing. There are two types of marketplaces in Donghai's crystal market. The first one is the crystal market center composed of physical shops. In addition to independent crystal shops on the street, there are two main crystal market centers: the older one is Donghai Crystal City (DCC, also called China's Crystal City), and the new one is Donghai International Crystal and Jewelry City (DICJC). DCC was constructed in 1992. By the side of DCC, there is also a building called Donghai Crystal Plaza (*Shuijing Huai*, or DCP) constructed in 2010. Both building are located at the center of Niushan Township. DICJC was constructed in 2008 and is located at the east of Donghai. In terms of business types, DCC is similar to Liwan Plaza and sells many semi-manufactured products. DCP and DICJC focus on crystal jewelries and fine sculptures. We already can find the influence of *fengshui* in the crystal market center. In DICJC, outside a crystal shop, there was a very large poster introducing each sort of crystal's *fengshui* function. Furthermore, shop sellers could also explain to clients how to apply crystals on *fengshui*. By questioning how they learned these ideas, shopkeepers admitted that they learned these concepts from the Taiwanese and people from Hong Kong.



**Figure 14: Donghai Crystal City**

The other type of marketplace is shown in the two outdoor market fairs, and their occurrence is based on the Chinese lunar calendar. The fair surrounding DCC and DCP occurs on every lunar month's 4<sup>th</sup>, 9<sup>th</sup>, 14<sup>th</sup>, 19<sup>th</sup>, 24<sup>th</sup>, and 29<sup>th</sup> day; and the fair surrounding DCJIC takes place on every lunar month's 3<sup>rd</sup>, 8<sup>th</sup>, 13<sup>th</sup>, 18<sup>th</sup>, 23<sup>rd</sup>, and 28<sup>th</sup> day. The grounds surrounding each market center have been delimited well by the two market management committees. In the early morning of each market affair, around 5AM, dealers from neighboring areas all come to the stall spaces which they rent to display their products and wait for clients until 4 PM. The space of market affairs is also divided into different areas according to the types of products. Basically, there are: a raw material zone which sells imported raw crystals, a semi-manufactured goods zone sells crystal-made jewelry materials, and a crafts zone selling diverse sorts of crystal-made artifacts. Since the division is naturally formed, not organized by the management cadres, it is easy to find some small stalls selling different products within each zone.

The majority of crystal carvers and sculpture workshops concentrate at Niushan Township as well. Since it is important to have crystal chunks with high quality, the carvers all go to the market fairs to search for what they need. Usually, carvers or bosses of sculpture

workshops go to the fair very early since they want to avoid competing with too many colleagues. Over time, it has become a tacit agreement between the sellers and carvers. Carvers always have a powerful flashlight when they go to the fairs. Since the crystals' colors could be dark, they like to use the flashlight to check the inclusion and quality of crystals.



**Figure 15: The market fair in front of DCJIC**

Many neighboring villages are devoted to the crystal processing industry, such as Yinguan Village, Chaojia Village, Chiuyang Township, etc. In addition to agricultural farming, a lot of villagers in these areas conduct part-time crystal processing jobs, or have transferred to conducting crystal business only. For example, Lan-Ai Yin, the lady I discussed in the last chapter, has transferred to crystal business exclusively. Actually, Lan-Ai is not a singular example in which a villager goes abroad to buy crystals. Many villagers in Donghai have experiences purchasing crystals abroad. Since selling crystal could be extra income, villagers already have the habit of selling crystals in market fairs before introducing foreign crystals. The predecessor of crystal market affairs was just average affairs selling everything; these took place on every lunar month's 4<sup>th</sup>, 9<sup>th</sup>, 14<sup>th</sup>, 19<sup>th</sup>, 24<sup>th</sup>, and 29<sup>th</sup> day, and people brought the crystal which

they found in their farms to sell. Since the present crystal market is booming, many villagers continue this custom and go abroad to find crystals for selling. For instance, Min Dai, the Donghai businessman I met in Brazil, had been to Russia, Madagascar, and India to find suitable crystals for the local market's demand. Many Donghai people also told me that villagers, in some areas, like to raise funds together and let one or two villagers, as the delegates of the village, go abroad and buy to bring minerals back for selling as an investment strategy.

People who want to conduct crystal business but have no chance to go abroad could buy crystals when containers come to Lianyun Port from other countries. Usually, multiple containers arrive at Lianyun Port each month, and dealers will receive the information released from the consignors and go to the port on time to purchase crystals. Sometimes, when too many buyers appear at the same time, a small auction occurs for deciding the ownership of a chunk of crystal. Then, the buyers bring these crystals to sell at market fairs or sell them to carving workshops with whom they have cooperative relationships.

In my fieldwork, I heard that some groups of crystals remained circulating in the market affairs and were difficult to make into products. Since the demand for crystals is rising, some buyers buy a group of crystals or a large chunk, and then soon after sell them in the market affairs with higher prices for arbitrage. This causes what the Chinese called *chaozuo* (to manipulate an object's market price), which means that dealers try to create an image that the demand for crystal is rising and that the supply is limited, so that they can sell what they just bought to other dealers. This approach created an illusion of a booming market economy, but inflation already made some investors unable to sell what they bought, and therefore only some crystals circulated in the market affairs.

Donghai's development of the crystal industry and economy are embodied in a biennial event, the "Donghai Crystal Festival." The first one was held in 1991 and the twelfth one was held in September, 2013. It has become the most important event with a local identity. In the festival, all local enterprises and shops joined in, displayed their best crystal sculptures for the competition, and provided special sales to customers. The Donghai County Government which hosts each festival also uses this opportunity to announce the achievements of the local crystal industry and economy directed by the government's policies, and the future plan of local development. Furthermore, it also holds the craft contest for picking the best sculptures of the year. In my visit in 2012, local government secretary, Mr. Ji-Shen Chang, informed me that the government had spent a lot of the budget on building the crystal industrial zone and the Donghai Crystal Museum. Both will begin use in the festival of 2013.

### **Crystal Carvers and Carving Workshops<sup>19</sup>**

There is no official number of crystal carvers working in Donghai. However, according to my local informants' calculations, the actual number was between 3500 and 4000. Originally, Donghai had no crystal carvers before the 1990s, but it has become the center of outstanding crystal carvers. Most carvers are from other provinces which have historical craft traditions, such as Fujian, Guangdong, Shanghai, Henan, and Beijing. Furthermore, connoisseurs can distinguish the differences among their crafts. Basically, it is said that the southern carvers' crafts are more graceful and the composition is more complicated. In contrast, the style of crafts by carvers from the north is more rough and freehanded. Even though the northern carvers and the southern

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<sup>19</sup> There are also multiple famous crystal carving workshops in Guangdong and Fujian. In my 2010 fieldwork, I visited the workshop of Ming-Jian Chen, one famous crystal carving master in Liwan District, Guangzhou. I also interviewed other carvers in Guangzhou in 2012. My discussion of crystal carving skills also includes of the data that I collected in Guangdong.

carvers both love to sculpture religious motifs, but the southern carver usually combines it with more natural landscapes or wild animals.

Almost all workers began learning their skills when they were very young, and most of them learned other types of sculpture before becoming a carver for crystal crafts. Many carvers, especially the elder cravers, learned carving jade, stone, or wood in other places before the 1990s when crystal sculptures were not at all popular.<sup>20</sup> By hearing that carving crystals had become more beneficial, they transferred to carving crystals. Young carvers may directly begin with crystal carving, but they are still few. Therefore, it is not difficult to find that the motif and the style of crystal sculptures are similar to the traditional Chinese motifs on other sculpture crafts. In my fieldwork, local crystal shopkeepers and carvers directly told me that they believed that crystal carving is originated from jade carving.



**Figure 16: A carver carving a crystal sculpture at Donghai**

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<sup>20</sup> Crystal craft was not popular before the 1990s, but it indeed was a sort of craft tradition in China. Some museums, for example, National Palace Museum, and some collectors stored crystal crafts produced in Qing Dynasty.

The training process of crystal carvers is outside of the formal education system. Crystal carvers all found their own masters and became apprentices to learn the skill. Usually it requires at least three years to learn the basic skills. At the beginning, they learn how to mold one, then learn how to conduct the fine carving and polish, and then they had the chance to learn how to design a craft. An apprentice may follow multiple masters in order to learn the skills of carving different motifs. When one apprentice becomes a formal carver in a workshop, their basic salary is at least RMB\$10,000 (around US\$1,600), which is much higher than that of the workers doing processing jobs in a jewelry factory. However, the career of a crystal carver cannot last over fifteen years. Since the carving process damages a carver's vision, carvers easily suffer early deterioration of eyesight than ordinary people. Their necks and backs also suffer pains because they usually maintain some specific postures for a long time in order to conduct meticulous carving jobs. Moreover, the dust created in carving also brings the potential worry of pneumoconiosis. Thus, many carvers try their best to have their own workshops with apprentices and become a designer as early as possible.

Even though the carving technique of crystal is developed from other types of craft traditions, the physical features of crystal still bring its own characteristics to craft performance. Wei-Chi Qian told me that the Chinese and the Taiwanese usually do not appreciate the natural beauty of jade, so carvers need to carve jade with an image of a religious deity or animals. Compared to this, crystal buyers usually like to keep a crystal piece's natural beauty, so the most common way is to make a chunk of crystal into a ball. And, the original purpose of crystal carving is to cover the defect of a crystal chunk when it could not be made a ball. Presently, crystal carving is not only used to rescue a chunk of crystal with defects. In fact, outstanding carvers could also use the inclusions to create a *jìn* (scenery). The carvers usually highlight the

most beautiful part by keeping and polishing that part, and hiding the parts with defects by carving motifs on them. Since the technique of atomization can be applied to crystals, carvers usually atomize the parts with defects. For example, if the inclusion of rutile needles within a rutiled quartz has a radial shape or forms an abstract ‘scenery’, a carver will retain that feature by making that part into a hemisphere. As a transparent hemisphere has an amplification effect, it highlights the inclusion or the “scenery” inside a chunk of crystal to viewers. Moreover, carvers also need to know how to carve details, such as flowers or grass, on the remaining part of a chunk to lead the viewer’s eyes to the main points of appreciation. This composition corresponds to a skill used in traditional Chinese painting: *liubai* (leaving blank), in which a space is left in a painting to give a viewer’s sight a relief and stimulate a viewer’s imagination. Applying this to carving crystal, the scene with natural mineral beauty becomes the part retained by a hemisphere, and other details function to lead viewers’ sight to the beauty. Crystal carvers claim that carving crystals is also more difficult than average stones because of their transparency. Carvers’ senses of space with other materials become hard to apply to crystals. To carve a motif on a chunk of crystal, carvers need more experience than carving on an ordinary stone.

The workshop of carving crystal sculptures works like a production line. Usually the most experienced carver is responsible for designing and drawing the black lines on chunks of crystals with oily pens. After completing the design, the second step is the initial roughing out based on the design. The carver uses a carving saw to carve off the unnecessary parts and create a basic form of style on the crystal. Usually, a novice starts his or her learning process from this step by following an experienced carver’s instruction. Then, the details are added to the item, including atomization. This step needs carvers with over two years of experience. Through atomization, the product will have a better three-dimensional appearance and highlight the

“scenery” of the transparent part. The last step is to polish. Some workshops give this job to novices with the instruction of experienced carvers, and some prefer to give this to more experienced carvers.

When a leading carver receives a chunk or piece of crystal, he will spend time on deciding what sort of motif matches the material. By carefully observing a chunk of crystal, he also needs to decide which part should be highlighted or hidden through carving details. In a workshop, there are many artistic books of traditional Chinese motifs for referring. A lead carver usually imitates the traditional painting of deities or animals printed in these books to conduct a design job. A carver starts to experiment with designing when he or she already has the ability to add details on a crystal sculpture. The lead carvers will assign apprentices some simple designing jobs or smaller parts of a large piece as training. The junior carvers that receive these jobs need to accumulate the experiences and grasp the opportunity to prove their abilities. Since the price of a large chunk of crystal is expensive, some carvers use their own money to buy small pieces of crystals to accumulate their design experiences.

It is obvious that the motifs of crystal crafts on the current market are limited and most of them are religious deities and animals in traditional styles. Shopkeepers of crystal shops informed me that this is because the training system does not emphasize creativity. Within the traditional master-apprentice system, to become an independent carver usually takes at least 5 years. Many young independent carvers choose to carve popular motifs rather than invent a new one because traditional motifs are still in great demand on the market. While the demand of the common motifs is stably plentiful, carvers have no need to develop new motifs and take a risk. Even though the motifs are limited, connoisseurs or people who have capabilities of appreciating

crystal sculptures still can easily distinguish the value of a crystal sculpture through carefully observing the skills embodied in a craft's verve.

In Donghai, senior migrant carvers usually lead their teams consisting of apprentices who live and work together in workshop buildings. In September 2012, my informants brought me to visit a workshop run by two brothers, Jia-Chiang Ke and Jia-Le Ke. They were migrant carvers from Fujian Province. They learned their skills from a stone sculpture carver when they were in Fuzhou, a north coast city of Fujian. They began their crystal carving business around 2005. In that period, they stayed in Fuzhou and carved orders from Taiwan. In 2010, they heard that Donghai had more crystals and a better market for crystal sculptures, and they therefore brought their team there. They rented a house with four floors for living and working together.

When a crystal carver becomes independent and has his own workshop, he needs to be responsible for purchasing crystal materials for business. In Chinese conversation, he no longer does *dagong* (work for the boss), but becomes *laoban* (boss). As I mentioned in last section, these bosses usually go to the market affairs very early to find suitable pieces or chunks of crystals. They may not always buy raw chunks of crystals but instead buy crystal sculptures with defects as a common strategy to save money, since the defects may make it difficult to sell the craft. It is also common to find that some owners of crystal shops buy crystal materials and give these to the carvers or workshops which they trust and appreciate.<sup>21</sup> This could be seen as a win-win strategy. On the one hand, crystal shops still have the ownership of the craft or sculpture, and they can give advice about to the carvers' work or follow the client's order to request a carver to carve a specific style. On the other hand, carvers, especially those who just have their own independent businesses, could use these chances to guarantee the oversell of their work and

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<sup>21</sup> Shu Mu Qian also conducted this strategy. So, this type of cooperation not only exist Donghai, but also in Guangzhou.

have a chance to accumulate their experience and reputation. It is also common that crystal shops use the crafts which they bought from carvers to join in the crystal craft competition. When one piece of craft wins an award, both the shop and the carver share the honor. Following the award, the shop also has better standing point on which to raise the price of the sculpture. The carver's succeeding crafts may also have better price on the market.

During my fieldwork, I also heard many people criticize that most crystal sculptures are only “crafts” without real aesthetic value, while all carvers only imitate their teachers' styles or traditional motifs and do not want to spend energy on innovation. I discussed this issue with local crystal shops and the shopkeepers informed that this situation is because of the training system. In the training process, the master-apprentice relationship requests that the apprentice follows their instructors' style and motifs. When apprentices become carvers, they only know how to imitate and do not know how to create a new style. Even so, I still found exceptions. Songshen Crystal's owner, Jian-Hong Shan, does not cooperate with the carvers from the traditional master-apprentice training system, but instead tries to work with young carvers who received formal art school training. By providing a contract and materials, she led six young carvers to conduct artistic creation. As all six of these carvers received formal art training in universities or art schools, and because Mrs. Shan stresses the importance of creativity, their products surpassed the traditional motifs and style and had received many awards in competitions. For example, one carver, called Xin Miao, gave up the common front face orientation when he carved the sculpture of Bodhidharma (or called *Damo*, see the figure below), and decided to carve the figure's profile on the crystal. This was extremely uncommon to crystal crafts, and it won the golden award in a province level competition in 2012. With this award, Shan estimated the artwork's price would be up to RMB\$ 150,000 (around US\$ 23,000).



**Figure 17: Xin Miao's crystal sculpture**

Bestor claims that whatever their origins, trade rules are accretions of customary practice, modified by occasional flurries of political deal making, institutionalized in the market's regulatory structure, and incorporated into the informal norms that govern the trade of any particular commodity. They reflect the continual efforts by market participants to reach trade-offs as they manage risk and competition (2004: 252). In Donghai, we can see that the market affairs or crystal market centers are not only the embodiment of "the invisible hands", but they are also the "marketplace" embodying the social relationship among people working and living in the crystal industry. More than just the social relationships, Donghai's crystal market also embodies the cultural traditions and the changes in the art of crystal crafts.

#### **4.5 EXPERIENCING THE WORLD IN A WORLD FACTORY: CRYSTAL'S INSEPARABLE PROCESSING AND MARKET IN A CHANGING CHINA**

This chapter articulates processing and the market to explain crystals' social life in China. Heifong, Huadu, and Donghai are all examples of the "world factory". In Guangzhou, including the Huadu District, crystals are in more stories about migrant workers and the whole area's connection with the image of a "world factory". Ethnography recorded in Heifong speaks about how a community is specialized into industrial areas of processing crystal because of its residents' life experiences of being migrant workers. In Donghai, carving sculptures is another form of processing by applying crystal's physical features to create the identity of a place. All these lead us to rethink what people are experiencing on this GCC. Capitalists who run factories and crystal shops and workers who directly change the appearance of crystals may experience the world differently on the same GCC.

##### **Capitalists' View: China's Economy in a Transition**

The growth of China's crystal and semi-precious stones processing industry reflects the transition of China's economic development after the economic reform. Taiwanese enterprisers in Huadu, factory owners in Heifong, and shopkeepers in Liwan Plaza and Donghai all utilized this trend and earned prosperity. If the southeast coast of China is the world factory, then capitalists are the pushers pushing the factory work and taking advantage of it. We can find similarities between the present Chinese crystal and semi-precious stones processing industry and the Taiwanese jewelry industry between 1960 and 1990. Both were developed with the global demands of semi-precious stones and constructed the "world factory" in each place. Cheap laborers became one of the most important factors in constructing this role. Instead of caring

about workers' welfare and difficulties, capitalists care more about how to maximize their production and profits through exploitation of the labor force. Relocation of production to other developing countries with cheaper labor costs was one of the most significant strategies of world capitalism. By extending the discussion of chapter 2, Huadu and Heifong were the replacement of the Taiwanese jewelry processing industry which was subjected to labor cost rises caused by a shortage of labor and the risk of worker protests and organizations (Deyo 1989). Following this, it is reasonable to foresee the potential issues of crystal processing industry's future in China. When the advantage of cheap labor no longer exists, the foreign orders will move to neighboring countries providing cheaper labor. This is what the Taiwanese jewelry processing industry experienced before.

When talking about the prospects of this industry, some Chinese shopkeepers in Liwan Plaza and Donghai were optimistic about the future market of crystals. They told me that the domestic market of crystal and semi-precious stone products is rapidly growing. The price of crystal products in China is even higher than in Taiwan's market. The expansion of the domestic market extremely increases the demand of crystal products and raises the price. There is also a slogan proposed by a brand of franchising crystal stores: "Buying crystals is better than buying gold" to attract investors or people who want to own their own business.<sup>22</sup> No matter whether or not it will be beneficial, this already implies the developing market of crystal products and the shopkeepers' optimistic or roseate view toward it.

In contrast, most factory owners in Huadu and Heifong have started to worry about the overall economic trends of China and their impact on the production and market of crystal and semi-precious stone products. While the basic salary and the material cost are endlessly rising,

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<sup>22</sup> See relevant news report: <http://sn.people.com.cn/BIG5/n/2013/0322/c339260-18341297.html>;  
<http://sn.people.com.cn/BIG5/n/2013/0322/c339260-18341297.html>

the benefit of processing factories is decreasing year by year. This may also bring the fluctuation of the price and reduce the consumers' consumption. The factory owners have no confidence about whether the future domestic market will accept the more and more expensive crystal products. The antithetical views coexist in the capitalists' view of this GCC.

### **Worker's View: *Dagong* as a Social Status**

Workers also experience the world through their works in the processing factories, and they are definitely influenced by their class positions in the GCC. The migrant workers' *dagong* does not just mean working for an employer, but also signifies a way of experiencing the world. Pun defines *dagong* as a process of turning individuals into working subjects, particularly for a capitalist "boss" and means causal labor that can be dismissed easily, that can be replaced by anyone who is willing to sell his or her labor for a lower price (Pun 2005: 12). This definition implies that every worker in any institution could work as a *dagong*. Actually, *dagong*, in my fieldwork, is a term with extreme implication of exploitation of migrant workers. As migrant workers leave their hometowns and subject themselves to a factory in the coastal area, they no longer work for themselves but for a capitalist boss. In this mechanism, their labor forces are exploited and alienated as tools of production belonging to the capitalists. Furthermore, due to the restriction of *hukou*, they cannot enjoy the same social welfare as local citizens and their status makes it extremely difficult to earn prosperity.

Since the production of crystal products lacks a complex processing sequence and is relatively simpler than other processing occupations, the labor is highly substitutable. Employers could easily find new laborers to replace the workers who are not suited for the job, rather than provide a higher payment or a promotion as a strategy for stimulating employees' productivity.

Furthermore, manufacturing extremely expensive crystal products which the migrant workers have no chance to consume constructs the sense of class consciousness in these workers' minds. In this consciousness, the term *dagong* signifies the change of capitalist-labor relations, and the *dagongzai/mei* (working boys/girls) is a new configuration imbued with an awareness of labor exploitation and class consciousness (Pun 2005b: 13). Moreover, *dagong* is also a specific way to interact with crystals within a GCC. It makes implications about a migrant worker's specific status on a GCC in which the workers' interaction with crystal is constructed by the employer-employee relationship.

Pun also claims that the lives of Chinese migrant workers have to be understood against the larger development, which consists of two reactionary forces in China. The first force is comprised of the changing modes of social regulation and political engineering of society by the party-state, and the second is the increasing capitalization or marketization of socialist society embroidered with the hegemonic eulogy of the "search for modernity" or "quest for globality," and branded with the slogan *yu quanqiu jiequi*, ("setting China on the track of globalization") (2005: 4). From this perspective, I am more interested in what sort of modernity or globality these workers have experienced.

In the processing stage, the discourse of using crystal for good fortune has become common because of the cultural and business interaction among China, Taiwan, and other pan-Chinese societies. In many Chinese cities, middle class citizens already have the habit of consuming crystals for self-decoration and good luck. However, the migrant workers in factories have extremely few opportunities to consume what they produce. Their inability to consume crystal becomes a metaphor indicating that they have less and less chances to become fortunate and wealthy while they are producing the products which are assumed to bring good fortune. The

alienation of crystal processing workers' labor force decides their poverty when they are also producing consumer's hope for the future. Just like Pun says: "Poverty is artificially and historically made and, most importantly, is something that needs to be consumed and refilled (2005: 14)." Moreover, this also implies that the "fortune" marketed with the crystal products at the end of this GCC has a foundation of exploitation and poverty through the processing.

### **Worker's View: *Jiagong* as a Way of Experiencing the World through Crystals**

The other perspective by which to understand the social and cultural meaning of processing to workers is the Chinese phrase "*jiagong* (processing)". Literally, it means "to work by adding things on" or "to transform the raw materials into products". That is to say, this phrase is indicative of the interactions between the subject and the object. When workers do "*jiagong*" for factories belonging to a GCC, they also interact with the world through the material. *Jiagong* is not merely a processing job for changing the material, but also a chance to experience the world through the crystals moving through a GCC. Even though these migrant workers do not have ownership of these crystals, they still learn a lot about these materials through the processing job. During the processing job, the workers learn about where these minerals are from and where they go. The information released from the employers, senior, colleagues, mass media, or the internet inform them a lot about these materials. Furthermore, the quantity and quality of crystals they touch during their work, directly or indirectly, reflects the price fluctuation of the crystal market and lead worker's imagination about the world economy.

Factories' productions may also bring their workers different experiences of the world and physical features of crystals and semi-precious stones. The purpose of processing in Huadu and Heifong is mass production, and this is indicative of one feature of the crystal's mass

processing: “no design”. This does not mean crystal has no value for design but means that the processing of crystal is to highlight the naturalness of crystals. Through processing, such as cutting and polishing, the crystal’s physical features, such as transparency and inclusions, become more easily noticeable. The workers in this type of processing factory will understand that the natural beauty of crystals is partly artificial. This differs from the carving process in Donghai. To carvers, they need to highlight the natural beauty of each chunk of crystal by using the motifs or patterns to lead the viewer’s vision. They also understand the uniqueness of crystals is created by working on each crystal’s distinctive physical features.

*Jiagong* is also a specific way to experience globalization: the crystals should be moved on through being a part of the GCC. Whether or not with shopkeepers or workers on the production lines, the crystal should not stay in one place and must move to their next destinations. They experience globalization through the flow of crystal goods while the local economy and the global economy are bound together. When the flow is fast, it means that the economy is booming and more foreign crystals have the opportunity to enter into China and become commodities for selling. Alternatively, when the flow becomes slow and more crystals stay in factories, it not only means that the demand of foreign crystals had reduced but also means that the economy has declined as well. The shopkeepers, factory bosses, and factory workers all sooner or later sense the fluctuation as a result of the flow of goods. The market demands directly influence the orders and the corporation’s management of the production lines. All these compose a specific experience of globalization. I do not deny that these people were also experiencing globalization in other ways. A lot of my informants use Samsung smartphones and go to McDonald’s often, but their jobs, as a part of a GCC, provide opportunities to touch specific sorts of foreign materials and to interact with them with a unique way.

To adapt foreign crystal materials and participate in a production line is also a form of “glocalization”. Processing workers do not merely let goods pass through their hands, but they also interact with these crystals and create a specific material culture. First, processing is also a way to make crystal glocalized, which means the material, which has moved through the process of globalization, has local meanings or has more opportunities to be used or consumed by people at different places. Second, “glocalization” also implies that the localization process does not need to happen locally. The objects we use may experience localization before their buyers and users on a GCC. To make crystal localized and fitted into the Taiwanese market does not require processing the material in Taiwan, but in China. To change a crystal’s appearance or shape, or to assemble crystal with metals to become adornment or jewelry, the processing zone becomes the starting point of localization embedded within a GCC. Third, glocalization also implies that one place is dealing with another place’s localization. While Chinese people form a way of living with crystal or a system of economy of crystal, they are also dealing with the localized application of crystal in Taiwan. Following this, glocalization is not merely a process to adapt the impact of globalization, but also a process by which multiple local places interact with each other through manufacturing goods. The further theoretical discussion of globalization will be presented in Chapter 7.

Last but not least, in terms of the anthropological concept of ritual and the social life of things, we could also view crystals are experiencing a “rite of passage” through the process of “*jiagong*”. Through *jiagong*, crystals change not just their social appearance, but also their social roles in their social relations with humans. As many rites of passage we are familiar with, the crystal in processing is also in a period with liminality (Turner 1969: 95). They no longer stay in

the category of “raw material”, but will become “commodities” or “religious objects” ready for selling on the market.

## 5.0 THE MARKETING, CONSUMPTION AND USE OF CRYSTAL IN TAIWAN

After excavation from Brazil processing in China, the crystals finally arrive in Taiwan. Before crystals become something placed in a user's home, they still need to pass through the process of transaction or consumption which happens in crystal shops. These shops connect the Taiwanese with these foreign crystals.

Taiwan indeed owns rich mines of silicon dioxide (SiO<sub>2</sub>) in the central and eastern area of the island. However, these mines did not form rich crystals. One of my informants, Yu-He Lee, a Taiwanese geologist, informed me that Hualien County owns few crystal mines which were very remote. It would not be economic to conduct any large scale excavation over there. Thus, Taiwan did not develop its own crystal material culture based on local crystals and the Taiwanese material culture of crystal is based on the imported crystals. Following this, my main questions in this chapter are: What material culture of crystals do the Taiwanese have? How is this material culture constructed?

By focusing on these questions, I will interpret not only consumers' consumption, but also crystal shops' marketing strategies. Anthropologists point out that consumption is a sort of dialectic process (Miller 1987) in which people use the goods and consumption behavior to communicate with each other. It is also important to apply this dialectic perspective to interpret the cultural and social meaning of marketing. From this perspective, crystal shops in this thesis are viewed as spaces in which shop owners try to communicate with their customers in order to

achieve their commercial goals, simultaneously constructing and transmitting crystal's meanings. That is, through studying crystal shops' marketing strategies and their interactions with their consumers, we will better understand what the Taiwanese really expect in their consumption process.

Even though marketing is one research focus in this thesis, I will not focus on any specific brand. Since most of crystal objects have no logo on them, and crystal shops have no exclusive products, it will be pointless to connect products and corporation culture with consumers' behaviors. Alternatively, I argue that it is more important to treat all crystal shops as a whole and to capture how the Taiwanese interact with these crystal shops. Moreover, these crystal shops also play the role of bridging foreign crystals to the Taiwanese. Their marketing strategies must correspond to Taiwanese local culture and the physical features of crystals.

Between 2009 and 2012, I interviewed 25 crystal shops in total in Taipei City and New Taipei City (original Taipei County), and over 50 crystal users. Moreover, I also conducted participant observation in crystal shops for interactions with customers. My main participant observation was conducted in Shan Fu Crystal and Yan Lei Crystal. Shan Fu Crystal is a downstream store of IAS; and Yan Lei Crystal is one of the largest franchised crystal stores in Taipei. I usually stayed in these crystal shops for many hours each time and observed how the shopkeepers and sellers interacted with their customers. I also grasped opportunities to talk with the customers in, or outside of, these stores and invited them to conduct a deep interview. Sometimes, I shared my photos which were shot in the fieldwork of Brazil and China with people in the crystal shops for reciprocating their contributions to my research.

## 5.1 A BRIEF HISTORY OF CRYSTAL SHOPS IN TAIPEI

When did Taipei start to have crystal shops? This was my first question regarding the Taiwanese material culture of crystal. Since it is impossible to trace the first person to use crystal in Taiwan, it is more reasonable to search for the first business space to sell crystals. The appearance of this commercial space is meaningful because it represents the appearance of specific type of consumption and consumer in Taiwan. In Chapter 2, I mentioned the development of Tip Top Gold and Jewelry Corp (TTGJC), but before the mid 1990s, TTGJC did not run its business for the average customers and only sold materials to the factories in the jewelry processing industry. Compared to TTGJC, Blanco Crystal which was transformed from an export-oriented corporation to an imported-oriented crystal shop, was the first one to open to the average customers in the 1990s.

After the first crystal shop Blanco Crystal opened, Taipei formally had a new type of business space, the “crystal shop”. They mushroomed between 1990 and 2008 and quickly distributed throughout all of Taiwan. There is no official statistic of the number of crystal shops in Taiwan. However, according to many shopkeepers’ estimation, there were over 200 crystal shops in Taipei City and New Taipei City before 2008. After the global financial crisis happened in 2008, Taiwan’s declining economy caused a decrease of crystal shops. Presently, there are 100-130 crystal shops in the two connected municipalities.

According to business mode and scale, there are four main types of crystal shops in Taiwan: wholesale stores, single retailers, franchised shops, and market affairs. The wholesale stores are mainly responsible for importing foreign crystals and minerals into Taiwan. They concentrate at the northern area of Taipei Railway Station and the multiple administrative districts of southwest New Taipei City, such as the Sanchong District, Wugu District, Xinchun

District, and Taishan District. In Chapter 2, I have mentioned some of these stores, such as TTGJC and Fu Jewelry Merchandise Co. Most of them have direct overseas sources of crystal goods and have become where retailer shops conducting purchases. Some wholesalers have cooperative relationships with the jewelry factories in Heifong or the stores in Liwan Plaza and routinely import goods into Taiwan from these sources.

Some crystal shops' shopkeepers claimed that the northern area of Taipei Railway Station could be the earliest area to collectively sell crystals. As I mentioned in Chapter 2, in the late 1980s, when Taiwan's economy was booming because of the manufacturing industry, there were many shops selling antiques and Buddhism crafts in this area. The Taiwanese usually call them *yipindian* (crafts shops) or *fojiao wenwu dian* (Buddhism crafts shops). Some jewelry processing factories producing crystal beads for foreign orders sell some of their products, especially the strings of chanting beads, to these shops. Some rich Buddhism followers or practitioners like to buy these expensive chanting beads composed of foreign minerals because of their rarity. Therefore, these shops could be the earliest business spaces selling crystal products in Taiwan.

Wei-Lun Qiu, who ran the first crystal shop on Chongqing North Rd, one main road of the area north of Taipei Railway Station, remembered that there were already 7 or 8 crystal shops on that street in 1995 which sold crystal products manufactured from the crystal factories in China.<sup>23</sup> Between 2000 and 2008, the northern area of Taipei Railway Station became an important area for crystal wholesale. In 2003, when I conducted the fieldwork for my MA thesis, there were over 15 wholesaler stores selling products from Liwan Plaza in Guangzhou City.

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<sup>23</sup> Wei-Lun Qiu was the second generation managing this shop, Yongshen Crystal. In the late 1980s, his father was running jade and mineral business in Hualien. His father moved the family and business due to the decline of jewelry processing industry in Hualien. In the first five years of the 1990s, the shop still sold many local mineral products from Hualien. In that period, crystal became more and more popular and they also sold more and more crystal products in the store. After the 1995, the shop was transformed to mainly sell crystal products from China.

Compared to wholesale stores in New Taipei City which have larger space for large pieces of crystal crafts, wholesale shops in this area have smaller spaces and mainly focus on products of crystal jewelries. However, many wholesale stores have been closed because of the serious reduction in Taiwanese's consumption of crystal after 2008.

The other place where retailers like to make purchases is the weekly market affair of Jianguo Jade Market (JJM). JJM is a market affair held under the Jianguo High Way on Saturday and Sunday. Some crystal consumers also like to search for crystals in this market affair since the prices are relatively cheaper than in some retailer shops. Most of the stalls in JJM originally ran business in Guanghua Market, a market famous for jade, antiques, and second-hand books. After the deconstruction of Guanghua Market in 1989, most of the stalls moved to this market affair. At the beginning, JJM only focused on jade jewelry, jade adornments, and Chinese antiques. As crystal products became popular in Taiwan, more and more stalls sold crystals in JJM. According to my informants, Shu-Xuan Zhu, a retailer who ran a stall in JJM for many years, JJM once had one fourth of the 595 stalls selling crystals. However, in 2012, there were less than 40 stalls conducting crystal business.

There are also a lot of single retailers in Taipei, and this genre occupies the majority of crystal shops. Most of these shops purchased their goods from wholesalers, and a few went to Liwan Plaza to conduct purchases on their own.<sup>24</sup> Basically, crystal retailer shops are distributed in different neighborhoods. Depending on each administrative district's economic and social status, shops also provide crystal products of different qualities and prices. It is obvious that the same level of crystal products have higher prices in Taipei City than in New Taipei City. Even in

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<sup>24</sup> Very few shopkeepers go to Tucson Gem Show in Arizona annually to conduct purchases. These shopkeepers' stores on online shops mainly service mineral collectors. Since the products of Liwan Plaza lack diversity, these shopkeepers prefer to go to purchase minerals or crystals which are relative rare in Taiwan's market in TUCSON Gem Show in every year' February.

Taipei City, for the same level of crystals, the prices in Xinyi District and Daian District will be higher than in other administrative districts. The relatively higher price reflects the operating costs of shops and consumers' social classes in these areas. Many single retailers also concentrate at the Taipei Underground Market, an underground street mall by the side of Taipei Railway Station.<sup>25</sup> It was opened in 2000 and it has become an area famous for clothes, TV games, Japanese Animations, and crystal products. There are 11 retailer shops running along the two streets of the Taipei Underground Market. To frequent buyers of crystals, this area has become an area for searching for suitable products. These shops also have more customers who are attracted by the crystals displays when they pass by.

Franchised stores were common before 2008. There were some famous franchised stores, including Blanco Crystal, iStone, Jin Qi, Dong Wu, and Crystal Palace. After the economic recession between 2008 and 2012, many of them ended their businesses, or closed most of their franchised stores and left the headquarter store remaining. Presently, Yan Lei Crystal is the largest franchised stores, with four stores in Taipei City. Basically, the products sold by retail shops and franchised shops have no obvious difference.

In addition to these four main types, many dealers also rent stalls in some daily local markets affairs to sell crystal products. These stalls mainly serve housewives who go shopping in these local market affairs, and their products are, of course, relatively cheaper with lower quality. Furthermore, internet shopping and TV shopping channels also provide services for crystal consumption. However, most customers still prefer to buy crystal products in physical stores so that they can check the quality and inclusions of the crystals with their own eyes.<sup>26</sup>

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<sup>25</sup> The other area where retailer crystal shops concentrate is Yingge District of New Taipei City. There are over 40 crystal shops distributed in Yingge Ceramic Street. But, most of consumers in this area are from Taoyuan County.

<sup>26</sup> There is the other commercial ways called "auction". The auction is a commercial space selling crystals by

Generally different types of stores also have different social relations between shopkeepers and customers. The larger a shop, the thinner the social relationships are. Those wholesale stores' main clients are downstream retailer shops and usually have relatively fewer frequent customers. Their businesses are usually very busy on weekends and most sellers in stores do not have time to take care of each customer. Otherwise, retailer shops which focus on customers living in nearby neighborhoods usually like to spend their time chatting with customers and building rapport with them, even if they just look around inside and buy nothing.

The booming period of the Taiwanese crystal market was between 1995 and 2007. Many crystal shops' shopkeepers had a collective memory about that period. They all remembered that they could easily earn money by selling crystal products. Due to the fast flow of crystal products, the demand was also great. Shopkeepers who worked at the downstream retailing shops often needed to work until 10PM, since their customers came to their shops after their daily routine jobs. After closing the door of the shops, these shopkeepers also needed to purchase goods from wholesale stores, such as TTGJC or FJMC in New Taipei City.

Nowadays, the shopkeepers state that their businesses cannot at all compare with ten years ago. After the global financial crisis in 2008, the market of crystal shrunk seriously. Between 2008 and 2012, many crystal shops, wholesale centers, and stalls had closed due to Taiwan's economic recession and consumer retrenchment. Some shopkeepers complained that the government indulges giant consortia and investors' investments on the real estate market and increases the difficulty of living in Taipei, which caused a decrease of crystal buyers. In addition, the rising domestic demand in China greatly enhanced the average crystal price. Some

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auctioning. It exists in Wanhua District, Taipei City, and Longtan Township, Taoyuan County. It has become a commercial space when some crystals bankrupt and needs to sell their goods for cash. The most common products in this are geodes and crystal sculptures and geodes. It is not a common channel for average consumers to buy crystal products. Therefore, I did not spend too space to discuss them.

shopkeepers argued that the rise in crystals' prices reduce buyers' willingness of buying crystals. They mocked themselves, saying that a lot of customers want to buy crystals to solve their problems but crystal shops cannot rescue themselves from the economic crisis.

## 5.2 COMMON COMMODITIES AND THE FUNCTIONAL INTERPRETATIONS OF CRYSTALS

A crystal shop is called *shuijindian* by the Taiwanese, even though these shops also sell some minerals which have no crystallized part. In fact, crystal, in Taiwanese daily conversation, not only refers to quartz crystal, but all kinds of minerals with crystallized parts called *shuijin*. Some people even call all commodities sold in crystal shops *shuijin*. Except for quartz, there are also other popular sorts of crystals and minerals which almost every crystal shop has relevant products, such as citrine, phantom quartz, rose quartz, rutilated quartz, smoky quartz, tiger's eye, tourmaline, amethyst, aquamarine, obsidian, agate, etc.<sup>27</sup> Even though a lot of mineral products may have no crystallized parts, they are all classified by the Taiwanese into the commodity category of crystal. This causes some shopkeepers to complain that the Taiwanese have quite limited common sense of minerals.

There are three basic types of commodities in crystal shops: jewelries, *fengshui* objects, and crystal sculptures. Customers can generally find all three types in each crystal shop in

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<sup>27</sup> According to multiple crystal books, quartz could be advance classified into crystalline varieties, cryptocrystalline varieties, and special varieties. Crystalline varieties refers to quartz has concrete crystal structure. This category includes: white crystal, amethyst, citrine, smoky quart, aventurine, rutilated quartz, tiger's eyes, cat's eyes. Cryptocrystalline refers to a rock texture made up of such minute crystals that its crystalline nature is only vaguely revealed even microscopically in thin section by transmitted polarized light. This category includes agates, carnelian, chalcedony, chrysoprase, and jasper. The special varieties are what could not classified into the above two categories, especially those with special shapes, include elestial quartz, skeptical crystal, and skeletal quartz. Overall, as long as the mineral owns the ingredient of quartz or SiO<sub>2</sub>, it could be classified into the category of quartz or crystal.

Taiwan. However, each shop may have its own characteristics according to a shop's conditions or the shopkeeper's preferences. For example, some crystal shops which target mineral collectors usually have more non-crystal mineral samples for sale. There are also some shops which only stress crystal jewelry products and try to avoid the other two types of commodities as much as possible.

Jewelry products are usually the best-selling products in most crystal shops. In addition to the series of quartz minerals, crystal shops also provide other sorts of minerals for jewelry making. Each sort of mineral is said to have a special metaphysical or healing function by these stores. Most shopkeepers, especially those running retail shops, claimed that 90% of customers come to their shops to buy jewelry and crystal products that claim to solve some anxieties or physical issues. Therefore, the sellers in a crystal shop need to memorize relevant knowledge from references or books. In addition, concatenating beads to become a necklace or a bracelet is one required skill for sellers in crystal shops. Sometimes, customers will request the service a necklace or bracelet repair when the string thread is broken.

The most common *fengshui* products are amethyst geodes, crystal arrays, mixed crystals eggs, crystal balls, and crystal clusters. Except for the mixed crystals egg, which is composed of five sorts of crushed crystals with five colors, in correspondence with the five elements theory, other sorts of *fengshui* crystal objects are more expensive than the average prices of jewelries and have relatively fewer buyers. In contrast to crystal jewelries, sellers will inform their customers of some common sense regarding the placement of crystal *fengshui* objects and prefer not to explain much about *fengshui*. One shopkeeper, Pin-Lian Zhou, who runs his crystal shop in Zongzhen Distirct, Taipei City, told me: "*Fengshui* is a very professional category. Many factors need to be considered. What I tell to my customers is what is presented on TV programs

or books. These are just common knowledge. I still suggest to them to find a trustworthy *fengshui* consultant for suggestions about crystal placement.” The details of *fengshui* manipulation with crystals and *fengshui* consultants’ professional comments will be discussed in the next chapter.

Crystal sculpture is the most expensive category of crystal shop commodities. Usually, a crystal retailer shop only has a few sculptures, but the wholesale centers with larger spaces could own more pieces. The most popular motif of crystal sculptures in Taiwan is Buddhism-related. Basically, this type of crystal product marketing does not stress the metaphysical function of crystal, but instead stresses the religious value or aesthetic value of the craft.<sup>28</sup>

In addition to the four types of commodities, crystal shops usually prepare books or different sorts of references to introduce crystals’ metaphysical functions to customers who need more information. Sellers in these shops all need to memorize the contents of these references to answer customers’ inquiries. Sometimes, when a customer enters the store and looks for a specific sort of crystal and cannot find it, illustrated books or encyclopedias help communication between sellers and customers. Some shopkeepers even hang a poster on the wall to directly introduce each crystal’s metaphysical functions. Sometimes, customers bring their expectations of improving their fortunes but do not know which sort of crystal is best for solving their situations. In this condition, some sellers also provide consultation and suggest suitable crystals to the customers. This happens more often in a retailer shop than in a wholesale store.

That is to say, crystal shops in Taiwan provide potential solutions to issues that happen in customers’ daily lives and provide some comforting services. This explains why many crystal

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<sup>28</sup> According to Taiwanese tradition religious customs, the manufacture of sculptures in relation to Buddhism or Daoism should follow strict rules and obey rigorous taboos. Relevant study has been conducted by Wei-Pin Lin (2003).

shops have their loyal customers. Crystal retailer shops all welcome clients to stay in the shops and share their lives with sellers. Some crystal shops directly announce that they want to hire people who like to talk with customers to be their sellers. This is because all the shopkeepers know that their customers not only want to buy a beautiful crystal but also want to solve some anxieties in their minds.

While crystals are widely applied in *fengshui* or other metaphysical categories, the shopkeepers of crystal shops generally know some *fengshui* consultant or fortune tellers. Crystal shops' customers sometimes ask the shopkeepers where to find a good fortune teller or a trustworthy *fengshui* consultant. Therefore, shopkeepers also need to play the role of a human resources agent to help their customers.

Without a doubt, Taiwanese crystal shops have become a specific space constructed by a cultural agreement between the shops and customers in which customers expect that the crystal shops will provide solutions to their' anxieties. The crystal shop is a not just a space for selling crystals, but also a space for selling hopes and solutions to people's worries. This also shows that Taiwanese consumption of crystals is not merely for admiration values, but also for solving issues that really happen in users' daily lives. Manifold crystals provide diverse solutions for anxieties. However, how have the Taiwanese built this cultural understanding of crystals? I claim that we need to understand how the media combines crystals and minerals with fortune telling and *fengshui*.

### 5.3 MEDIA'S INFLUENCES: BOOKS, COLUMNS, AND TV PROGRAMS

While Taiwanese consumption of crystal is related to fortune telling and *fengshui*, we cannot ignore the media's influences. Mass media has become an important source of information in Taiwanese daily life. Especially for contemporary Taiwanese *fengshui* and fortune telling, mass media plays a pivotal role in constructing people's basic understanding. Thus, to review the mass media's relationship with *fengshui* and fortune telling helps us to understand the process of constructing this custom and people's consumption of crystals.

#### Books

The first book, written in Chinese, about crystals' applications on improving one's fortune was *The Travel of the Crystal Palace (Shuijingong Chi Lu)*. The author was Hao-N Chen, a Hong Kong resident. In this book, Chen systematically introduces many concepts and applications of crystals in relation to the New Age Movement in the West, and he linked these with traditional Chinese cosmology of *qi*. He also claimed that crystals are helpful to improve one's health and fortune. The first edition of this book was published in Hong Kong in 1991 and was introduced into Taiwan by the Taiwanese Jin-Long Huang in 1992. Jin-Long Huang migrated to Argentina in the 1980s and moved back to Asia in 1991. When he went to China for business opportunities, he bought this book in Hong Kong. Inspired by this book, he then started a crystal business and sold this book in Taiwan.<sup>29</sup> Hao-N Chen also runs his crystal shops

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<sup>29</sup> Presently, Jin-Long Huang has a crystal museum in Pintung County, the southernmost county of Taiwan. His firm was in Zhonghe District, New Taipei City. Since he could speak Spanish so he went to Brazil directly purchase his goods back for selling and less went to Liwan Plaza.

in Hong Kong and extended his business to Taipei in 1994.<sup>30</sup> After this book, Chen also published other books to introduce the metaphysical functions of crystal, including: *How to Use Crystal?*, *How to Exploit Crystal's amazing force?*, *Crystal Therapy*, *The Secret of Fengshui Crystal*, etc.

The first book relevant to crystals' metaphysical functions written by a Taiwanese is *The Story of Crystal (Shuijin Wuyu)*, published in 1994. The author is Hua-Zhen Xu, one of the two brothers running Blanco Crystal. In interviews with him, Xu admitted that he referenced to some materials of Chen's book. However, Xu was also critical of that Chen's books claiming that they did not have advanced research. Xu also published a series of books to elaborate his personal research and understandings in relation to crystals, including *The Spiritual Power of Crystal*; *The Handbook of Utilizing Crystals*; *A Treasure Book of Crystal*; *The Magic Book of Crystal and Love*; *Crystal Q & A*; *Crystal and Environmental Energetic Field*, etc.<sup>31</sup>

*The Travel of the Crystal Palace* and *The Story of Crystals* are the earliest publications about crystal's applications in the 1990s, and both books also provide some explanations of crystals' functions. In *The Travel of the Crystal Palace*, Chen only explains that "the colors of crystals could 'resonate' with the seven chakra wheels with different aura colors."

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<sup>30</sup> Crystal Palace had two stores in Taipei and Kaohsiung. One was in Taipei but it closed around 2008.

<sup>31</sup> All these books were published by Blanco Corporate.



**Figure 18: The books related to crystals published in Chinese. Left: The Travel of Crystal Palace; middle: The Story of Crystal; Right: The Treasure Book of Crystal**

For example, when a student will encounter a university entrance exam, his parents may buy a necklace composed of amethyst, since its purple color resonates with the aura halo around one's head, whose color is purple as well. Following the same logic, solar chakra aura, which is said to represent one's emotional energy and fortune of prosperity, and crystals with yellow color, such as tigers' eye, citrine, or yellow tourmaline, will bring positive effect on the auras. However, Chen did not provide advanced explanation of their function based on any scientific discussion.

Similar to Chen's strategy, Xu also claimed that the chakra theory explains crystals' metaphysical functions by referencing some foreign books about the New Age Movement,

crystal healing, and the discourses of the seven chakras.<sup>32</sup> However, he also tried to provide an explanation based on scientific inference. In *The Story of Crystal*, Xu argued:

Scientists have found the “piezoelectric effect” of crystals in the late 19<sup>th</sup> century. The piezoelectric effect occurs when pressure is applied to a piezoelectric material such as quartz (SiO<sub>2</sub>); the crystal deforms in such a way as to create an electric dipole moment, generating an electric current.

Dr. Water Guyton Cady discovered that a quartz crystal connected to a variable-frequency electronic oscillator would vibrate strongly at a very specific frequency, but that at other frequencies it would not vibrate at all. According to this, the quartz crystal resonator actually controlled the frequency of the oscillating circuit. Cady quickly realized that this circuit could be used as a frequency standard. In 1921, Cady and his colleagues made the first quartz crystal resonator. It was the foundational technology of chips in contemporary IT technology (1994: 107).

According to quartz crystals’ vibration feature and piezoelectricity, Xu then continued to interpret the five physical functions of chips composed by silicon and its application to science and technology: to store, to amplify, to transmit, to transform, and to focus. These are essentially based on the piezoelectric effect. For example, with the piezoelectric effect, a chip composed of silicon will change its electronic charge to a positive charge or negative charge when it receives pressure or an electric current. This forms the basic binary “0” and “1”. With this effect, a chip can store the type of information which is the most fundamental mechanism of a calculator and a computer. About amplification function, Xu explained that frequency, such as sound, could be

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<sup>32</sup> These books are: *The Crystal Book* (Deal Wakler 1985), *The Healing Gems* (Roger Anthony Calverley 1983), *Healing with Crystal & Gemstones* (Daya Sarai Chocron 1986), *Crystal Enlightenment* (Katrina Raphaell 1985), *The Language of Crystal* (Roger Calverley, 1987), *The Complete Crystal Guide Book* (Uma Silbey 1987), *Hands of Light* (Barbara Ann Brennan 1988), and *Crystal: The Science, Mysteries & Love* (Douglas Bullis 1990). These references also indicated that the application of crystals by practitioners of New Age Movement could be traced to the middle of 1980s.

amplified through a chip's vibration effect and the frequency will be maintained. Radio and speakers all apply this principle to reproduce sounds (ibid.: 107).

After claiming the scientific interpretation of SiO<sub>2</sub> and its application to technology, Xu then connected this idea with the concept of “*qi*”. *Qi* is the most important cultural concept in Taiwanese folk culture and it is treated as the living essence of all creatures. Xu argues that “*qi*” is a form of physical energy. He quoted Albert Einstein's most famous formula  $E = mc^2$  to claim that the world is composed by energy. Thus, this world is also composed of *qi* while people identify *qi*'s energetic nature. Base on this connection, Xu claims that we can use the concept of *qi* to understand the effect of crystal (ibid.: 111). From Xu's point of view, living in the world is a sort of interaction between one's physical energy and environmental energy. An environment filled with positive energy would bring good fortune to residents, and vice versa. Since crystal has potential energetic features, it will also function to accept the human body, which is also composed of energy. In the book, Xu claims that this mechanism explains why crystal could have functions of healing and *fengshui*. Diverse sorts of crystals with different colors bring different forms of energy that will interact with the users by the five physics functions (ibid.:8).

From a rigorous logical standpoint, there are logical problems in Xu's discourses on crystals. He appropriated the function of chips made of silicon for interpretation of all sorts of crystal. There are other materials and elements in a chip that lend to its physical function, but Xu only noticed silicon and used it to interpret all of crystal's metaphysical functions. No matter whether his discourses are truly scientific or pseudo-scientific, they have become the most influential explanations to Taiwanese crystal users. Other later publications all extend Xu's discourse to elaborate more about crystals' metaphysical functions.

Xu's publications have become the most important references for Taiwanese crystal shops. Almost every crystal shop has his fourth book, *The Treasure Book of Crystals (Shuijin Baodian)*, an illustrated crystal handbook published in 1999. I recorded a story from one of my informants: N-You Tao, a shopkeeper running his business in Sanxia District, New Taipei City, told me about the process by which he opened his crystal shop. In 2001, he ran a stall business selling clothes in a night market. In those days, he noticed that one of his colleagues selling crystals and amethyst geodes always completed his day's work much earlier than him. He went to query that colleague about his business, and that man told him that he purchased crystal jewelries and geodes and then sold them in the night market. The colleague's business was very good and the profit was much better than Tao's clothing business. Thus, Tao decided to conduct a crystal business and opened his retailer crystal shop. He also went to the northern area of Taipei Railway Station and the Taipei Underground Market to study required knowledge of the crystal market. In the Taipei Underground Market, Tao met N-Yu Wang, the boss of Yan Lei Crystal. Wang introduced *The Treasure Book of Crystals* to him and said: "After memorizing the content of this book, you can then do crystal business." Indeed, Yao admitted that his knowledge of crystals at the beginning was all from Xu's book.

Xu's discourses on crystals have been well applied by all Taiwanese crystal stores. In their applications, it is also common to see the shopkeepers use scientific terminology to interpret crystal use. For example, in Shan Fu Crystal, there is an introduction sheet as a guide explaining different crystals' and minerals' function:

1. Crystal Buddha Figurine:

[Used for worshipping] The crystal Buddha figurine, in all kinds of figures, has the strongest spiritual power which could make the shrine vibrant. It is a symbol of peace, property and auspiciousness.

[Artwork Appreciation] Natural crystal with an extremely strong magnetic field and delicate carving is indispensable for a boutique's artwork collection.

3. Natural Rock Crystal (Natural White Crystal)

The growth pattern of white crystal is radical. The energy projected from each point can resist against the invasive harmful *qi* (*sha qi*) and *evil qi* (*xie qi*). The large sized crystal columns and clusters especially require millions of years to grow. Therefore, each of them has inexhaustible natural energy, from which a super strong *qi* field having high vibration frequency emits with a million vibrations per second.

When one has too much negative ions on the body, his or her *qi* field cannot function well and feels uncomfortable. While a residential environment's *qi* field is not in harmony with or is intruded by of an exterior magnetic field (for example, high voltages on road and household appliances are sources of negative magnetic fields), disputes naturally increase and bring problems to one's work. The strong energy of white crystal could breach these negative fields and creates a peaceful and stable *qi* field in a residential environment. In this way, naturally, residents will be healthy and have good fortune.

4. Amethyst Geode:

The magnetic field of purple is oscillatory energy with high intensity, which could stabilize the human cerebellum and the central nervous system, activate brain cells, enhance wisdom, strengthen ability of memorization, and help concentration. It will be helpful for enhancing students' learning and performance in examinations, making their dreams come true. It will relieve insomnia and migraines. The *qi* field launched by an amethyst point densely covered within a geode can agglomerate the property *qi*. Thus, it is suitable to put

them in an office and a house to improve the *fengshui*, make the environment more beautiful and accumulate more property.

It is obvious that scientific terminology and religious language are simultaneously used in this introduction text. The narratives sound even more illogical while they are translated into English. It sounds like these minerals' functions have been proved and will bring good fortune and health to users. I asked Fu-Chen Liang,<sup>33</sup> the shopkeeper of Shan Fu Crystal and his employees how they learned these information. They informed me that they learned these from books, including Xu's *The Story of Crystals*, and that they firmly believe the contents of these books.<sup>34</sup>

Xu's discourse which connects crystals with science also influences how crystal shops explain the price difference between commodities. Usually, the more transparent a crystal, the more expensive it is. The piezoelectric effect of a quartz crystal is better than a piece of white quartz of the same volume, since the silicon content of quartz's single crystalline is richer than average white quartz, which has more metal elements or other inclusions. Thus, crystal shops usually claim that the transparent crystals are not only more beautiful but also have a better effect of releasing energy, which is more useful for improving one's health and fortune. However, this discourse does not further explain the connections among the piezoelectric effect of crystal, physical health, and personal fortune.

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<sup>33</sup> It is a pseudonym.

<sup>34</sup> There are other references. They will be introduced in one of following sections.

## ***Fengshui, Fortune Telling Programs and Mass Media***

Mass media is the other important source from which the Taiwanese learn about crystals, and fortune telling columns in print media and fortune telling programs on TV are the most influential ones. In Taiwan, fortune telling, *fengshui*, and astrology are all attributed into the category of “*mingli*”, meaning “theories of fate” or “the logic of fate”, which are the knowledge and skills to predict, analyze, or manipulate one’s fate and fortune. Since Taiwanese techniques of fortune telling and *fengshui* are both developed from the same philosophical background, the cosmology of *qi*, many fortune tellers also provide *fengshui* services, and vice versa. The Taiwanese usually attribute both of them into the same category of *mingli shi*, or *mingli* consultants. Because of the globalization of Taiwanese culture, contemporary *mingli* also absorbs western astrology, Tarot Cards, Life Path Numbers and other western fortune telling techniques. Nevertheless, it is not a specific category within newspapers and radio programs, as well as TV programs. Before the 1990s, all of these topics were treated as “superstition” or “irrationality” by the ideology of modernity in the media environment (Guo, 2005:11). Even though those were popular in laypeople’s daily lives, they were not allowed to be placed into the mass media under the Taiwanese government’s previous censorship. This situation did not change until the opening of satellite channels and cable TV. According to Chiu (1999), after 1994, *mingli* gradually developed into a category of mass media. At the beginning, print media was the first to accept these issues. With the trend of promoting local culture, which is not merely a trend of localization but also a trend opposing the impact of globalization, traditional and folk topics became acceptable for publication in mass media, such as newspapers and magazines (see Table 1<sup>35</sup>). The reason for this rising trend could be the competition among media, in which each paper or radio program wants to attract more readers and listeners with

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<sup>35</sup> Cited and translated from Guo’s Master’s Dissertation “*The Trend of Millennium Fortune Telling – Audience Research of Fortune Telling Programs*” (2005).

interesting topics. The Taiwanese localization movement which started in the late 1980s may be the other reason for this trend. In this movement, traditional religions or people's folk beliefs have been destigmatized in favor of a social ideology of respecting traditional Taiwanese customs and personal religious beliefs.

**Table 1: The columns of *mingli* and fortune telling on Taiwanese Newspaper**

	Start	End	Day	Title	Space
China Times	1997. 4.20		Saturday Everyday	Star Signs Weekly Fortune Daily	
China Times Express	1995. 5. 7	1996. 2. 1	Everyday	Contemporary Mind and Spirit	Whole page
United Daily News	1994. 8. 4		Everyday	Chinese and Western Astrology	Column
United Daily News Express	1996. 1.13	1996.12. 7	Saturday	Fortune in Life	Column
	1996. 4. 3	1996. 7.28	Sunday	News Words of Fengshui	Column
	1996. 9.27	1997. 2.16	Everyday	Star Signs & EQ	Column
	1997. 2.16	1997.12.31	Saturday	Stars Signs& EQ	Column
The People's Livelihood Daily News	1994. 4. 2		Saturday	Star Signs Weekly	Column
Zili Daily News	1995. 3		Everyday	Boys and Girls	Whole page
	1997. 12. 9		Tuesday	Astrological Philosophy	Whole page
Zili News Expewss	1995. 2.28	1998. 5.	Sunday	Fortune Calculation for Life	
	1997. 4. 6		Sunday	A Grand Sight of Mingli	Whole page
Liberty Times	1988. 1. 1		Everyday	Farmer's Calendar	Whole page
	1995.10.15		Sunday	Star Signs	Whole page
	1996.12.29		Saturday	Fate and Fortune	Whole page
The Common's Daily	1997.10.18		Everyday	Farmer's Calendar	
Taiwan Times	1997. 7.26		Saturday	Star Signs Weekly	
Dacheng News	1995. 2.27		Monday	Star Signs Weekly	Whole page
			Monday	Prophet	Whole page

After the 1990s, almost every newspaper or entertainment magazine had at least one column to help readers predict their fortune for the coming week or a month. In these columns, astrologists usually suggested to their readers to wear some necklaces or bracelets with a lucky stone. Through these columns, the Taiwanese, especially young people, became familiar with

many foreign gemstones and crystals. At the same time, *fengshui* and fortune telling became popular topics outside of print media, and there were more and more TV and radio programs with relevant contents. Nevertheless, many *fengshui* consultants and fortune tellers who practice the traditional skills still commonly question the metaphysical functions of crystals or gemstones, and did not published any books to discuss their effects.

Gradually, fortune telling and *fengshui* have penetrated different forms of mass media. Since the year 2001, fortune telling programs (or *mingli jemu*) have become an independent genre on TV cable channels. Before this year, there were some talk shows or entertainment programs that tried to combine fortune telling stories and ghost stories with other entertainment genres. The first exclusive fortune telling program was “Different Fate and Fortune”, or “*Mingyun Da butong* (命運大不同)”. Other programs following this one have had similar content. These programs’ basic structure is as follows: the host leads fortune tellers and *fengshui* consultants to discuss a topic about people’s everyday lives from the perspectives of fortune telling theories and *fengshui* theories, and they then provide suggestions to audiences who may encounter similar issues in their daily lives. Usually, two to three celebrities, such as actors or singers, are invited to share their life experiences and ideas about the topics, and then consultants with different areas of expertise, such as western astrology, traditional Chinese astrology, palm reading, face reading, *fengshui*, psychological analysis, or Tarot Cards, share their opinions about the topic. Sometimes, fortune tellers prepare some small tests on the topic for the program’s guests and the audiences, and then explain or predict their fortunes according to the results of the tests. For example, regarding the topic of office relationships, the host would lead the celebrity to share their stories and problems happened in their offices. Then, a fortune teller who specializes in western astrology may discuss how to work with people whose star signs

differ from their own. The face reader may teach how to read an advisor's or a coworker's personality and attitude by analyzing one's facial features. *Fengshui* consultants may also remind audiences of some common *fengshui* problems which people may encounter that could cause a bad relationship in the office; and the consultant suggests some crystal objects which could be placed on an office table to improve the office relationship.

Very successful programs have been “*Lucky Strike*” (*Keiyun Jiandingtuan* 開運鑑定團) and “*Funny Fate and Fortune*” (*Mingyun Hao Hao Wan* 命運好好玩). Compared with other programs which usually last for less than three seasons, these two are still running until today and have become the important programs in promoting *fengshui* and fortune telling in Taiwan. It is hard to affirmatively say why these two programs have become so successful; the program's tempo, the combination of host and consultants, and the selection of topics may all be the important reasons. However, it is easy to tell how they have influenced Taiwanese understanding of *fengshui* and fortune telling. I interviewed one producer, Miss Lin, the producer of “*Funny Fate and Fortune*”, and she said:

“We think about what will be most popular for our target audience. Our target audience is females from 30 to 50 years old. They have some basic demands. Women who are not married wonder when they will get married; and women who are married worry about if their husband is having an affair. Working women worry about whether they can get a promotion or when they can earn a lot of money. Family women worry about their children's futures and their family members' health. Those are questions people always ask. We design our topics according to these questions and ask fortune tellers and *fengshui* consultants to develop their discourses with these in mind. We can also see that the television viewing audience increases when we design a program in relation to these topics. This proves that these topics are what the audiences really care about.”

Lin's statement shows who the target audiences of these programs are and what these audiences expect to see. According to her, the average television viewing audience rate was 0.5~1.3%, almost 200,000~400,000 audience in Taiwan, in the year 2003. Most audiences live in urban areas. The urban lifestyle may also affect the topics people like to watch.

*Fengshui* reality shows are the other successful genre promoting the use of crystals on mass media. The most famous one is "Amazing Fengshui in Taiwan" (Taiwan Miao Miao Miao 台灣妙妙妙). In 2012, *Fengshui is Important!* (*Fengshui Yu Guanxi* 風水有關係) became the other well-known *fengshui* program. Compared with the above programs which were talk shows produced in a studio, these programs directly deal with *fengshui* issues in participants' houses. In these shows, the host and a *fengshui* consultant go to an audience member's or celebrity's house to figure out how *fengshui* could be causing problems, like health issues or a troubled marriage. Then the *fengshui* consultant gave the audiences some suggestions to solve these problems. In these problems, different *fengshui* problems cause different misfortunes which need to be solved with different sorts of *fengshui* objects. Within the programs, *fengshui* consultants like to suggest that the residents use crystal objects, either amethyst geodes or crystal arrays, to solve their issues.

At the end of every year, *mingli* consultants, especially those joining TV programs, publish books to give readers forecasts and suggestions for the coming year. In these books, the fortune tellers or *fengshui* consultants promote the lucky crystal-made products which they personally designed. Their readers can go their websites to purchase what they need.

**Table 2: Taiwanese *Mingli* programs from 2001-2005<sup>3637</sup>**

No.	Channel	Program's Title	From to	Content
1	Much TV	Different Fates and Fortunes	03.09.2001~ 11.01.2002	Western Astrology and Chinese fortune telling, Fengshui
2	GTV	Fighting for Fate and Fortune	04.19.2001 ~ 09.08.2001	Western Astrology and Chinese fortune telling, Fengshui
3	ET Jacky	Divination Campus	04.25. 2001~ 11.24.2001	Western Astrology and Chinese fortune telling, Fengshui
4	CTTV	Lucky Strike	05.01.2001~	Western Astrology and Chinese fortune telling, Fengshui
5	STV	Turning e Lucky	05.03.2001~ 08.09.2001	Western Astrology and Chinese fortune telling, Fengshui
6	STV	Funny Fortune and Fate	08.18.2001~	Western Astrology and Chinese fortune telling, Fengshui
7	ON TV	Fortune and News	10.13.2001~ 01.12.2003	Introducing folk skills of fortune telling and combine with political and news analysis
8	STAR TV	Rose War	04.11.2002~ 08.22.2002	Gender program combining psychological analysis and western astrological analysis
9	ON TV	Food and Luck	07.01.2002 ~ 08.22.2002	A program combing fortune telling and cuisines. Experts develop menus according to famous guests' zodiacs.
10	TTV	The Whitebook of Naming	07.01.2002~ 09.15.2002	Analyzing celebrities' names and predicting fortune.
11	ET Jacky	Great Fate and Fortune	09.09.2002~ 12.30.2002	Western Astrology and Chinese fortune telling, Fengshui
12	CCTV	Carnival of Fate and Fortune	01.14.2003 ~ 08.16. 2003	Western astrological analysis
13	CTi TV	Amazing Fengshui in Taiwan	06.04.2003	Hosts and fengshui experts go to audience's house to check fengshui and solve problems caused by fengshui
14	CTi TV	The Secret of Luck	06.04.2003~ 12. 2003	Western Astrology and Chinese fortune telling, Fengshui
15	Azio TV	Tricks of Luck	08.06.2003 ~ 10.20.2004	Western Astrology and Chinese fortune telling, Fengshui
16	ON TV	Amazing Fate and Fortune	10.13.2003 ~ 03.28.2004	Western Astrology and Chinese fortune telling, Fengshui
17	Azio TV	Amazing Tarocard	12.2003~ 8.2004	Predicting and analyzing celebrities' fortune by Taro Card
18	ON TV	How to Have Wonder Luck	2004.12.22~ 2005	Hosts and fengshui experts go to audience's house to check fengshui and solve problems caused by fengshui.

<sup>36</sup> Since there are no official English names for these programs, I translated them according to their original Chinese name and their themes.

<sup>37</sup> This table is cited from Guo's Master's Dissertation, *The Trend of Millennium Fortune Telling – Audience Research of Fortune Telling Programs* (2004).

All these examples indicate that Taiwanese consumption of crystals are related to mass media's influence. Just as the shopkeepers told me: "When *fengshui* consultants suggested to audiences to use crystals on TV, our business became better for a while. The type of crystal they suggested easily became those which customers like to inquire about and consume." However, I do not mean that all Taiwanese crystal buyers are dominated by these consultants and TV programs. In my field work from 2003 to 2012, most of the informants never found consultation provided by consultants shown on TV. Although they all learned about *fengshui* or fortune telling information from mass media, they relied more on friends' or personal social networks' recommendations to find a *fengshui* consultant or to go to an average crystal shop to buy crystal objects. When I asked them why they did not seek out consultations or commodities provided by consultants on TV programs, my informants said that these *fengshui* consultants may charge more than average consultants, and they were skeptical of these objects' efficacy. Lay informants had more confidence in a consultant recommended by their social network, because this consultant's service had been examined by their acquaintances. My informants, especially crystal shops' shopkeepers, also argued that these *mingli* consultants' commodities must be more expensive than the same goods in their shops. Most customers who learned *fengshui* information from TV preferred to go to average crystal stores or *fengshui* commodity shops to find the same goods with lower prices.



Figure 19: *Fengshui* consultant (left) instructs a celebrity how to place an amethyst geode in *Fengshui is Important!*<sup>38</sup>

#### 5.4 BASIC MARKETING DISCOURSES, AND THE INTERACTION AND SOCIAL RELATIONSHIP BETWEEN CRYSTAL SHOPS AND CONSUMERS

By staying in crystal shops for multiple hours on many afternoons and evenings, I recorded many interactions between the sellers and customers. The ways sellers introduced crystals to customers and the questions which customers asked to shopkeepers or sellers were actually filled with cultural meaning. In crystal shops, the most common questions asked by customers were “what kind of crystal is useful for \_\_\_?” and “Do you have [a certain kind of crystal?] I heard it is helpful for\_\_\_\_.” The blank spaces were always filled with customers’ anxieties. Those questions indicate that crystal shops are not only places for selling jewelries or adornments, but also for solving consumers’ anxieties. The most common anxieties I heard were

<sup>38</sup> The image was a screenshot from youtube flip: <http://www.youtube.com/watch?v=xXnl0XBdH7I>

about jobs, love, and health. For people who like to enhance their fortune of prosperity, the sellers in crystal shops usually suggest to them to buy a bracelet of rutilated quartz crystal. If customers want some good luck with a romantic relationship or have a chance to get married, jewelry composed of rose quartz beads are commonly recommended by the sellers.<sup>39</sup> In Yan Lei Crystal, the franchised store at Daan District, I met two girls who were looking for a specific sort of crystal: “red rabbit hairs”.<sup>40</sup> After their purchases, in an interview, they told me that they both had serious monthly menstrual pain, but the issue was solved by wearing “red rabbit hairs” crystal bracelets, as suggested by their friend. Thus, they chose to search for beautiful “red rabbit hairs” in different crystal shops when they went shopping. In the other crystal shop, I also met a lady, around 25 years old, who asked for a bracelet composed of rose quartz, because she heard that rose quartz helps one’s romantic relationship and social relationship with colleagues. I also had an informant who was looking for “green hair crystal”, because his old bracelet composed of green hair crystal beads was broken and two beads were lost. He believed that this mineral helped his business and wanted to find a new bracelet with the same sort of crystals.

These informants all firmly believed that crystals could solve their problems. Different crystals are believed to respectively own different supernatural functions. Therefore, I like to ask: Why different sorts of crystal have diverse functions? Most crystal shops claim that crystals’ colors decide their functions, and there are two basic systematic theories to explain this mechanism: the chakra theory and the five elements theory.

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<sup>39</sup> Another type of popular crystal products are jewelries composed of tourmaline beads. Since tourmaline also has great piezoelectricity, it is also said to have great metaphysical functions by crystal shops’ sellers or crystal users. Otherwise, tourmaline also has multiple colors, so that many sellers apply the five element theory to interpret its application. Presently, most tourmaline materials sold in Taiwan, Hong Kong and China are from northern India. In Liwan Plaza, it is common to find India sellers selling tourmaline. In Taipei, it is also common to find Indian businessmen visit crystal shops to sell tourmaline beads.

<sup>40</sup> Red rabbit hair crystal is also called red amphibole quartz. It is a sort of quartz crystal with the inclusion of red amphibole.

## Chakra Theory, Buddhism, and the New Age Movement

By analyzing the chakra discourses provided by crystal shops, there is a connected system of chakra concepts, Buddhism, and the New Age Movement. The shopkeepers told me that one important group of their customers are people who practice these religions or beliefs. Their consumption of crystals is associated with the purposes of religious practice.

Shopkeepers claimed that crystal is one of seven treasures in Buddhism. The seven treasures are (1) *suvarṇa* (gold); (2) *rūpya* (silver); (3) *vaiḍūrya* (aquamarine); (4) *sphaṭika* (crystal); (5) *musāragalva* (conch shell or white coral); (6) *lohita-muktikā* (ruby); and (7) *aśmagarbha* (emerald). These seven treasures are widely used by Buddhism practitioners. In particular, crystal was said to have the function of purifying body and mind, protecting the user, and unleashing one's chakras. Because of this, many Buddhism practitioners, or believers of folk beliefs,<sup>41</sup> like to buy prayer beads to assist the process of chanting or meditation.

Following this, chakras theory also becomes important to interpret the colors of crystals and minerals. The functions of minerals could be represented in the following table.

**Table 3: Chakra Associations**

Chakra	Color	Physical Area	Aspects	Minerals
Sahasrara	Purple	Pineal gland/ top of head	Spirituality, enlightenment	Amethysts, white or hyaline quartz
Ajna	Indigo	Pituitary gland/forehead	Higher intuition, psychic abilities	Lapis lazuli, sapphire

<sup>41</sup> In Taiwan, the borders between Daoism, Buddhism and folk religions are extremely vague. Thus, some scholars claim that many people who claim they are Buddhists are in fact believers of folk religions. Relevant studies have been conducted by Steven Sangren (2000), Donald Sutton (2003).

Vishuddha	Blue	Thyroid gland/ throat	Creativity, speech, writing	Aquamarine, Azurite
Anahata	Green	Cardiac plexus/ heart	Compassion, love	Rose quartz, Kunzite, jade
Manipura	Yellow	Solar plexus/ stomach	Personal power, ego, impulses	Citrine, topaz
Swadhisthana	Orange	Adrenal/ abdomen	Strength, sexuality	Carnelian, tiger's eye
Muladhara	Red	Perineum/ base of the spine	Survival, security, safety	Red garnet, smoky quartz

Even though chakras theory does not exist in Mahayana tradition which is the most popular branch of Buddhism in Taiwan, the Taiwanese have been familiar with this from the spread of Vajrayana (Tibetan Buddhism) or the mass media.

Shan Fu Crystal is one crystal shop which stresses the practice of Buddhism rituals practice in the store. The shopkeeper Fu-Chen Liang was a Buddhism practitioner and his follower called him Master Liang. In Shan Fu Crystal at Zhonghe District, New Taipei City, there were two floors. The first floor was divided into two areas: a crystal shopping area and a Buddhism ceremony area; the second floor was designed for an exhibition gallery for crystal sculptures.

Commodities presented on the first floor's business area included the three types of crystal products which I mentioned above. Among these, there were many very large raw crystal samples over 1.2 meters high. Followers liked to use their hands to touch these crystals, and they claimed that they could sense the energy released from these crystals.

By the side of entrance gate, there was a desk with a computer working as the server for Shan Fu Crystal's internet homepage. On the desk, there were multiple English crystal books, *Minerals and Gems* (Harlow & Peters 2003) and *Love is in the Earth* (Melody 1995). The sellers told me that those books were the references for the contents of the online homepage of the store.

On another desk, there were many free reference books and leaflets published in Chinese introducing different crystals' functions.



**Figure 20: Crystal sculptures and monthly chanting ritual in Shan Fu Crystal**

On the second floor, there were over 60 pieces of crystal sculptures exhibited. These sculptures' motifs could be divided into two categories in terms of style: Buddhist deity statues, and auspicious shapes or animals. Those large, beautiful, and detailed artworks were tagged with a very high price. The price varies with the size and quality of raw crystal material, and the difficulty of the level of carving. The cheapest one, an Avalokitesvara Bodhisattva statue, made of white crystal, was priced at US\$3,500. The highest level artwork on this floor might charge more than US\$100,000.

On the last Sunday afternoon of each month or on the birthdays of deities, this crystal shop holds a routine ceremony. In each ceremony, almost two hundred of Master Liang's followers get together around 1PM and start to chant together until 5PM. By sitting in the space surrounded by crystals, these participants chant multiple sutras and mantras and sometimes stand up and bow toward the crystal Buddha sculptures. In the ceremony, followers told me that it will be more efficient if I chant and hold the crystal chanting beads at the same time. I remember that

my first time I joined the ceremony and chanted with them, I did not have the chanting beads. Multiple followers noticed that I did not hold chanting beads and came to remind me to have the beads for chanting. Even though it was not mandatory, I could sense its importance to the participants in these ceremonies.

The days of ceremonies were also the most important periods for Shan Fu Crystal's business. After the ceremony, the followers became consumers and bought what they liked in the business area of the first floor. Master Liang's followers used this chance to buy chanting beads or other crystal products, including *fengshui* objects.

These ceremonies also had a social function. Since the ceremony has been held for over fifteen years, it has become a social occasion for Master Liang's followers to meet each other. In each ceremony, many devotees kindly prepare fruits or desserts to share with all ceremony participants. During this occasion, the story about crystals' metaphysical functions were also shared and circulated throughout the followers. When I conducted my participant observation and declared my research purposes, some participants actively shared their stories and collections of crystals with me.<sup>42</sup>

People who participated in the New Age Movement are also important consumers of crystal products and prefer to apply crystals to their meditation practices. It is hard to estimate the population scale of New Age Movement practitioners in Taiwan, since many practitioners also practice traditional Taiwanese folk beliefs, Buddhism, or Daoism. Most crystal shops do not teach their customers how to conduct meditations or spiritual practices with crystals. One seller stated: "we do not conduct these religious practices personally, so we cannot teach our customers

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<sup>42</sup> Presently, these New Age Movement practitioners prefer to use social media, especially Facebook, to communicate with each other. Since they have specific preferences of crystals objects, some groups' members imported suitable crystal goods back from overseas origins and sell them to groups' members through the promotion on the groups' Fan Pages on Facebook.

how to do that. Customers can find the crystal goods for their practices in my store, and go back to conduct the religious practice on their own.” Usually, their consumption differs from the majority and they like to buy crystal without evident processing marks. They do not like crystal that has received cutting and polishing and prefer to buy the raw crystals, because they believe these crystals have purer energy than those that are processed.

I joined one meditation activity held by a New Age Movement practice group, The City of Light. I was introduced into this activity by one of my informants and both of us were there as newcomers. Before the beginning of the activity, the activity leader had used diverse sorts of crystals to compose an abstract geometric pattern on the ground. All those crystals had no processing marks and maintained their natural shapes. The pattern of crystals on the ground symbolized a spiritual hall, and the participants were supposed to connect their spirits with the hall through a meditation. All 16 participants followed the female leaders’ instruction to conduct a meditation for two hours with the New Age music. During the two hours, the leader reminded the participants to imagine that they were communicating with the crystal pattern on the ground. The leader and remaining participants called the crystals “the elders”. This was because they believed that crystals store the energy of earth through billions of years. Thus, to conduct a meditation with crystals was also to communicate with an old guru from Mother Nature. They organized monthly and weekly meditation activities for the group members. The participants told me that it was not difficult to accept the concepts of applying crystals to meditation. They could connect New Age Movement concepts with traditional Chinese Daoism philosophy, Buddhism practices, or other folk religious concepts with which they were familiar. However, from the behavior of calling crystals “elders”, there is also a characteristic of deifying crystals in their

practices, which is uncommon among average users who only use crystals for good luck or *fengshui*.

### **The Five Elements Theory and *Fengshui***

If you ask the Taiwanese crystal users why they believe that crystals have metaphysical function, most of them would answer that is due to the belief in *fengshui*. Even though most people do not have *fengshui* consultants' expertise, they still can apply some basic principles to it. In particular, the five elements theory, one of the most well-known traditional cosmological concepts and a fundamental theory of *fengshui*, is the other systematic concept by which shopkeepers explain crystal's functions to their clients. It is extremely difficult to investigate who were the first Taiwanese *fengshui* consultants connecting crystal's functions and the five element theory. However, we can find some clues via review of some *fengshui* publications.

When Chen and Xu published their books about the application of crystals, many Taiwanese *fengshui* consultants did not commonly accept crystal products, since they were not typical objects in local *fengshui* culture and there was no formal publication about the application of crystals in *fengshui* provided by the experts.<sup>43</sup> However, in 2003, one *fengshui* consultant, Yu Yang Jiu Shih, published a *fengshui* book, *Opening Fortune, Gathering Prosperity, and Good Fengshui (Kaiyun Zhaocai Haofengshui)*, and took a lead in explaining how to apply crystal in *fengshui*. After this book, in 2004, another *fengshui* consultant Shan-Ji Tsai published *Shang-Ji Tsai Fengshui Crystal*. It exclusively introduced the topic and became the first crystal book written by a *fengshui* consultant.

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<sup>43</sup> Some informants informed me that they believed that Japanese *fengshui* consultants' applying crystals on *fengshui* prior to Taiwanese and Taiwanese learn it. But I did not find formal publications about this proposition.

**Table 4: Crystals and the five elements<sup>44</sup>**

Crystal	Element	Color	Organs	Viscera	System
Hyaline quartz, silver hair crystal, white phantom,	Metal	White	Large intestine	Lung	Respiratory System
Green rutilated quartz and green phantom	Wood	Green, blue, and cyan-blue	Gallbladder	Liver	Nervous System
Obsidian, black rutilated quartz, smoky quartz, ink quartz	Water	Black	Bladder	Kidney	Urinary system
Red Rutilated Quartz, Red rabbit hair	Fire	Red	Small intestine	Heart	Circulatory system
Citrine, Golden Rutilated Quartz, Yellow Rutilated Quartz, copper quartz, red phantom	Earth	Yellow	Stomach	Spleen	Digestive System
Rose quartz,	Metal and Fire	Pink	Large intestine and small intestine	Ling and heart	Respiratory System, and Circulatory system
Amethyst	Wood and fire	Purple	Gallbladder and small intestine	Liver and heart	Nervous system and Circulatory system
Colorful Crystal	Mixed	Mixed	Overall		

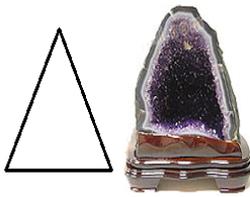
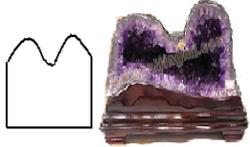
In *Opening Fortune, Gathering Prosperity, and Good Fengshui*, Yu Yang already mentioned the connection between crystals' colors and the five elements theory. She did not explain extensively but instruct readers that they can put five sorts of crystals which correspond to the colors of the five elements (green: wood; red: fire; yellow; earth; white: metal; black: water) into a basin as a *fengshui* object. In *Shang-Ji Tsai Fengshui Crystal*, Tsai further provides a systematic interpretation of how different sorts crystals connect with colors, organs in the human body, directions, and positions of an interior space. Shan-Ji Tsai provides a table (Table 4) in the book. Many crystal *fengshui* objects apply these concepts of colors, such as crystal

<sup>44</sup> This table is cited from Shan-Ji Tsai's *Shang-Ji Tsai Fengshui Crystal* (2004: 59).

arrays or crystal eggs. *Fengshui* consultants usually remind the users to notice whether the composition of crystals follows the “generative principle” of the five elements theory.<sup>45</sup> For example, within a crystal egg filled with crushed crystals, the five sorts of crushed crystals should be put into the egg-shaped container according to the generative principle.

Except for crystals with different colors, amethyst geodes’ contours are also categorized according to the five elements theory. Even though amethyst geodes are all purple, its contours could be classified according to the five elements theory (Table 5). Sellers need to remember which sort of geode’s contours matches a specific element of the five, since some customers may receive a *fengshui* consultant’s specific suggestion. This also indicates how crystal shops apply the five elements theory to conduct their marketing jobs.

**Table 5: Amethyst geodes and the five elements<sup>46</sup>**

Wood	Fire	Earth	Metal	Water
				
The shape looks long and thin.	The shape looks like a flame.	The shape looks like a square or trapezoid.	The shape looks like a triangle.	The shapes looks like a wave.

One thing that should be mentioned here is that both Yu Yang and Shan-Ji Tsai are commonly shown on mass media, especially on the fortunetelling programs of satellite channels.

<sup>45</sup> The generative principle refers to the mutual generating relationship of the five elements: wood generates fire, fire generates earth, earth generates metal, metal generates water, and water generates wood. According to the theory, if someone can make the five elements to have a cycling generative pattern, it forms an auspicious symbol and could bring good fortune.

<sup>46</sup> The images of geodes are cited from the following website: <http://www.shuijingmi.com/article-2180.html>.

Not just in books, their applications of crystals on *fengshui* have been broadcasted by these programs. Moreover, they also sell crystal products in their service offices or online shops. Therefore, it has also caused many *fengshui* consultants who did not have connections with mass media to criticize them. They thought that Yu Yang Jiu Shih and Tsai's motivations for applying crystals to *fengshui* were merely for earning profit. However, presently, most *fengshui* consultants in Taiwan have accepted the application of crystals. I will give a further discussion to the connection between *fengshui* and crystal utilization in the next chapter.

## 5.5 PHYSICAL FEELINGS OF “ENERGY”

Customers also like to ask the sellers whether crystals really have “energy” or “*qi*”? Sellers usually not only answer this question by showing the contents of books, or by giving the explanations from reference books, but also by trying to provide some direct physical experiences to clients. There are three common ways and the simplest way is to ask the customer put his or her hand at the center of an amethyst geode and ask the customer to sense the energy released from crystals. The sellers said that some people's hands could sense the change of temperature or have a subtle feeling of tingling on the palm; the sellers called these feelings “*qigan*” (the feeling of *qi*) caused by energy or *qi* released from crystals.

The second way is that the seller will ask the customer to open his or her palm, and the seller will hold a piece of quartz crystal with a sharp point facing toward the palm's center and move the crystal in the air. If the customer has the feeling of tingling on the palm, the sellers will tell them that is the sensation of *qi*.

Thirdly, the seller will ask the customer to hold a piece of crystal with the left hand, and open the right palm but connect the thumb and forefinger as tightly as possible. Then the seller will ask the other customer to open the subject's connected fingers and request that the two people remember the feeling of strength provided by the connected fingers. After that, the seller will request the subject to connect the two fingers again but this time the left hand will hold nothing. Usually, during the first event, when the subject holds a crystal by the left hand, it is more difficult to disconnect the connected fingers. Crystal sellers claim that this test proves the energy's existence of a crystal and its effect on a human body.<sup>47</sup>

Not every customer has the same "*qigan*" with crystals. In my fieldwork, it was interesting to observe how customers interpret an inability to sense the energy in these occasions. Except for a few people who firmly claimed that they did not believe in the existence of energy or *qi* of crystals, most customers claimed that "I think I am not sensitive enough." Actually, it is a self-comforting narrative which implies that everyone, in their ideas, should innately have the capability to sense the existence of *qi*. My informants claimed that people who practice *qigong*, meditation, or yoga would easily have the sense of *qi*, since their trained bodies are more sensitive to *qi* existing in the environment than average people.

Some crystal shops also try to provide an advanced experience of *qi*. For example, Blanco Crystal provides the service of "energy photography" to customers. It is obvious that crystal shops not only claim the metaphysical functions of crystals, but also try their best to convince their customers via physical experiences. Indeed, to most crystal consumers, especially those having a routine habit of crystal consumption, they accept these discourses and believe crystals' effects on them.

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<sup>47</sup> This is also called "Bi-Digital O-Ring Test" "O-Ring Test" in English. It still has not sufficient scientific research to explain this. But, it has been well applied in alternative healing and deviation, either in the East or the West.

## **Blanco Crystal: A Case of Energy Photography**

In the late 1990s and early 2000s, Blanco Crystal was one of the most important institutions promoting the crystal culture. Under the management of Hua-Zhen Xu and his brother Hua-Huang Xu, Blanco Crystal organized many activities to popularize the metaphysical functions and relevant applications of crystals to the public. They invited experts in different categories to give lectures, such as fortune tellers, *fengshui* consultants, geologists, and astrologists. Most of these lectures have been uploaded to Youtube and consumers can watch them online. In addition, they also introduced the equipment of energy photography to promote their businesses. This photographic technology is called Kirlian photography, named for its inventor, a Russian scientist, Semyon Kirlian. Originally, it was a photographic technique used to capture the phenomenon of electrical discharge. Within a photo taken by this equipment, a person will be surrounded by a colorful aura. The two brothers claimed that the distribution and color of the aura indicate the subject's physical and metaphysical condition, allowing for interpretation through the chakras theory. They also argued that the aura shown on the photo proved the existence of *qi* or chakra, and the various auras indicate that one can apply some ways to improve one's physical health or metaphysical fortune.

Hua-Huang Xu and other employees of Blanco Crystal usually take two photos for a customer who would like to receive the test. After taking the first photo, Hua-Huang Xu analyzes it and explains the photo's details to the subject, picks up a sort of mineral or crystal to give him or her, and then takes another energetic photo. Usually, two photos' colors and the distributions of auras are different. Hua-Huang Xu explained that "it indicates the mineral or the crystal has effect on improving or repairing the customer's *qi* or chakra." "By wearing a string of crystal

jewelry or placing a crystal array in the bedroom, the user could receive the positive energy released from the minerals and have better health and fortune.” This is a very direct experience for most clients and stimulates the subject’s motivation to consume crystals. The customer could then find the jewelries or adornments composed of suitable minerals or crystals for consumption in Blanco Crystal.

Blanco Crystal has become one crystal shop famous for the energetic photo service, and many people who practice the New Age Movement also like to go to there to find commodities that they need and use the energetic photo equipment to analyze their energy conditions.

## **5.6 THE RITUAL OF “XIAOCI” (TO DEGAUSS)**

When a consumer buys a string of crystal jewelry, a set of crystal arrays, or an amethyst geode, the seller in a crystal shop must instruct him or her on how to conduct “*xiaoci*”. Literally, it means “to eliminate the magnetic field” or “to degauss” in English. Even though a piece of crystal may have no metal inclusion and have no opportunity to cause a magnetic effect by itself, all crystal shops or users still call this behavior “*xiaoci*” and believe that it is necessary. Actually, it could be viewed as a ritual of purification and it has become one must-do for all crystal users, and crystal shops have the responsibility of teaching users how to conduct it.

I recorded some common ways of conducting *xiaoci* as suggested by the sellers or relevant books:

1. The most common way is to clean an amethyst geode is with clean water and then expose the geode to sunlight. Sellers say that water has a purifying function, and sunlight has the greatest energy and could recharge the energy of a geode.

2. For crystal jewelries, the sellers like to place them into an amethyst geode for at least one day. The sellers said that amethyst geode represents the energy of earth. To place a string of crystal jewelry into an amethyst geode is equivalent to burying the jewelry underground and using the earth's energy to achieve the purpose of purifying.
3. Crystal can be fumed with the smoke from burning incense. The sellers say that it is a religious way of cleaning. Since the incense is a communication tool between human and deities, the incense's smoke also has great power for cleaning.
4. Another way is to use sea salt water to wash crystals. The sellers say that sea salt symbolizes the energy of the sea, which has energy as great as sunlight. Therefore, the sea salt can remove the negative energy stored in a crystal and recharge it.

After conducting the *xiaoci* ritual, these crystals are believed to have become pure and ready for personal use. This state also symbolizes that the crystal is no longer a commodity, but has become a personal property which has a direct connection with the user.

*Xiaoci*, with the trend of crystal use, has become an extremely common term to all crystal shops and users. If we analyze these methods, there is no one element really associated with the magnetic concept. Why do the Taiwanese prefer to use the phrase *xiaoci* to name this ritual behavior? Why has the term "*xiaoci*" become a widely used phrase in Taiwan? Or, from the cultural perspective, what do the buyers and sellers think about crystals through practicing this ritual?

The prototype of these methods probably originates from some western crystal books in which the authors state that it is necessary to clean crystals before using them. When the Taiwanese translated the books and learned how the western people use these crystals, they also learned about this ritual. However, the purpose of *xiaoci* is not just for cleaning the dirt on a

crystal. We can find that Hao-N Chen and Hua-Zhen Xu already mentioned the importance of purifying or cleaning in their books. Also, Xu's *The Story of Crystal* was the first book to call this behavior "*xiaoci*" in Chinese publications. I directly questioned Xu about this, and Xu told me the process of using this phrase in his book:

I was not the one who created this term. In that period (1994), we had many customers working in the electronic industry. They often dealt with the issue of degaussing of computers, electronics, and video tapes. When they heard that crystals should be purified, they naturally thought of the phrase "*xiaoci*" and used it to refer to this ritual. Thus, I naturally used the phrase "*xiaoci*" when I wrote the book.

By analyzing the appropriation of this term, we could find that the Taiwanese had applied their scientific concepts to interpret the material and imported the ritual from foreign countries. Blanco Crystal's customers applied the concept of storing information or energy which was used in scientific technology to understanding and using crystals. Through Xu's book, this phrase was quickly spread among crystal shops; it also became well used by crystal users through these crystal shops' instructions.

The *xiaoci* ritual makes implications about how the Taiwanese think about a crystal prior to its sale. As Xu said crystal has the function of storing energy and information; the buyers believe that the crystal or any sort of mineral sold in crystal shops could store information or energy, and the energy stored in these crystals are unpredictable and require a process to deal with the energy before they become personal property. A crystal that has not undergone the *xiaoci* ritual could bring misfortune or potential risks because of the negative energy or information stored inside. From the user's perspective, the ambiguous history of crystals could cause possible dangers in the future. By connecting these materials with Xu's discourses of

crystals' functions, this ritual becomes necessary because a crystal is claimed to have the function of storing information. Therefore, a crystal product must store a lot of positive or negative information inside and it may bring some unpredictability to its users. It corresponds to Mary Douglas' idea about "purity" and "danger" (2001).

The methods above are claimed to utilize a greater natural power, such as sun, earth, or sea, to achieve the goal of purifying. That implies that the ritual is a process of connecting the object with a greater natural environment or the cosmos as imagined by the Taiwanese. Through the ritual, it is said that the great nature will naturally take away the negative energy or information stored in a crystal, and becomes "pure" without any pollution. Further, the great nature also recharges the crystal with harmonic energy.

Why does "magnet" become a term used in this ritual? I think that "*ci*" is used to substitute the concept of "*qi*" in a linguistic expression. It is because of *ci* (magnet) could be created from the electromagnetic effect and quartz crystal (SiO<sub>2</sub>) has the physical feature of the piezoelectric effect. Therefore, the invisible magnetic force becomes a projection of the invisible *qi* which blurs the borders between different categories, such as religion/science and physics/metaphysics.

This phrase *xiaoci* and its ritual strengthen the concept of *qi* added to crystals, even though it does not directly mention it. Nowadays, all mineral products sold in crystal shops are all claimed to require the ritual of *xiaoci*. Some customers who thought that their crystal jewelries required another *xiaoci* also asked the crystal shops to help them put the jewelry into an amethyst for one day. I saw this happen multiple times in different crystal shops.

## 5.7 CONSUMERS' PERSPECTIVES

During the period of fieldwork, I also collected many informants' narratives about their experiences in relation to crystals. These instances will reveal crystal users' understandings of and attitudes towards crystals in their daily lives.

### Case A. Crystal and *fengshui* experiences

Xiao-Bo Yang, a veterinarian, shared his story with me. He, at the end of 2001, opened a pet hospital in Nangang District, Taipei City. When he opened the pet hospital, he did not concern himself with the necessity of including *fengshui* into the interior design. From the beginning of 2002, his pet hospital encountered a series of problems. In January, one dog which already received vaccinations died on its second day in the hospital. After that, one Old English sheepdog ran away and got lost in the middle of traffic. During the process of searching for the dog, he also encountered a traffic accident. All these events convinced him that there was something wrong of his hospital's *fengshui*. One of his friends, who was running a crystal shop and learned *fengshui* by himself, came to the hospital and checked the *fengshui* for Yang. The friend figured out the *fengshui* issue caused by the bakery's signboard directly facing the gate of hospital from the opposite side of the street. The sharp side of signboard, which looked like a knife, formed a *shaqi* (harmful energy) and influenced the hospital and people working inside. Thus, the friend suggested to him to buy a hyaline quartz crystal to deal with the issue.

The friend took Yang to Yan Lei Crystal to buy a quartz crystal. Yang found the quartz crystal he liked in a very inconspicuous corner of the storehouse and spent NT\$6000 (almost US\$ 200) for it. Yang believed that there was a special and invisible connection between the crystal and him because the crystal was hidden well and hard to find. The quartz crystal looked

like a shield with a large flat surface on one side. After coming back to the hospital, he placed the quartz crystal on a chest on the front desk and made the flat surface face toward the gate and the signboard. After this, Yang sensed the business of the hospital gradually become better, and no more troubles bothered people working the hospital. This event changed his ideas about crystals and *fengshui*. A few years later, the hospital had earned money and got a chance to redecorate. This time, he asked the designers to put the *fengshui* concerns into the hospital's interior design and changed the position of the gate. In the new space, he still placed the quartz crystal on the chest on the front desk. He still believed the necessity of using the quartz crystal to deal with the harmful energy from the other side of the street.

When I interviewed him at his animal hospital, Yang showed me the quartz crystal and pointed to some tiny yellow crystals on the back of the quartz crystals to me. He told me that these tiny yellow crystals did not exist when he bought the original piece, but they grew naturally in the past ten years. He believed that these tiny yellow crystals symbolized the prosperity of his pet hospital which was growing with its business development. Yang told me that he received rigorous scientific training in the period of university, but he could not find a perfect explanation for the crystal's effect or *fengshui*. He also said that he personally had no strong feeling about *qi*, but this event made him believe in the energy of crystals and the effect of *fengshui*.

### **Case B. Physical Experiences with Crystals**

Some crystal users claimed that they could communicate with their crystals or had very strong physical feelings caused by crystals.

Xiao-Lin Lin, a crystal collector who was also a research assistant working in the Academic Sinica, told me that she thought that she had the potential of being a shaman and could

communicate with crystals. She claimed that she could sense the difference of different sorts of crystals. For example, she narrated that the feeling of rutilated quartz is sharper and stronger, and the feeling of rose quartz is tender and smooth. Every morning, before she leaves her home for work, she can hear some messages from her crystals calling to her. She uses the messages to decide which crystal bracelet or necklace she brings to work. She could also tell the gender of crystals by listening to the messages released from crystals. When she walked outside and passed by a crystal shop, she could sense the energy of crystals inside the shop.

Hong-Pai Yeh, a 35 year old manager of an audio brand, started to use crystals when he had a long term argument with his girlfriend fifteen years ago. He checked information on the internet and bought an agate necklace (he classified agate into the category of crystal). He recounted that he felt extremely uncomfortable when he put that necklace on, so he did not wear it further and stored it at home. However, he still remembered that he was really unlucky and unhealthy after that. He solved the problem by receiving a religious practitioner's help. This did not stop his consumption of crystal and he continued to buy diverse sorts of crystal products in different crystal shops in Taipei City and New Taipei City. Yeh also practiced meditation with crystals and claimed that he could sense the crystals' energy. He remembered that he, one night after a trip to Taichung in 2001, sensed that he was attacked by evil spirits and felt extremely uncomfortable. In that moment, he grasped a string of obsidian beads and chanted the Great Compassion Mantra. He continued to do this for three days and finally solved the issue. Yeh also had another spiritual experience with quartz crystal. One day, he bought a necklace of quartz crystal at Blanco Crystal. In that night, he dreamed that the necklace transformed into an iron chain and took him to visit Hell. He claimed that he, in that dream, witnessed many souls who were suffering. He kept watching and hearing the screams from Hell until he could not put up

with it anymore, and then he woke up on his bed. These experiences made him believe that crystals have special energy and power. Yeh's stories indicate that not every crystal owner has positive experiences with crystals.

### **Case C, Zheng and his crystal experience**

Mr. Zheng was a businessman, over fifty years old, living in Taipei City. I met him at a monthly chanting ceremony in Shan Fu Crystal. In addition to participating in chanting, he also bought crystal products in this shop. In the first interview conducted in Shan Fu Crystal, I asked him how he built his connection with Mr. Liang and the crystal shop. Zheng answered:

It was a real result of karma. Twelve years ago, I was a legislator's assistant. One day, my wife brought an amethyst geode back. I remembered that some people told me that a geode requires *xiaoci* but I had not done that for a while. During that time, I had a real big conflict of interest with someone, and both of us had some friends who were gangsters that came to help each of us. I was threatened by my rival; he sent gangsters to fight me three times and I escaped three times. I did not want to succumb to him and I connected with some gangsters I knew for help. I was thinking if I gave up, I was not a man. That was a really nervous moment.

In the afternoon, when we were ready to fight, I rode my scooter and passed by Shan Fu Crystal, where I often passed by. I suddenly thought about the *xiaoci* and stepped into the crystal shop. That was a really important and serious moment. Before that, I blindly insisted on my personal interests and cared about nothing else. But, in the deep corner of my heart, I worried about my family's security.

In the crystal shop, I spent my whole afternoon talking with Master Liang. Liang reminded me what was really valuable in my life. After stepping out of the shop, I gave a call to my rival and told him that I forfeited everything which was both on and under the table. After that, I quit my job and

the benefits I had during that time. After that, I kept my habit of joining this monthly ceremony to this day.

I: So, do you think that geode changed your life?

Zheng: Yes, I think so. You can say that.

I: Did you buy other crystals?

Zheng: Yes. I had other crystals. I bought some here (Shan Fu Crystal) and others from other places.

I visited Mr. Zheng's home a few days after our first meeting. On one side of his living room with three large windows and bright natural light, he placed a row of crystal products, including two geodes, one of which was the geode that changed his life, arrays of crystal columns, and eggs with colorful crushed crystals. He explained that the purple arrays of crystal column were bought for his sons' learning and examinations. The yellow crystal was used to bring the property *qi* which was good for work. Sometimes he gave the eggs with colorful crushed crystals to his friends as presents. I asked him: "Will you sell the geode (the one that brought Zheng's life change) or give it to friends?" Zheng answered: "No, I won't. Sometimes I have given my friends crystal products if I thought that my friend needed it, but this one is too important to me and I will never give it up."



Figure 21: Zheng's crystal collection

“Do you believe in *fengshui*?” I asked. He told me that he believed in *fengshui*, but he did not know how to explain crystal's functions in *fengshui*.

Zheng's case, to me, demonstrates how lay people use these crystal products for *fengshui* purposes. To them, after placing them in a private space, these are no longer commodities but properties and *fengshui* objects assumed to bring good fortune.

### Criticisms from Crystal Users and Shops

Not every crystal shop likes to promote the metaphysical functions of crystals; no every crystal collector consumes crystals for improving his fortune. Some crystal collectors complained that they were labeled as “superstitious” even though they were just mineral collectors. This kind of complaint also exists in crystal shops. Daqian Crystal is a crystal shop mainly serving mineral and crystal collectors in Taipei. The shopkeeper, Shu-Xuan Zhu,

criticized the marketing strategies of most crystal shops and the mass media's biased reports of crystals in Taiwan. Zhu said:

“Most Taiwanese crystal shops only know how to promote their businesses by boasting crystals' metaphysical functions, and mass media always binds crystal and *fengshui* together. This is because they do not have enough knowledge about minerals. It limits people's understanding of the minerals and crystals. There is no TV program to teach people about formation of crystals or how to admire the natural beauty of crystals. In the long term, people only have biased knowledge about them.”

In Beautiful Stones, a crystal shop mainly selling crystal jewelries, the shopkeeper Di-Yin Chen argued that the metaphysical and spiritual discourses of crystals created its market but also ruined the market's future. Personally, she did not totally believe in the metaphysical functions or energetic discourses of crystals, since she did not have concrete feelings or experiences with crystals. However, she still needed to respond to customers' questions about crystals' metaphysical functions. Thus, she placed some reference books in her store and hung large poster which gave instruction about chakras theory on the wall. She said that she was not an expert about *fengshui* or spiritual practice, so that she let her customers to find the required information on their own. She criticized that the Taiwanese craze for crystals caused the prices of crystal products to stay high and that most customers ignored the natural beauty of crystals.

### **Other social factors**

We could definitely use the concept of fetishism to explain Taiwanese crystal material culture, but it extremely simplifies the complicatedness of this cultural phenomena. I do not deny that Taiwanese ways of using crystals have the features of fetishism. Indeed, there are religious

motivations behind Taiwanese crystal consumption. However, I want to have a further discussion about the social milieu of these motivations.

Some shopkeeper informants claimed that the tradition of wearing jade accessories and the fetishism of giant stones were important reasons for why the Taiwanese like to use crystals. According to N-Yu Wang, the shopkeeper of Yan Lei Crystal, Han Chinese have the custom to wear jade bracelets or other jade jewelries. Traditionally, the Taiwanese extended the jade culture from China and believe that wearing jade is not only a symbol of social status but also has the function of protecting the wearer from evil's attacks. N-Yu Wang believed that this tradition had made Taiwanese familiar with metaphysical functions of some minerals and easily appropriate the cultural habits of using jade to crystals.

Some of my informants also believed that the Taiwanese folk belief of giant stones is the prototype for crystal material culture. In Taiwan's countryside, it is common to find that the folks worship giant stones, even build small temples for them. These stones are called *jiutaogong* (stone deity) in Taiwanese dialect. When countryside folks find a giant stone, they usually say that there must be a deity or a spirit living inside, and it will bless people who worship it. This folk belief emphasizes the giant stone's uniqueness and the difficulty of its formation in a natural environment. I argue that this folk belief could be related to crystal users' narratives of stressing crystals' formation time and each crystal's uniqueness. In crystal shops, it was common to hear sellers or customers mention that millions of years and specific geological conditions are needed to form crystal mines. Thus, they claimed that crystals embodied the great energy of the earth and people should respect crystals as Mother Nature.

There are two other social factors which also construct the social milieu, and we cannot ignore their importance to Taiwanese crystal culture: modern education and the development of

Taiwan's IT industry. Both factors may not directly construct Taiwanese knowledge of quartz or crystals, but they provide a milieu influencing people's interactions with crystals. First of all, modern education has constructed basic understanding of science in Taiwan. Taiwan started its nine-year compulsory education in 1968 and gradually extended the period to twelve years.<sup>48</sup> This policy has brought significant cultural changes in Taiwan in which modern science education has become one part of a collective experience. Through the execution of modern education, many scientific terminologies have also become a sort of common sense or one part of people's daily lives, even though these terms may not necessarily be correctly used.

My informants, especially those living in Taipei City and New Taipei City, all at least received a senior high school education. Actually, the majority of them have a college degree. Even though the modern education brings scientific terminologies to people's daily lives, it does not limit Taiwanese cultural appropriation of these concepts. Instead, most of the Taiwanese, especially crystal users, use these scientific concepts to supplement their understanding of crystals' metaphysical functions. I do not mean that people with a lower education level will more easily accept the discourses of crystal's metaphysical functions. Instead, many informants who received university education, even higher education levels, or professional scientific training also believe in the metaphysical functions of crystals. One informant, Miss Xiao, an electronics engineer working at a corporation of an IT industry, firmly believed in the metaphysical functions of crystals even though it had not been proven by scientific experiments. As an engineer who received scientific training, she chose a standpoint of agnosticism for crystals and believed that science still has its limitations in understanding the secrets of crystals.

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<sup>48</sup> Taiwan started its compulsory education after 1945 according to the Constitution of the Republic of China; and the Nine-Year Compulsory Education started in 1968.

The second factor is the development of Taiwan's high-tech industry, which let the Taiwanese better understand the application of silicon dioxide (SiO<sub>2</sub>), the most important element of chips or wafers. Taiwan's government has supported the development of the semiconductor technology industry since the late 1980s, and it has quickly developed in the following thirty years. Hsinchu Science-Based Industrial Park (HSIP), a high-tech industrial zone utilizing SiO<sub>2</sub> under the jurisdiction of the National Science Council and Industrial Technology Research Institute, has become the most important symbol of Taiwan's economic growth (Tsai & Chou 2006). HSIP has also been called "Taiwan's Silicon Valley" which implies a connection between Taiwan's economic development and the application of SiO<sub>2</sub>.

Taiwan's economic ties to SiO<sub>2</sub> have created a cultural milieu stressing its application. As the sellers follow Hua-Hung Xu's interpretation of crystal's five functions, computers and electronics which use SiO<sub>2</sub> have become a projection of crystals' functions and metaphysical features in users' minds. It is common to hear the sellers say: "Crystals have been applied to many electronics, especially computers."<sup>49</sup> "Just like a computer, crystals can store information and energy." These discourses construct a pragmatic analogy between crystals and electronic devices. While SiO<sub>2</sub>'s industrial applications have become dominant in Taiwan's economy, most of the Taiwanese have no specific understanding of the concrete details of the technological applications, and the folks have formed a cultural way to respond to it.

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<sup>49</sup> In *The Travel of Crystal Palace*, Hao-N Chen already called crystals as computer (1991: 29). But he did not elaborate this deeply.

## 5.8 CRYSTAL SHOPS AND CONSUMERS ON A GLOBAL COMMODITY CHAIN

In this chapter, I have introduced how Taiwanese crystal shops market their commodities and how people use them in their daily lives. All these distinguish Taiwan's role from Brazil's and China's on a global commodity chain of crystal products in which the Taiwanese material culture of crystal stresses its metaphysical functions. Furthermore, the Taiwanese also respond to these imported materials by their own ways. To connect crystals with *fengshui* or Buddhism practice has become a locally cultural local response to the globalization.

It is also important to recognize the effect of the GCC of crystals. The GCC introduced the foreign crystals into Taiwan and Taiwanese consumption also stimulates the operation of this GCC. That is to say, the GCC should be viewed as a whole in which crystal shops connect consumers with the GCC of crystal. Even though most consumers do not directly sense the existence of the chain, crystal shops, especially the wholesalers, already reflect the demands of Taiwanese consumers through their purchases in Liwan Plaza and other overseas sources, and the demands indirectly influence the miners and the crystal market in Brazil.

However, crystal shops and consumers' knowledge about the GCC and crystals is fragmented. The former is business-oriented and one in which crystal shops mainly care about transactions. On the other hand, the latter is function-oriented and one in which consumers care more about how to use crystals to solve their anxieties. Except for some wholesalers, most shopkeepers, sellers, and consumers have no understanding about the operation of the global commodity chain of crystals. In my interviews with them, I displayed my photos taken in Brazilian crystal mining areas and Chinese processing factories, and shared my fieldwork experiences in these areas with them. They expressed they never realized the difficulty and the complexity about this GCC. Some shopkeepers informed me that few customers may ask which

countries the crystals were from, but the shopkeepers can only answer the questions from the reference books. Furthermore, the customers never ask questions about the mining or the processing, but care more about the metaphysical functions of crystals. Many informants also like to ask me whether I can prove crystals' metaphysical functions by academic methodologies. Even though I gave a negative answer to them, it never influenced their belief of crystals' metaphysical functions. All these indicate that the Taiwanese in relation to crystals are all *bricoleur*, or practicing '*bricolage*', inspired by Levi-Strauss (1966), in which they all try to do a construction or create a work from a diverse range of things that happen to be available.



**Figure 22: Yan Lei Crystal, a crystal shop at the end of a global commodity chain**

In term of materiality, the interaction between the Taiwanese and crystals has constructed a unique material culture. Compared to the Brazilian miners who notice the geological conditions of crystal mines or the Chinese workers who care about how to use facilities to process crystals, Taiwanese consumers care more about crystals' composition, inclusions, and metaphysical functions. The Taiwanese interact with crystals through consumption and this consumption, differs from the international trade between mining areas and processing factories. It is a mechanism to identify crystal's use value based on a local context. Taiwanese religious

traditions, development of international trade, and the education system all contribute to this material culture and the materiality of crystal in Taiwan.

To conclude, local consumption culture may be changed by the GCC. Anthropologists have provided examples: the GCC of sugar changed how the British taste sweetness (Mintz 1986); the GCC of fish changed the Japanese sushi culture (Bestor 2004); the GCC of cut flowers changed how Americans buy flowers (Ziegler 2008). The GCC of crystals has definitely influenced Taiwanese understandings and utilizations of crystals. Taiwanese consumption of crystal is constructed by multiple factors. In addition to the GCC of crystals, the introduction of New Age Movement, Taiwanese investments in overseas jewelry industry, and the global economic recession all influenced Taiwanese consumption of crystals. Furthermore, it is also a process of “glocalization” in which the Taiwanese has developed a local way to appropriate these foreign materials and relevant customs based on local culture.

In the next chapter, I continue to discuss how this GCC influence Taiwanese *fengshui* practice.

## 6.0 CRYSTAL AND THE CHANGE OF *FENGSHUI* PRACTICE IN TAIWAN

When ask why the Taiwanese like to use crystal and why there are so many crystal shops in Taiwan, all of my lay informants informed me that “it is because of Taiwanese belief of *fengshui*.” The majority of them never thought that crystal was not treated as *fengshui* object before the 1980s. This leads us to rethink about the nature of *fengshui* beliefs and the changes in *fengshui* culture in Taiwan. Following this concern, this chapter continues to supplement the factors influencing the changes and discusses the *fengshui* experiences constructed by the use of crystals.

In the last chapter, I have mentioned that the import of foreign minerals with a global commodity chain, the development of Taiwan’s IT industry, and the executives of modern education all push the change of *fengshui* practice. Additionally, Taiwanese *fengshui* consultants have encountered direct challenges from the changes in architectural styles. In the first part of this chapter, I will focus on discussing the differences in styles between Taiwanese traditional residential architecture and modern residential architectures. This comparison will indicate that the use of crystals and other objects is a sort of response to the restrictions caused by the changes in residential architecture.

In the second part of this chapter, I mainly focus on the perception of *qi*, the core concept of *fengshui* theories and practices. By applying a phenomenological approach, I will analyze the

perceptions of *qi* constructed by *fengshui* objects, especially crystals. Based on this analysis, I will indicate that crystals also link *fengshui* with science and technology which expands and supplements the traditional cosmology. Furthermore, I will reveal that the basic concept *qi* has been replaced by the concept of ‘*nenliang* (energy)’.

Compared to the last chapter, I will place more emphasis on *fengshui* consultants’ professional discourses in this chapter. As Kai-Shih Lin (2007) reminded us, *fengshui* is a category of expertise that belongs to professionals and the category of common sense belonged to lay practitioners. Even though the border between the two categories is vague, *fengshui* professionals’ adoptions authorize the use of crystal in *fengshui* practice. Their narratives will provide deeper materials by which to discuss the cosmological change.

## 6.1 TRADITIONAL DWELLINGS AND *FENGSHUI* IN TAIWAN

*Fengshui* practice relies on the manipulation of material space. By studying the ways of using crystals for *fengshui* purposes, it is obvious that it is always placed in an interior space. However, placing adornments inside is not a common way of practicing *fengshui* in traditional Taiwanese villages.<sup>50</sup> By figuring out the meaning of using these *fengshui* objects, I argue that we need to compare the architectural structures in traditional dwellings and modern living spaces. Through this comparison, I will indicate that using *fengshui* commodities, including crystal objects, is a cultural response to the structural variation of residential space.

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<sup>50</sup> In Taiwan’s countryside, it is common to see “*zhengzhaifu*”, a piece of charm paper for exorcism provided by temples. However, it is not directly associated with *fengshui*, but more connected with Daoism custom. Most *fengshui* consultants do not provide this service.

The main style of Taiwanese traditional domestic dwellings was originated from Han immigrants in the Late Ming and Qing. Most of the early Han immigrants that came from Fujian province not only introduced Fujian dwelling styles, but also brought the *fengshui* customs into Taiwan. Basically, early Han people's application of *fengshui* in traditional dwellings stressed on these aspects: location selection, orientation, spatial distribution, and building process.

As Hung (2003) highlights that *fengshui* custom was very popular in Fujian and Guangdong provinces, in which *fengshui* had been commonly applied to dwellings and graves in order to bless residents and descendants' prosperity. Choosing an auspicious location to develop a community, to build a dwelling or to bury ancestors according to *fengshui* principles are commonly recorded occurrences in historical documents. This not only applied to commoner's dwellings, but the Qing government also adopted *fengshui* for its city planning and bureaucratic buildings. These location selections were based on *fengshui* consultants' interpretations of the natural landscape. The best location is called *xue* (point), which has the best *qi* and natural landscape. Dazhang Sun indicates, according to Jiangxi Hilltop School, also called Form School, a village site is selected through investigation of natural and ecological surroundings, in which a mountain could determine the direction of air currents; they are called "places of vitality (*shenqi*)" in *fengshui*. An ideal model for a village's location is one with billowing mountains behind, a river encircling, and hills in front (*annshan*) (Sun 2004:33). Commoners and *fengshui* consultants usually liked to name a *xue* with animal names, which distinguished the place from the surrounding area and symbolized that the composition of the landscapes is great, in order to bring prosperity to people living there.<sup>51</sup>

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<sup>51</sup> Here, I suggest the collectivity of *fengshui* practice in traditional societies. This also responds to Freedman's research about the lineage village in southeast China (1958). John Largerwey has similar observation and treats geomancy (*fengshui*) as strategy to deal with the competition and scarce resources on a collective level (2010).

In addition, *fengshui* was applied to determine a house's structure and orientation. Since most early Han people immigrated to Taiwan from Fujian province, the style of the traditional Taiwanese dwelling is similar to dwellings in Fujian and other southeast coast provinces. Taiwanese traditional dwellings have similar features to Chinese domestic architecture on the mainland: symmetry and axially, guided by the shape, size and orientation (Knapp 1986:91). A Taiwanese traditional dwelling extends its structure with an increase of family population. During the early stages of family formation, a solitary structure of a single story (or called *pingfang*) with either side of two floor plans was prevalent. The second floor plan derived from the erection of partitions on either side of the central section or main hall (or called *gongting*, *zhengting*, or *keting*). Balance and symmetry were maintained by having the rooms total an odd number, usually one or three, and placing a door in the center of the front wall. Axiality was represented by the long side of the rectangle, an alignment tied to the expression of significance and seniority (ibid.91). Accompanying these characteristics, *fengshui* was traditionally embodied in how people emphasize houses' external form, spatial layout, and construction process. In the respect of external forms, a *fengshui* classic called *Yangzhai Shi Shu* (Ten Paragraphs of a Living House) lists ten kinds of sites' forms and explains their *fengshui* meanings; for example, "Square land or with one corner lacking is inauspicious site; land with front side longer than the rear side or with the left side longer than the right side is inauspicious site." This book also enumerates more than fifty conditions of site surroundings, touches on topography, hillocks, mounds, water lows, pond roads, forests and graves (Sun 2004:15)

Regarding spatial layout, traditional dwellings stress exposure, shape, and dimensions. As Sun highlights, the general principles of exposure is to make the house full of sunlight,

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Relevant research also could be seen in Wei-Pin Lin's article, The rise of "Precious Fengshui Land": Migration and Place Making in Taiwan (2009).

keeping out wind and drawing in vitality. The best exposure is “with the Yin behind and the Yang in front,” which means to face south, and has become a fixed pattern in the North and the South of China. Even though the entrance was not on the southern face of the house, the southern exposure would be maintained by changing the direction of the path (ibid.: 42). After the determination of exposure, the position will be fixed by a compass in light of the theories of *wuxin* (the five elements), *bagua* (the eight trigrams), *tiangan* (the heavenly stems), *dizhi* (the earthly branches),<sup>52</sup> the twenty-eight *xinsu* (the constellations) and other principles. This technique of *fengshui* is the Compass School, also called Direction School, in which the consultants observe the space with a *fengshui* compass to decide how to arrange a building site with the most beneficial energy flow. With regards to a dwelling’s shape, the *fengshui* consultants classify the shape of houses into five types and twelve kinds in detail. This technique is important in “Form school”, in which *fengshui* consultants emphasize how the shapes of natural and artificial landscapes influence people’s fortunes. No matter which school of *fengshui* practice a *fengshui* consultant follows, a house with balanced structure, regular shape, high foundation, appropriate eave height, and a southeastern exposure, would be regarded as fortunate (ibid 42). However, it is not difficult to find common examples where the entrance and gate are put on the corner as decided by *fengshui* consultants’ specific concerns. In addition, we can also find that *fengshui* consultants give suggestions about where to place a shrine of worshipping, bed, restroom, kitchen, stove, or storage. There are some general construction principles with regards to *fengshui*. However, as different families have consulted *fengshui* experts from different schools, there is no standard *fengshui* arrangement and distribution for these parts.

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<sup>52</sup> *Tiangan* and *dizhi* or called Chinese sexagenary cycle is a cycle of sixty terms used for recording time and space.

Constructors and *fengshui* consultants have rules for dimensions. For example, *Yangzhai Huixin Ji (Experiences of Yangzhai)* states that “multi-*jin* (courtyards), the foundation of the main room in the backyard should be 3 or 5 *cuns* (Taiwanese inch) higher than that in the front yard”, “the room height in the backyard should be 5 or 6 *chis* (Taiwanese feet) higher than that in the front yard,” or “the side room should be divided lengthwise into two sections... (ibid.:42)” There are also *fengshui* statements on the height and width of different architectures within a house or the size of furniture. People usually apply Mengong Chi, also called Luban Chi<sup>53</sup>, to determine the height and width to make sure the size is auspicious for the residents and users.

Aiming at some inauspicious arrangements, geomancers take up the methods of “*rangjie*”, which means to pray to spirits to eliminate disaster, and *zhenmei*, which means to suppress ghosts and transfer inauspiciousness as remedies (Sun 2004:44). For instance, setting “*Taishan Shigangang*”<sup>54</sup> beside a wall which exactly faces a overpass or an inauspicious house towards mountain pass, chimney, grave or wall corner; placing a mirror with the pattern of the “Eight Trigrams graphs” on it to reflect demons; pasting up a red paper or hanging a wood plate near the door, both with the pattern of Taoist Talisman figures on them to frighten demons. Even though these methods may just offer the inhabitant psychological consolation, there also develops a sort of material culture which uses small objects to solve issues caused by *fengshui*.

The other aspect of *fengshui* practice is *fengshui* consultants’ cooperation with contractors in the construction process, which is embodied in rites and taboos. Since most of *fengshui* consultants also provide fortune telling and date selection (or called *zere*) services,

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<sup>53</sup> Mengong Chi, also called Luban Chi, is a sort of ruler with inscribed texts with auspicious meanings or negative meanings. Taiwanese crafts or workers usually use this to decide objects’ length.

<sup>54</sup> *Shigandang* is a piece stone or a stone tablet with the inscribed writings “泰山石敢當”, which is used to exorcise the evil spirit in China and Taiwan. This is often placed in the junctions of streets, or three-way junctions, especially in the crossing, which is often viewed as an inauspicious corner in terms of *fengshui*.

*fengshui* consultants help contractors decide an auspicious date for some important procedures with rituals of construction: “*potu* (breaking earth, which means to start to build)”, “*shangliang* (placing a beam)”, complete with rituals of “*wanggong antu xielong* (pacifying dragon and thanking earth)”. Otherwise, when a dwelling requires an expansion of construction or a restoration, the selection of a date is important as well. For selecting the best dates, *fengshui* consultants collect all of a client’s family members’ birth dates and calculate which future date is most beneficial. We can see a similar concern in traditional Chinese and Taiwanese funerals, in which *fengshui* consultants also work with grave builders and the bereaved family to decide the dates and times for different procedures of a funeral. This shows that *fengshui* in early Taiwanese society began to cooperate with other professions to develop a material culture together. It additionally shows that *fengshui*’s concern with architecture is not only about the spatial aspects, but also the temporal aspects.

In summary, *fengshui* was hardly divided from traditional Taiwanese dwellings architecture. This also implies that people naturally learn the material culture of *fengshui* by living in traditional dwellings. I have shown how *fengshui* is practiced in traditional architectural location selection, forms, spatial distribution, and the construction process. However, the economic development and the evolution of architectural technology have changed the material environment for practicing *fengshui*.

## 6.2 MODERN ARCHITECTURES IN TAIWAN AND *RELEVANT* FENGSHUI PRACTICE

Taiwanese architectural forms have evolved with its social development. European Colonization, Japanese Colonization and the great diaspora with Kuomintang (KMT, or Chinese Nationalist Party) all draw different elements into Taiwanese architectural styles. Because of the rapid economic development, urbanization and globalization, Taiwanese architectural forms and structures also have experienced serious fluctuations. Contemporary Taiwanese urban architecture has transformed into a modern style. In the below sections, I will argue how the modern style restricts *fengshui* practice and how *fengshui* practice had transformed into a modern style and develops its modernity because of these restrictions.

First of all, even though the locations of modern Taiwanese cities or towns may be selected by ancestor's concerns with the natural environment, the majority of modern citizens live far away from natural landscapes and will rarely select a dwelling based on them. Most people only have a selection of their residences by artificial landscapes and buildings. In urban areas, houses and mansions crowd and people's concerns with buildings, roads, and other artificial landscapes naturally become stronger than those for natural ones. That means that location selection by observing the natural landscape's *fengshui* no longer carries the same importance in urban areas. After all, people who live in a metropolitan area have less opportunity to select a land with a hill behind and surrounding rivers.

However, this does not mean that the *fengshui* methods of traditional location selection completely disappeared in urban areas. In fact, it has transformed into the interpretation of artificial landscapes, which is analogized to the natural ones. Architectural components, in *fengshui* experts' eyes, including buildings, roads, artificial fountains, and parks, all could be

analogized as natural landscapes. In this analogy, buildings are analogized as mountains and roads as rivers, which are important for traditional location selection. When a *fengshui* consultant views a building's *fengshui*, he will holistically observe the composition of the artificial landscapes. A string of buildings could be viewed as a string of mountains, which was viewed as a "*longmai* (dragon, mountain range)"; shorter buildings could be also viewed as "*ann* (table)". However, usually, only *fengshui* consultants can interpret a landscape in this way, as they did in traditional communities, and commoners without this coding/decoding capability can only follow consultants' interpretations. For example, during the 2008 presidential election, I interviewed a *fengshui* consultant, Bo-Le Jiang, and questioned how he viewed the *fengshui* of two campaigns' headquarters, KMT and the Democratic Progress Party (DPP). Jiang said that from the landscapes of the two headquarters, the *fengshui* of headquarter of Chan-Tin Xie, the candidate of DPP, was worse than the *fengshui* of Ma Yin Jiu's, the KMT's candidate. There was a higher building behind Ma's headquarters that acted as a supporting mountain, and the curving road in front of the headquarters also brings positive *qi* and voters' support to the candidate. Compared to Ma, Xie's headquarters' right side had a higher building, forming a "*baihu sha*", a sort of harmful energy named "white tiger", and there was no curving road to bring positive *qi* to the building and for it to remain. At the end, Ma was elected. It is impossible to determine how *fengshui* influenced the results of the election, but Jiang's narratives indicate that the traditional *fengshui* way of interpreting the landscape has been applied to modern architectures as well.

The compositional forms of modern architecture prominently differ from those of traditional dwellings by the style of multi-stories. With the change of the traditional family structure, traditional one-story houses are no longer typical. Multi-story, high-rise, and congregate unit types form the norm (Sun 2004:44). In order to solve the demographic pressures

in limited land and enhance the floor area ratio, most of the architecture in urban areas is in the form of modern congregate apartment buildings which are multi-storied and have numerous units within a building. In this way, the population of a small village could crowd into a large condominium building. Moreover, the majority of these units are designed for nuclear families rather than extended ones. This architectural style does not allow for the structural extension which also limits each unit's population increase. It changes the unit of the space of *fengshui* practice to one which is smaller than a family in a traditional village. This congregation of people and families does not form a community as a traditional village, because people have less contact with their neighbors and are less likely to treat where they live as a community with an identity function. Furthermore, people who live in this type of building need to respect other residents' religious beliefs and privacy, so they have no right to change the public spaces' landscape.

Moreover, the residents cannot easily change the façade of a building. The Taiwanese government has restrictive laws on architectural remodeling and alterations in order to secure a building's structural safety, including the rules of the façade. Therefore, when people live in an apartment or a condominium, it is difficult to change the outer façade of a building if they have any *fengshui* concerns. Even though some condominiums have a management committee which represents all of the residents in a building, it is still hard to change the façade or structure without agreement from the majority of the residents.

That is to say, when people find that the outer *fengshui* is harmful to them, they have no ability to change the public space or the façade of a building, unless the whole community forms an agreement. Thus, people can only modify their own spaces to solve their anxieties. *Fengshui* consultants also understand this well and only give their clients suggestions about spaces where

the residents can control. For example, they could change the direction of the stove and bed, place a *fengshui* object in a specific corner inside, or change furniture colors, rather than change the outside of a building. Hanging *fengshui* objects, such as *bagua* mirror, *shanhaizhen* (Mountain Ocean Array, which will be explained in following sections) on a wall, or using crystals in an interior space have become extremely popular strategies of defense against the outside harmful *qi* as a result of these restrictions. This may also lead to the development of the commoditization of *fengshui* objects which are easier to manipulate with their smaller size and decorative function.

Even though residents have no direct control of a building's *fengshui*, it does not mean they also have no concerns in about *fengshui*. A lot of Taiwanese who rent or purchase an apartment still follow basic *fengshui* principles. Taiwanese construction companies and real estate designers must all be concerned with these Taiwanese *fengshui* customs due to business concerns. For example, Taiwanese do not like to see restrooms or the kitchen when they open the door of a unit, or they will not buy a unit with a restroom in the center. My informant, Hong-Lan Sung,<sup>55</sup> an architect, said:

Even though school training didn't teach anything about *fengshui*, you naturally run into it when you start your business or enter a construction company. Your company and colleagues will teach you what kind of designs are related to bad *fengshui* that you should not to draw...I never met an architect who does not care about *fengshui*. This is because our clients think that a building will be comfortable if we design it with *fengshui* in mind. If we do not concern ourselves with *fengshui*, we will not have business (Sung 2005: 100).

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<sup>55</sup> This is a pseudonym.

Architects and interior designers emphasize that they face more requests for *fengshui* for offices or commercial spaces. Interior designer Ting-Rei Xue<sup>56</sup> said:

Clients' requests for *fengshui* fluctuate with the economy. When the economic situation is not so good, clients really care about *fengshui* or treat *fengshui* as reasons for their business failures. For example, the catering industry stresses the location of cash registers. Some clients requested that their business space have a large fish bowl with "living water (flowing water)" or some living plants for bringing guests into their store (ibid.: 101).

In Xue's experience, he has more cases of commercial space concerning *fengshui* than residential space. In his opinion:

It is an attitude of "gambling". When someone invests a lot, he cares less about the cost, but cares more about whether the office, or the store, can make returns quickly. However, it is hard to predict. So, people request help from *fengshui*. Moreover, the Taiwanese attitude of "tending to believe it exists (*ning ke xin qi yu*)" influences them seriously (ibid. 101-2).

This attitude of handling investment risk with *fengshui* not only shows in the architectural design industry and interior design industry, but also in the Taiwanese real estate companies. Their agents also always encounter clients' requests for *fengshui* or for visiting houses or commercial spaces with a *fengshui* consultant. Usually, a *fengshui* consultant's affirmative words are more influential than agents' promotion. Buying a house or renting a shop can be seen as an investment and the Taiwanese tend to use *fengshui* to reduce the risk of investment.

In addition, even though contemporary construction companies do not cooperate with *fengshui* consultants as much as before, these companies still follow some traditions of

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<sup>56</sup> This is a pseudonym.

worshiping and selecting an auspicious date for different procedures of construction. Conducting rituals in ceremonies, such as groundbreaking, placing beams and thanking the earth on an auspicious date is still important to the contemporary construction industry and interior decoration industry in order to ensure the success and safety during construction.

Forms of modern buildings' compositions influence how *fengshui* consultants, especially for the Compass School, practice their expertise. Traditional dwellings have apparent axes and symmetrical design, usually a perfect square or rectangle, and *fengshui* consultants can easily point out a building's orientation by which direction the door faces. The orientation is called *zuoxiang* in Mandarin and *fengshui* consultants treat it as the pivotal factor for determining how *qi* is distributed within a space or what type of *qi* a living space receives. Since there is no coherent position of a door of a unit in modern multi-storied architecture, there is no longer a standard way to decide a unit's direction. Some units' main door links with the living room; or doors in some houses link with the balcony and there is a pair of french doors linking with the living room. Moreover, a unit within a modern condominium may have an irregular shape and lack evident axuality. These increase the difficulty of deciding a unit's direction and figuring out the distribution of *qi* within a unit. Different consultants have various opinions about which door represents a unit's direction. In my fieldwork, I also heard some *fengshui* consultants state that they treat the gate of the building or the gate on the side which could receive most sunlight as the real direction of a unit.

Diverse ways of deciding one unit's direction indicates the complexity of contemporary *fengshui* practice. Since there is no certificate mechanism to certify *fengshui* consultants' expertise, it is impossible to say which way is correct or most useful. That is the reason that most of the Taiwanese find a *fengshui* consultant through friends or relatives' recommendations, and

why most *fengshui* consultants also rely on word of mouth to promote their business. Average Taiwanese *fengshui* practitioners are also used to a *fengshui* change's failure and the ongoing search for a better consultant. When a *fengshui* change is not useful, *fengshui* consultants could also blame it on a client's fortune, which is beyond help even though he has done his best to minimize the negative fortune's impact on the client.

To sum up, Taiwanese contemporary *fengshui* practice is restricted by the forms of modern architecture. Modern residential space lacks traditional Taiwanese folk dwellings' characteristics: being embedded in natural landscape, single story, symmetry, and axiality. In contrast, they are characterized by being embedded in an artificial landscape, multi-stories, non-symmetry, and an unclear axis. Facing these tendencies, people's *fengshui* practice becomes interior-oriented and *fengshui* consultants also give suggestions which can be applied to private interior space. These factors do not directly influence Taiwanese use of crystals for *fengshui* purposes, but construct a milieu which indirectly pushes *fengshui* professionals and lay practitioners to notice the utilization of interior space and the possibility of using crystals.

### **6.3 TAIWANESE *FENGSHUI* CONSULTANTS' ADAPTION AND THE APPLICATIONS OF CRYSTALS**

The restrictions with modern residential architectures directly challenge *fengshui* consultants' services, and contemporary Taiwanese *fengshui* consultants have actively adopted it. Many of them have published their research and experiences about applying traditional *fengshui* theories to modern forms of architecture. When *fengshui* consultants encounter an unchangeable building structure and interior composition, and clients' limited budgets, what they can suggest

becomes relatively limited as well. In this milieu, *fengshui* consultants focus more on giving suggestions for the interior space and stress the use of moveable objects. I wondered how *fengshui* consultants view these changes.

In my fieldwork in 2003 for my MA thesis, I followed a *fengshui* consultant, Jio-Xia Yuan,<sup>57</sup> to record his services and interactions with his clients. By conducting participant observation of his services, it is obvious that he never suggested his clients to change the interior composition unless it was affordable to his client. After checking the *fengshui* composition within a residential space, Yuan usually suggested his clients to change the position of a piece of furniture or the orientation of a bed for receiving better *qi*, to place a bucket of water at a specific corner for introducing the prosperity *qi*, or to hang a mirror on the gate or window to reflect the harmful *qi*. Yuan explained that:

Compared to the dwellings in the countryside, what I can do in a city is extremely limited. That is the reason that I prefer to go to countryside, to check the dwellings there. It is much easier. In Taipei, the first problem is to determine the direction of a residential space, but there is no coherent orientation of all units in a building. Moreover, it is expensive to request a person to reconstruct his or her interior layout, especially when someone is already in an unlucky condition. Therefore, to use the cheapest and most efficient objects to help people is important.

Yuan's words imply a criticism to some *fengshui* consultants who like to recommend their clients to buy expensive *fengshui* objects. From his perspective, *fengshui* consultants also need to practice their morality by actively helping poor people and freeing them from poverty. If a *fengshui* consultant only earns his benefits by selling commodities which are claimed to have a special power of bringing good luck, it is against the morality which they should follow. Based

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<sup>57</sup> It is a pseudonym.

on this principle, Yuan does not like his clients and students to use expensive objects for *fengshui*, especially the crystals promoted by TV programs.

Ironically, among Yuan's clients, there were multiple shopkeepers running crystal shops. These shopkeepers invited Yuan to check their shops' *fengshui* and also liked to learn how to apply crystal on *fengshui* from him. However, Yuan never gave them concrete answers about crystals' metaphysical functions. Yuan also opened multiple *fengshui* courses but he never actively mentioned about crystals in his instructions. In his services, when his clients asked him about crystals, he usually answered: "Using crystals is not true *fengshui*. If everyone could conduct *fengshui* by himself, the consultants are not necessary to exist." He criticized the *mingli* programs which became popular on TV and the use of *kaiyunwu*, the lucky objects which are claimed to bring good luck and promoted by *fengshui* consultants in mass media. He also argued: "I never learned these *fengshui* skills from my master and these objects did not exist before 2000. Those objects are created by the consultants on TV." Even though Yuan understood that his clients were influenced by the mass media exaggerating the effects of crystals, he insisted on the traditional methodology and should not overstate the function of crystals:

"I do not totally deny the efficacy of crystals. According to the fundamental ideas of *fengshui*, everything could have the potency for *fengshui* application. However, *fengshui* consultants should not exaggerate the function of crystals. Many consultants claim that crystal could be classified by its color according to the five element theory. However, from my perspective, all crystals are all from the earth and could only be classified into the earth category."

Yuan was born in the early 1960s and learned *fengshui* in the early 1980s and there was no crystal application in that period. His critiques to crystals are reasonable and reflect some elder *fengshui* consultants' view of the foreign materials.

While crystals have become well accepted by the public, more and more Taiwanese *fengshui* consultants also grant these applications and try to provide more professional interpretation of this based on their expertise. As I mentioned in the last chapter, the five element theory becomes a dominating discourse for interpreting crystals' applications. In addition, some *fengshui* consultants use the same theory applied in traditional dwellings to interpret and utilize crystals. For instance, Xian-Yang Lee, a relatively younger *fengshui* consultant with an MBA who learned *fengshui* from his grandfather, tries to provide his theories about crystal applications. In his services, he claimed the efficacy of crystals based on some traditional principles:

The landscape of a mountain controls a family's offering; the landscape of water controls a family's prosperity. Traditionally, *fengshui* consultants need to apply the outside natural landscape in their services. Therefore, in countryside societies, people would hire a *fengshui* consultant to decide the orientation of a house and the relationship between the natural landscape and people. In this way, the beneficial energy of natural mountain scenery and water flow will be used by the residents. In modern apartment buildings, people could not do this and they cannot change the structure of their apartments. Thus, I usually suggest my clients to create an artificial "mountain" and "water" at home. For the water, people can use a fish bowl or a decorative container filled with water. For the mountain, I will suggest that people could place a stone with admiration value or a crystal at home. Traditionally, this skill is called "*jie*" (to borrow), which means to create an artificial landscape similar to a natural one to introduce the natural *qi* into a house.

The strategy of "*jie*" has become something contemporary Taiwanese *fengshui* consultants like to use. Therefore, it is easy to find them suggesting to their clients to use aquariums or other installation adornments with circulating water and a stone to symbolically utilize the energy of 'water' and 'mountain'. Thus, when a house needs the "mountain" energy,

he may choose to use crystals to replace average stones as long as it is affordable to the client. From Lee's perspective, he does not treat crystals as objects more efficient than average stones if they are not placed at the correct positions. He stresses crystals as stones symbolizing "mountain". He also argues that it is a sort of superstition if people blindly believe the effect of crystals, and the use of crystals still needs to follow the traditional *fengshui* principles.

From multiple examples which I have mentioned in this thesis, crystal has been commonly accepted as a *fengshui* object by not only lay practitioners, but also professionals. While the two parties both accept it, I also wonder how it constructs the average experiences of *qi*, the most important element of *fengshui*, and how the experiences change with the introduction of foreign materials.

#### **6.4 THE REINTERPRETATION OF *QI* AND RELEVANT MATERIAL CULTURE**

*Qi* is a pivotal element in Chinese cosmology for understanding relevant religious and medical practices in Taiwan. The *fengshui* application of crystals also leads us to rethink the nature of *qi* in contemporary Taiwanese culture. Chinese philosophers, many centuries ago, provided plentiful literature by which to interpret it; religious practitioners in Daoism, Buddhism or folk religions have developed relevant theologies and rituals; and traditional Chinese Medicine (TCM) practitioners use it to conduct their diagnoses and treatments. However, all literary discussions hardly discuss the simple question: how do people sense *qi* in their daily lives?

This question is particularly important in this thesis since most crystals are foreign minerals and there was no such a tradition of applying crystals for *fengshui* purposes before the

1990s. While *fengshui*, as a form of material culture, embodies and objectifies the concept of *qi*, the utilization of crystal implies that the Taiwanese may change their understanding in relation to it and the relevant cosmology.

There is no coherent translation of *qi* in academic literature published in English. Western anthropologists usually give it different translations according to context in order to catch its embedded meaning. For instance, *qi* is usually translated into ‘vital force’ (Zhan 2009: 56) or a combination of breath, air, and energy (Furth 2010: 8) in TCM study; ‘animated force’ (Sangren 2000) in folk religion; or ‘material energy’ (Feuchtwang 2002: 22), ‘breath’ and ‘breath of nature’ (Bruun 2008) in the *fengshui* category. Various translations of *qi* indicate that *qi* is hard to define since each tradition reveals *qi* in its own way. *Qi* has become a complex entity crossing different categories. Because it is invisible and untouchable, its immateriality makes scholars use diverse methods to interpret how *qi* works. It is not the blood in veins, but it may move with the blood. It is also not the air in space, but the air in space matters when *qi* is interpreted by *fengshui* experts. In other words, we cannot see *qi*, but we can try to sense how *qi* works.

Scholars usually assume that *qi* is an essentially cultural concept in Taiwanese society and imagine that all of the Taiwanese know *qi* very well and apply relevant customs to it. Interpretations from experts, such as TCM practitioners, *fengshui* consultants and Daoists, have been used to generalize a Taiwanese view of *qi* (Feuchtwang 2002; Sangren 2000). Yet, this approach ignores the fact that non-specialists may not have the same understanding of it and may practice different relevant customs according to their personal backgrounds and familiarity with traditional concepts.

Non-specialist Taiwanese usually do not stress the contextualized meaning of *qi*, but have a general understanding of it. In my fieldwork, I always asked my informants “what is *qi*?” The

most common answers are: “*qi* is a sort of “*nengliang* (energy)” or “*cichang* (magnetic field)””. When I tried to ask how these scientific concepts link with personal health or *fengshui* practice, or if I continued to request a more specific definition of *qi*, I always received the following answers: “I am not an expert, you should go to ask a TCM practitioner or a *fengshui* master’ or “Don’t ask me, it is hard to explain.” It is interesting to hear these narratives because neither “energy” nor “magnetic field” exists in traditional Chinese texts or literature. Even though non-specialists cannot give an advanced explanation of the connection between *qi* and modern science, their answers already presumed that *qi* could be possibly explained or defined by science.

It is obvious that the concept of *qi* has become something that requires explanation from modern science in contemporary Taiwan. In terms of logic, if *qi* were the core of a cultural system, there would be no necessity to explain it with science. It needs scientific explanation because the Taiwanese have already changed their attitudes to the concept of *qi*. The cosmology made of *qi* in Taiwan has been fused with the cosmology constructed by modern science. Many contemporary Taiwanese may be more familiar with some concepts from physics, chemistry, and biology rather than TCM, traditional religions, and *fengshui*. We need to admit the influence of science and technology on traditional customs, especially in metropolitan areas or a modern community in which people are in contact with scientific information from the mass media or educational system rather than the information related to traditional religions and medicine. This is not to say that I deny the importance of the *qi* concept. I stress that anthropologists should not ignore the fact that where we are probing is in a context of modernity and we should present the meaning of *qi* in a contemporary milieu.

*Qi* is embodied in material culture, even though it is intangible and invisible. By using professional tools, *qi* becomes measurable and manipulatable by experts. For example, *fengshui* consultants use a compass to help themselves analyze the movement of *qi* in a landscape. Similarly, TCM practitioners also use acupuncture needles to stimulate a patient's internal *qi* as a medical treatment. Both forms of material culture are applied to utilize *qi*, whether environmentally or physically. Following these practices, people experience the existence of *qi* without seeing it. This also implies that the sensation following the interaction with an object may influence people's perception and cognition of *qi*. We may have a better understanding of how the contemporary Taiwanese understand *qi* by exploring people's use of *fengshui* objects and TCM devices.

The purpose of the following sections is to discuss how contemporary Taiwanese experience *qi* with relevant items of material culture and how the material culture forms people's concept of *qi*. I will examine how the Taiwanese experience *qi* in *fengshui* practice with relevant objects, and in TCM with a meridian diagnosis device (MDD). *Qi* is the core concept in both categories, either in theory or in practice. Actually, both fields share the most basic principles when they interpret the work of *qi*: yin, yang, and the five elements theory. However, the former has been developed with architecture and geomancy, and the latter has been developed in pathology and pharmacology.

As Daniel Miller states, material culture research is about how the things that people make in turn make people (2005: 38). According to this, the following sections focuses on 'what makes sense', especially 'what makes the sense of *qi*?'. This question has two specific meanings. First, it asks 'what material culture is meaningful to *qi*?'; second, it questions 'what material culture constructs the sensation of *qi*?'. The former question deals more with the representation

of *qi*. The latter is about how objects provide sensations and build the most fundamental experiences with *qi*. Both questions correspond to Michael Jackson's reflection on the intellectualism and his proposition of a phenomenological approach. This approach suspends inquiry into the hidden determinants of belief and action in order to describe the implications, intentions, and effects of what people actually say, do, and hold to be true (Jackson 1996: 11). Further, inspired by the work of Chris Tilley (2004) and his phenomenological interpretation of the relation between landscape construction and sensory experiences, I assume that people receive specific sensations provided by objects designed or used with the concept of *qi*. After this, Taiwanese culture contextualizes these sensory experiences and transforms them into perception and cognition in relation to *qi*. I will explore my informants' sensory experiences and perception of modern *fengshui* and TCM contexts, and then see how these may be transformed into the cultural perception and cognition of *qi*. For this purpose, I chose three *fengshui* objects: *shanhaizhen*, amethyst geode, Radionics device, and one type of TCM equipment, the meridian diagnosis device (MDD), in order to explore people's sensory experience with *qi* through these instances of material culture. Of the three *fengshui* objects, *shanhaizhen* originated from the local, but amethyst geode and the Radionics device are from foreign countries. It will provide a comparative viewpoint to indicate the change of *fengshui* practice.

### ***Shanhaizhen***

*Shanhaizhen* is a 'suppressing object' invented around the 1970s by *fengshui* masters in southern Taiwan. Basically, it is a mirror with a printed motif of mountains, ocean, a boat, *bagua*, and Daoist talismans. Its main function is to reflect the harmful *qi*, called *shaqi*, and transforms it into a beneficial *qi*, or called *jiqui*. According to the data collected in my fieldwork,

it was not broadly used before 2000. Before this period, there were also many *fengshui* products, which were made of wood or just a single mirror, with the same function for dealing with the invisible harmful *qi* for responding to the architectural styles in urban areas. Since the *mingli* programs became popular in 2002, *shanghaizhen* has become well-known by the Taiwanese.<sup>58</sup>



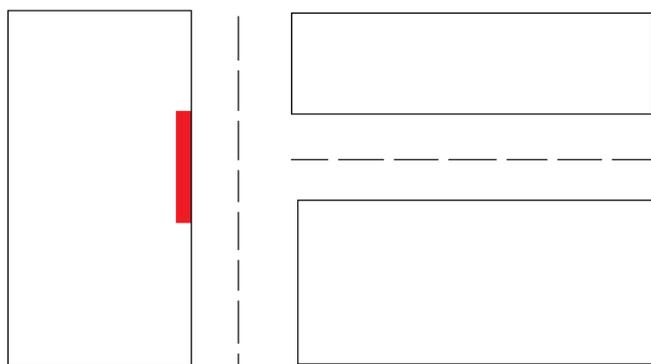
Figure 23: *Shanghaizhen*



Figure 24: A building with *shanghaizhen* on walls in different floors<sup>59</sup>

<sup>58</sup> The main promoter of *Shanghaizhen* is *fengshui* expert Yun-Jin Shie and his TV program *Fantasy Taiwan* in 2002. As the first *fengshui* reality show, it attracted many viewers and Shie promoted *shanghaizhen* in the program.

<sup>59</sup> This photo is from the search by Google Image. By keying in *shanghaizhen* in Chinese, one sees that there are a lot of photos about it and these teach people how to use it. This photo is one of them and represents a common



**Figure 25: *Shanhaizhen* is used at the end of a road**

According to *fengshui* experts' interpretations, each icon on a *shanhaizhen* has its own symbolic function. The icon of a mountain range symbolizes the *qi* extending from a natural landscape and connects the house with a real mountain range. The icon of the ocean functions like a moat embracing the user's house and symbolically protects the house against the harmful *qi*. The boat navigating toward the mountain range symbolizes that fortune and wealth is moving toward the user. The *bagua* symbolizes Daoism and an ordered cosmos. The printed Daoist talisman, called *fu*, implies that it will command the spiritual army to protect the house and bring fortune to the residents inside.

The motif on a *shanhaizhen* is complicated. I am curious about how a non-specialist can understand the motif on it without any training. The fact is that most of my non-specialist informants who practice *fengshui* cannot clearly tell me the symbolic meaning of each icon, and only *fengshui* experts can explain it well to me. Usually, non-specialist informants told me that *shanhaizhen* is for *dangsha* (to keep off negative *qi*), or *huasha* (to defuse negative *qi*). Non-specialist informants told me that they never think about how *qi* works until they use it.

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language people have about this *fengshui* object. The original website address of photo:  
<http://www.abab.com.tw/0up/3I/>.

However, *shanhaizhen* makes sense to them, since it easily indicates what is negative to a resident even though they cannot interpret it in a professional way. That is to say, non-specialists' understanding of this is more sensuous, intuitive, or pragmatic than generalized or theoretical. People's sensations of *shanhaizhen* could exist prior to their perception of its *fengshui* meaning, and people's interaction with this may lead them to experience the operation of *qi* via the influence of *fengshui* culture.

It is necessary to present a setting where a *shanhaizhen* is used as completely as possible in order to discuss people's sensations of it. *Shanhaizhen* is always hanging on wall or a window at the end of a road (see figure 2 and figure 3), or facing a building's sharp corner. According to the experts, this type of architectural setting forms *shaqi* and brings negative impact to the residents, because the movement of *qi* is straight and strong along the road and cannot stop. The airflow constructed by the architectural setting and the movement of automobiles on a straight road is fast and strong. To *fengshui* experts, this makes residents live in an uncomfortable environment with *shaqi*. In addition, the sharp corner of a house looks like a knife, bringing the symbolic harm to the residents facing it. The mirror functions as a battle against hostile influences. A hanging *shanhaizhen* not only indicates that the resident living in an apartment is dealing with threatening *shaqi*, but also leads people to think about the relationship between buildings, roads, and the landscape.

One's interaction with a building with a hanging *shanhaizhen* also contains the sensation following its materiality. The main part of a *shanhaizhen* is a mirror, and its materiality makes people see a reflection and sense the relationship between what is behind the mirror and what is reflected by it. From a phenomenological perspective, a mirror's reflection represents an attitude of resistance, rejection, or refusal of something. Furthermore, what could be reflected is

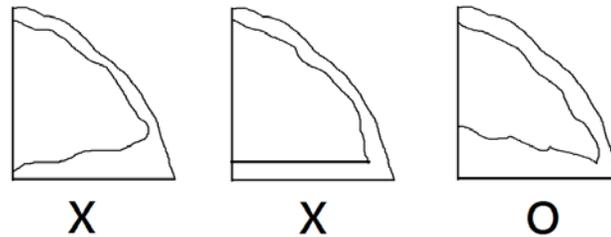
potentially harmful or threatening to what is behind the mirror. That is to say, the house with a *shanhaizhen* hanging on the wall is against a landscape which may bring negative effects. A *shanhaizhen* points out what may have a negative effect in an environment, such as the sharp corners, the cars moving on a straight road, and the building setting.

When *shanhaizhen* hanging on a wall repetitively appear in a neighborhood, they draw viewers' attentions to the environmental setting. Then, *fengshui* plays the role of leading people to contemplate why those buildings have the same application of such a mirror. The viewers, or the residents, may still have no idea about the symbolic meanings of the motif on a *shanhaizhen*, but they may already sense the spatial relationship constructed by it and connect their understanding of *qi* in order to give the landscape a *fengshui* meaning. By considering the reflective materiality of mirrors, *shanhaizhen* links non-specialists' perception of *qi* with the sense of light. Furthermore, by considering the composition of buildings and the airflow within it, *shanhaizhen* connects the concept of *qi* with the sense of airflow.

### **Amethyst Geode**

Among all crystal products, the amethyst geode is the most representative in *fengshui* application, and Taiwanese *fengshui* practitioners believe that an amethyst geode may concentrate *qi* and bring good luck to its user. Most of the geodes originate from Uruguay and Brazil. They are essentially hollow spherical to oblate masses of mineral matter; however the geodes presented in *fengshui* practitioners' houses are halved and erected. The inner crystalline layer and the outer rock layer form a conspicuous contrast. The interior crystalline layer growing inward from the outer rock and the middle agate layer present a temporal sequence and lead the

viewers' focus to the center of a geode. Further, the countless points of the interior amethyst layer also guide viewers' visions of the center as well.



**Figure 26: What amethyst geode is good for fengshui?**

In the last chapter, I have mentioned that some of the Taiwanese who practice *qigong* or New Age Movement meditation argue that they have the sense of itching or heat when they put their hands into an amethyst geode. They claim that this feeling is ‘the sense of *qi*’, and they can sense it for specific body practices. They also claim that an amethyst geode is more functional when it gives a stronger sense of *qi* on their hands;<sup>60</sup> they usually choose a geode by using their hands to sense ‘*qi*’ in different geodes and pick the one with the strongest feeling. However, the majority still chooses a geode according to its visual beauty and affordability.

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<sup>60</sup> In my fieldwork, I found that the following terms are totally interchangeable on this occasion: *qi*, energy (*nengliang*), and magnetic field (*cichang*).



Figure 27: The prosperity corner at a living room presented by mass media<sup>61</sup>

Not every geode is assumed to have the same function for *fengshui*, and the Taiwanese prefer to select specific types of geodes for better luck. Taiwanese *fengshui* consultants suggest their clients to choose an amethyst geode which has a pit inside (Figure 4). The pit within an amethyst geode provides a sense that something could be accumulated in it.<sup>62</sup> It leads the viewers to visualize that something may stay in the geode because of the pit. Usually, the deeper the geode's pit is, the higher its price is. The Taiwanese prefer to claim that this type of amethyst geode has the function of *jiuqi* (to agglomerate or concentrate *qi*), which is one of the most important *fengshui* principles to organize a space in order to have prosperity.

Following this, the Taiwanese usually assume that a larger geode with a deeper pit will be more functional in bringing good luck. This also explains why the Taiwanese think that a piece

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<sup>61</sup> The source of photo is from the website of Next Media. The website address is <http://www.appledaily.com.tw/appledaily/article/property/20061104/3004450/>.

<sup>62</sup> Fengshui consultant Shangji Tsai reminded also reminded his readers the same principle of selecting in his book *Tsai Shangji Fengshui and Crystal* (2004). This principle also explains why Uruguayan amethyst geodes relatively have worse market and price than Brazilian amethyst geodes. Amethyst geodes from Uruguay have relative rounder shape and have no outstanding pit part. It becomes hardly to bring the imagination of accumulating *qi* to *fengshui* practitioners.

of a broken amethyst geode lacks the function of *fengshui*. A flat piece of broken amethyst geode may be treated as a lucky stone, but the Taiwanese hardly connect it with the function of *fengshui*. The shape does not provide *fengshui* practitioners the sense of agglomerating *qi*, even though it has the same mineral ingredients as any amethyst geode.

It is claimed that amethyst geodes need to be put in a specific corner in order to make them functional for *fengshui*. According to *fengshui* experts, an amethyst geode requires to be put at a “*caiwei*”, or “prosperity corner” in an interior space. A prosperity corner is usually diagonal to the door (Figure 24). The two sides of a prosperity corner should be walls with no windows. From a sensory perspective, the corner is the focus of visual sight extended from the door, and it brings the viewers the feeling of stability and firmness and strengthens the sense of accumulating *qi* within an amethyst geode.

The use of amethyst geodes provides specific visual experiences to people who do not understand *fengshui* well. Furthermore, when a practitioner explains a geode’s connection with *qi*, it easily makes sense. The materiality of amethyst also supplements and expands the discourse of *qi*. Since silicon in amethyst, as in quartz, has the physical feature of piezoelectricity and it is comprehensively used in technology, it also implies that *qi* could be a sort of “energy” or “magnetic field”. From this perspective, an amethyst geode becomes a metaphor for “battery” or “power generator” based on the imagined electromagnetic effects. That is to say, if someone learns *fengshui* and *qi* from using an amethyst geode, he may easily link the discourse of *qi* with the concepts of energy or in modern science.

## **Energy Devices and *Fengshui*: Radionics and *Fengshui* Consultant Chen**

*Fengshui* consultant Ten-Nan Chen uses another way to apply crystals.<sup>63</sup> In his services and courses, he introduced a device called ‘Radionics’ to utilize crystals in his *fengshui* service. Based on his personal experiences, Chen disdained the defects of traditional *fengshui* techniques and skills. From his perspective, traditional *fengshui* techniques were developed within an environment without modern technology, and *fengshui* theories should evolve with development of science. For example, the modern living space is filled with electronics and all of these create electromagnetic radiation, and their effects on *fengshui* could not be figured out if a *fengshui* consultant only applies traditional skills and uses outdated tools. The compass, the traditional tool for every *fengshui* consultant, in his idea, cannot correctly indicate the northern direction since the orientation will be influenced by electronics in a building. In a building, the reinforcing bars hidden in a house or metal-made objects also easily influence the orientation of a compass and mislead a *fengshui* consultant’s judgment. Moreover, many electronics, such as microwaves or televisions, may release radiation and influence not only the residents’ health but also their fortunes. He also criticized that the concept of *qi* is not scientific enough and *fengshui* consultants who only insist on the traditional ways would be eliminated by a modern society. Therefore, he claims that a *fengshui* consultant should have a basic understanding of scientific concepts and apply them into service. Therefore, he introduced the Radionics device from the United States into his *fengshui* practices.

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<sup>63</sup> This is a pseudonym.



**Figure 28: A Radionics device**

Radionics (Figure 25) is a controversial device for alternative healing and its efficacy has not been proved by any formal scientific institute.<sup>64</sup> According to Chen’s narrative, the basic theory of this device is that a healthy person will have certain “energy frequencies” moving through his body that define health, while an unhealthy person will exhibit other energy frequencies that define disorders. Radionics devices are aimed to diagnose and heal by applying appropriate energy frequencies to balance the discordant frequencies of illness. Chen’s way of using “frequency” does not fit into its standard meaning but describes a type of imputed energy, which does not correspond to any property of energy in scientific scene. Chen introduced this device back to Taiwan in the mid-2000s. He recalled the motivation and process by which he introduced this device into Taiwan:

Many years ago, my daughter got a disease which all doctors and hospitals could not deal with. One of my friends suggested me to try Radionics, and it did solve my daughter’s illness. After that, I

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<sup>64</sup> The relevant information could be seen the official page of Radionics <http://www.raydionics.com/>.

started to study how to apply this equipment to *fengshui*. The inventor did not know that it is applicable to *fengshui*.

Chen, in his services, does not use traditional *fengshui* compass but use Radionics device to check the “energy frequency” of each corner within a residential space or a business space. By applying the device, he found that the digital value presented by a Radionics device varies in different corners within a residence space. In some corners, the device detected positive values, but other corners had negative ones. Chen found that people living in an apartment with more negative values easily became unlucky and unhealthy, and vice versa. Therefore, he connected these values’ variations with *fengshui* meanings. Instead of calling the values ‘frequency’, he calls them “signals”, or *xinhao*, and they can be represented by positive and negative numbers. In his interpretation, the positive values will bring health and good luck to the resident, and vice versa.

Then, Chen looked for strategies to change the negative signals in a living space into positive ones, since the device was originally designed to apply to a physical body. He thought of quartz crystals, which are said to have the function of storing information. Therefore he started to try to use the Radionics device to store positive ‘signals’ into the crystals and put these crystals at the corners which required modification. He claimed that his experiments were successful and helped his clients to improve their fortunes and solve some issues caused by poor *fengshui*. I interviewed some of his clients about their understandings of this device and its application to *fengshui*. They told me that they did not really understand how the device worked for *fengshui*, but they decided to give it a try by friends’ recommendations and were satisfied with its effect.

Personally, I felt that Chen did not want to reveal too much about how he used the device to me. This is reasonable, since most *fengshui* consultants try their best to keep their job

techniques confidential. However, it is also possible that he only ‘used’ the technology but did not understand it well. If he elaborated more, he may reveal more logical falsehoods. However, his application of the Radionics device has indicated a mutation of *fengshui* practice in which he gave up the most important tool, a compass, but embraced a facility which has no relation to any traditionally theoretical concept. From a phenomenological perspective, the device draws a sense of technology into people’s *fengshui* experience in which *qi* is no longer invisible, but is represented by digital values through the device. That is to say, through the use of Radio device, people’s perception and imagination could be more concrete than before and connected with other scientific concepts.

To sum up, I argue that the material culture of *fengshui* teaches the Taiwanese what *qi* is by providing specific sensations. *Fengshui* becomes a mechanism by which to interpret these sensory experiences and perceive their cultural meaning. *Shanhaizhen*, crystal *fengshui* objects, and Radionics devices all provide the materiality and sensation of *qi*. These objects exist in Taiwanese living spaces for everyday life and already silently instruct people about Taiwanese *fengshui*. We also need to bear in mind that the discourse of *qi* is inter-subjectively constructed by its practitioners and its relevant material culture. Modern science and traditional *fengshui* may be representative of different cosmologies, but they may fuse with each other, because the Taiwanese grow up with simultaneous scientific education and traditional customs.

It is now easier to understand why contemporary Taiwanese *fengshui* experts try hard to use science or scientific ways to explain either *fengshui* or *qi*. One *fengshui* consultant, Yang-min Lu, explained the nature of *qi* to me: sound, heat, magnetism, electricity, light, color, shape, and shadow. It is obvious that all these elements could be easily linked with physics, such as thermodynamics, electromagnetic, and optics. Lu’s argument indicates that Taiwanese *fengshui*

practitioners have developed a modern discourse of *qi*. In this case, *qi* is not a merely a mental projection but a concrete factor which could be interpreted by the science of physics.

The other expert Jun-Kuan Lin who taught *fengshui* in the Depart of Landscape Architecture at Chinese Culture University, named *fengshui* as “environmental psychology”. In Lin’s courses and book, *Fengshui, Landscape, Art, and Science* (1994), he also reminds people to notice some *fengshui* threats that come from modern technology. For example, Lin claims that we should not live in a house close to an electricity tower or a power plant, since the released electromagnetic wave is a sort of *shaqi*. He stresses that human consciousness and behavior is greatly influenced by environmental factors; and *fengshui* aims to make a living space better and to contribute to health, either of the physical level or mental level. When science and technology bring mental stress, this is also a sort of *shaqi* or negative *fengshui*.

### **Traditional Chinese Medicine, *Qi* and Meridian Diagnosis Device**

As a fundamental concept of Taiwanese culture, the concept of *qi* is not only dominant in the religious category, but also important to traditional medicine. To use scientific concepts to interpret *qi* is not monopolized by *fengshui* consultants; experts in the field of TCM do so as well. In Taiwan, many scholars tried to use scientific facilities to prove the existence of *qi*.

TCM practitioners encounter the immateriality of *qi* as well. In a physical body, the main routes of *qi*, called the twelve *jinluo* (meridians or channels) which connect organs, viscera, arms, and legs are also invisible in anatomy. TCM practitioners assume that illness is an imbalance in the functions of internal *qi* and they also believe that one’s *mo*, or pulse, embodies the imbalance of *qi* and the disorder of meridians. The four diagnostic methods, including inspection, auscultation, inquiry, and palpation, are a combinational method of

diagnosis. In these four methods, the palpation is the only direct way for examining the interior organs and provides a reference for identifying the pathogens by a physical contact with a patient.

However, palpation is criticized by modern medicine because of its uncertainty. Critics argue that TCM palpation analysis is too abstract and hard to standardize. Shigehisa Kuriyama argues:

The arts of pulse diagnosis and *qiemo* arose from the conviction that people express themselves not just in words, in a language accessible to the ears, but also in a language accessible only to the touch. Sometimes, as in the rhythmical articulations of the pulse, doctors drew explicit parallels between these two forms of expression. More often, though, they simply took it for granted that the style in which the body communicated messages by palpable movements would resemble how people conveyed meaning by the voice. (1999: 107-108).

The uncertainty of pulse diagnosis indirectly prompts the business of senior TCM doctors. The Taiwanese believe that a TCM doctor's pulse diagnosis will be more accurate if he has more experience in it. In order to overcome the uncertainty and inaccuracy of pulse diagnosis, some contemporary East Asian TCM practitioners work with scientists to develop devices for 'meridian diagnosis' by applying the technology of bio-energy and physics (Chen 1996; Huang 2007; Wang, Chang, Wu, Hsu, and Wang 1991; Lin Wang, Y.Y., Hsu, T.L., Jan, M.Y., and Wang, W.K. 2010 ).<sup>65</sup> In their ideas, it will be more certain and accurate to diagnose if

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<sup>65</sup> For instance, through experiments based on biophysics and bioelectricity, Dr Chin-Long Huang claimed that how meridians are embodied in tissue fluid: 'Huang argues that meridian is considered as a passage to proceed [facilitate] the electroosmosis transport. Due to the influence of electric term in the momentum equation, the boundary layer thickness is thinner than the common laminar flow under the same physical coefficients. Through this electroosmosis transport flow model, the phenomena of Chi-blood interaction can be revealed in detail (2007: IV-V).' Similarly, Physicists Kuo-Gen Chen (1996) and Wei-Kung Wang (2009) both apply the methodology of physics or bio-electricity to claim the existence of *qi* and meridians.

a TCM practitioner can directly catch the information from the meridians. There are already many meridian diagnosis devices (MDD) circulating in the market of TCM equipment, and all of them are based on the application of biophysics and bioelectricity. The performance of the meridians can be caught by detecting the bioelectrical signals.

By examining the development history of these devices, it would not be difficult to say that they objectify the concept of *qi* and meridians, and that may help the TCM practitioner to explain their medical practices. However, I am wondering how people, especially non-specialists, interact with MDD by their sensations and how their sensory experiences influence their understanding of *qi*.

For example, one of the most popular MMDs is the Pulse Health Care System (PHCS). PHCS is manufactured and marketed by the Shenhua Cooperation. The company follows the theory of a Japanese scientist, Dr. Yoshio Nakatanko, and his bioelectrical experiments to design the device. PHCS includes a detector linked to a computer by a USB cable, and a program running in a PC system. Presently, it has been developed into the second module. The first module is more complex than the second one. In using the first module, the subject needs to hold two metal sticks in both hands, and the detector will be used with a cotton ball moistened with salt water for conducting the 12V electricity from the detector to the acupuncture points. In the second module, the device has been refined so that it does not need a cotton ball moistened with salt water and directly detects the bioelectrical signal from the subject' acupuncture points in subcutaneous tissue; further, the subject does not need to hold metal sticks for the second module. All these features enhance the accuracy of testing.



**Figure 29: Using a PHCS device**

After receiving the signals from the detector, the program within the computer starts to calculate and transform the values of meridians into numbers and graphs. The test process is quite simple and most subjects felt amazed when they viewed the result shown on a screen since the system visualized the invisible *qi* and the meridians. It was not possible to visualize the operation of meridians by traditional diagnosis methodologies. In contrast, by utilizing a PHCS, the subject can easily catch some basic information about his or her meridians by viewing the graphs. However, an advanced diagnostic interpretation still relies on the analysis of a practitioner based on TCM pathology (Figure 26).

In the context of a MDD test, the TCM practitioners usually do not explain what *qi* is because they assume that their patients have some basic knowledge about TCM. As other diagnoses in a hospital or a TCM clinic, the subjects may catch the TCM practitioners' interpretation of their illnesses but they cannot understand the professional terminologies as well as a physician could. They hear that the practitioners mention terminologies such as '*qi*', 'blood', 'meridians', and descriptions from a result graph from the PHCS system. For example, "the chart indicates the value of your spleen which is overwhelmed and weak". However, without a

professional training, non-specialists can only catch terms which they are familiar with. That is to say, it will be useless if we only focus on a subject's memory of a professional's diagnosis and use it to see how he or she understands *qi*.

From a phenomenological approach, rebuilding a sensory context may help us to understand how people interact with a PHCS before people culturally perceive its operation. As a technological device, a PHCS test, or any MDD test, would not be successful without electricity and the relevant equipment. During a test, a subject's experience in a PHCS is bonded with electricity and technology from the beginning to the end. That is to say, the electricity and technology for detecting the signals of bioelectricity construct people's sensation and perception of the process. The operation of a program, the visualized graphical representation of the meridians, and the systematic calculation process all rely on electricity and a technological facility used in a PHCS test. The subjects of the test may not understand the technology associated with the device, but they can intuitively sense that it works with electricity and relevant technology. Then, the subjects can link their cultural understanding of *qi* with the sensory experiences provided by a PHCS, and connect the meridian graphics with their physical feelings. It completely differs from pulse diagnosis, which only relies on a TCM practitioner's hand touch and personal intellectual decoding.

When people recognize that the equipment with electricity can catch the value of their meridians and *qi*, they could perceive that *qi* could be understood by relevant scientific concepts. That is to say, even if someone has never learned about TCM and *qi* theories before, they still can understand them by this device. The concept of *qi* and the sense of technology have been brought together by the sensations following a test by a PHCS.

As mentioned above, TCM was criticized for its diagnostic methodology since pulse diagnosis lacks visible objects to observe. MDD users argue that these disadvantages could be overcome by MDD's visual effects. Ideally, TCM practitioners, by working with MDD, will no longer need to rely on a diagnosis methodology questioned by modern science, and then they can start to build a new database to refine and rebuild TCM pathology. However, the Taiwanese academic field of TCM has still not accepted this technology. Most TCM practitioners still rely on pulse diagnosis rather than a MDD. The Shenhua Corporation and other MDD companies have not built a substantial database and a standard methodology of interpreting the test results.

In sum, MDD challenges the traditional ways of perceiving *qi* and meridians. Its way of detecting bioelectric signals has built a material context for constructing people's sensation and perception of catching the invisible *qi* and meridians. As acupuncture embodies the existence of *qi* and meridians by sensuously connecting a treatment and physical reaction, PHCS is also a form of material culture linking visual sensations with the invisible meridians and *qi*.

Further, based on these sensations and perceptions, the subjects can easily connect their physical conditions with their scientific knowledge. Whether or not this diagnostic methodology will be approved by modern scientists, a MDD, as a Radionics device, has built a connection between the concept of *qi* and the sense of science. In this way, MDD bestows modernity on TCM and materiality of *qi* in contrast to the TCM practice based on pulse diagnosis. It corresponds to *fengshui* practitioners' understandings of *qi* based on their interaction with crystals. In the following section, I will continue to explain this dialectical process.

## 6.5 A PHENOMENOLOGICAL INTERPRETATION AND AN EXTENDED COSMOLOGY

Daniel Miller states that we cannot know who we are, or become what we are, except by looking in a material mirror (Miller 2005: 8). Material culture is not just what we make, but also what makes us. In the above sections, I presented the material cultures of *fengshui* and TCM that have developed from each one's understanding of *qi* and how each one applies objects to manipulate or detect it. I also used a phenomenological approach to illustrate how contemporary *fengshui* objects and MDD provide sensations to people and lead people to connect their experiences with modern science and influence their understandings of *qi*. *Shanhaizhen*, crystals, the Radionics device and PHCS may be used in different categories, but all these bring specific Taiwanese experiences to *qi* and construct people's interactions with it.

That is not to say that I deny the semiotic value of *fengshui* objects. Instead, the semiotic plethora in relation to *qi* exactly reflects its needs to be objectified to manipulate. From my perspective, the immateriality of *qi* gives it a space for interpretation because of its invisibility and intangibility. If *qi* was tangible and visible, *fengshui* manipulation and the meridian diagnosis of *qi* would become more standardized and concrete. As Morgan Meyer argues, what is involved here is the act of locating and following the traces of absence and understanding absences as traces; that is, as residual, incomplete, elusive, ambiguous, and yet material entities (2012: 103, 109). Because of the absence of *qi* in vision, we rely on material objects to trace it and then interpret it in a cultural way. The immateriality of *qi* leads people to develop relevant forms of material culture to objectify it. Without these forms of material culture, people who lack professional concepts find it difficult to experience *qi* and get involved in many traditional customs.

It is obvious that non-specialists and experts exist in both categories and there is a gap between the two sides' understandings of *qi*. Usually, experts who have passed through a professional training can better understand the operation of *qi* in a specific context and give a complete discourse about it, but non-specialists may just follow these experts' indications the common sense which they learn in their daily lives. In the fieldwork, many non-specialist informants did not like to be asked to interpret their ideas about *qi*, and suggested that I should talk with experts, such as TCM practitioners or *fengshui* consultants. This is not to say that non-specialists cannot figure out the different uses of *qi* in different contexts and particularly value experts' explanations. Indeed, I believe that experts in each field have professional ways to view *qi* and apply it, and we need to examine experts' statements within their own contexts of time-space. Yet, non-specialists may feel confused since the concept of *qi* is simultaneously and broadly used in different categories. People's experiences of *qi* in different categories may be merged together, and it makes Taiwanese cosmology more dynamic. Further, other factors also influence their understanding of *qi*, such as mass media and modern education, and supplement new elements into it.

While *qi* has a scientific sense, it also brings its effects to how contemporary Taiwanese interpret, or reinterpret, traditional concepts and customs. The concept of *qi* is definitely a channel connecting different categories in Taiwanese culture, including philosophy, medical practice, religion, literature, etc. Presently, this channel has extended to more categories because of the modernity of the *qi* concept. When Taiwanese view *qi* in terms of science, they more easily accept relevant new concepts when they practice traditional customs, such as crystal healing, aura photography, flower essence therapy, and other energy therapies. The experts have also realized that they need to provide a new discourse of *qi* in order to fit into the Taiwanese

contemporary service market of *fengshui* and TCM. More and more Taiwanese medical professionals simultaneously own permits for conducting modern medicine and TCM. They claim that each side has pros and cons and could be complementary to each other. One *fengshui* expert, Tao Wen, said that he needed to read books about quantum mechanics or astrophysics in order to make *fengshui* more persuasive to himself and to his clients. Many *fengshui* consultants even informed me that they preferred to use “*nengliang*”(energy) or “*cichang*” (magnetic field) to replace “*qi*” in their services, because they think that the scientific discourse is more convincing and easily acceptable when they interact with their clients.

We cannot ignore that *fengshui* is a function-oriented cultural practice behind its dizzying forms of material culture. While the use of crystals shows that Taiwanese cosmology has been expanded and supplemented, the practice of *fengshui* always connects people’s expectations and desires, and this is prior to its theoretical and technical development. Even though the cosmology’s internal composition of conceptual component has been varied, its practice is still tightly linked with Taiwanese ambitions of leading a better life.

Providing more persuasive discourses and looking for more efficacious methods, even if just boasted, is always one part of this material culture and makes the cosmology more pragmatic and endlessly evolving. The use of crystals indicates the change of this cosmology in which it not just retains the dialectical feature of the cosmology, or even disguises them in rationality and scientific elements, but are fundamentally the same motivations with new concepts and new forms of material culture. It is no doubt a dialectical process, in which the cosmology of *qi* provides a framework to interpret the functions of crystals, and the ways of utilizing crystals also influence Taiwanese understanding of the materiality of *fengshui* and *qi*. By using crystals objects, while *fengshui* practitioners use them to solve their anxieties, they also meet

opportunities to touch the scientific concepts following these objects and expand the cosmology which they believe. Cosmology is never a closed system. It is always dynamic with the use of the objects which embody it. Taiwanese concepts related to *qi* and the ways of viewing the world through *fengshui*, or the practice of TCM, all contribute to the formation of this endless-evolving cosmology.

That is to say, using foreign crystals has transcended the category of perception but has influenced the category of cosmology. Stephen Feuchtwang claims that the compass used by *fengshui* consultants represents a Taiwanese model of universe or cosmology. Through figuring out the juxtaposed natural symbols and reviewing the development of compass interpretation in history, Feuchtwang points out that *fengshui*, as a self-defining cosmology, “is definitely metaphysical, a hypothetical cosmology that is to explain physical events (2002: 148).” Feuchtwang analyzes the symbols used in a classic, *The Explanation of the Compass*, and *fengshui* consultants’ narratives and argues that there is always some form of dialectic, typically between the Heaven and Earth aspects of the situation, but more specifically, even within a single series of symbols, where one symbol implies another and interacts with it (ibid.: 149). In such a dialectic, everything is potentially or actively kinetic (ibid.: 150). To Feuchtwang, *fengshui*, through the work of *fengshui* consultants and the use of the compass, constructs a cosmology with the features of order and chaos. He claims “there are basically two forms of kinesis or interaction. That associated with disasters is where forces dash or injure one another, are out of balance and disperse. This state is chaos. That associated with good fortune is harmonious, balanced, concentrated, clear, pure, and beautiful (ibid.: 150).” That is to say, *fengshui* practice provides a systematic tool to lead people’s dialectical imaginations and understandings to *qi*. Even though the nature of *qi* is questionable, it was never a question of

people who practiced the cosmology in traditional societies. Following this, using crystals which draw scientific concepts into *fengshui* cosmology is to reinterpret “order/disorder” or “balance/chaos” in terms of new elements.

This dynamic dialectic between the cosmology and its materiality become more concrete while the Taiwanese have developed multiple forms, even new forms, of material culture to sense the operation of *qi*. *Qi*, to contemporary Taiwanese, could be understood as energy and magnetic fields, and energy and magnetic fields could be understood as *qi*. Since energy and magnetic field are immaterial as well, people’s sensations and perception of them also rely on relevant forms of material culture. The Taiwanese easily use them to connect these forms of material culture with the traditional concepts and give them new cultural and social meanings. Electric towers, power plants, microwave ovens, or even cell phones, which may have invisible effects on people, also leave space to be interpreted by *fengshui*. While people’s worries caused by modern technology go deeper, *fengshui* experts have better opportunities to include these worries into their expertise and provide consultancy services. That is to say, the cosmology of *qi* and the cosmology of science are always in a dialectical relationship. *Shenhaizhen*, crystals, Radionics devices or PHCS are all ‘hybrids’ in the terms of Latour (1993), and lead us to reflect on the ‘modernity’ of contemporary Taiwanese society. On the one hand, the Taiwanese try to use science to deconstruct/reconstruct their traditional cosmology; on the other hand, they use traditional cosmology to deconstruct/reconstruct a cosmology of science embedded in modernity. As with yin and yang, or immateriality and materiality, the cosmology of *qi* and the cosmology of science are always in a dynamically dialectical relationship.

The material culture of *fengshui* and Traditional Chinese Medicine definitely objectify invisible and intangible *qi* and transform it to be applicable concepts. With these objects, people

can have advanced imagination of the operation, or movement, of *qi* and then link this with their cultural knowledge of *qi*. To non-specialists, consuming and using these objects do not merely represent their cultural identity, but they also learn new cultural knowledge from these practices. To the specialists, especially *fengshui* professionals, these objects amplify the material spectrums of their cosmological practice. By this knowledge, they can apply novel techniques and objects and rethink how to make up the original adopted these new ones. That is to say, from the perspective of epistemology, anthropologists should not assume that the Taiwanese always practice culture in traditional ways, and it is important to draw new factors, such as technology and modernization, into our study. When people no longer treat *qi* as the unproblematic core of cultural systems, our interpretation of Taiwanese culture should be reviewed.

Moreover, the utilization of crystals could be seen as a result of globalization in which the GCC introduces the crystals into Taiwan's market. More than that, the utilization of crystals must be understood in terms of glocalization. Glocalization does not mean local people just directly use some foreign objects. From the examples of *fengshui* objects used by the Taiwanese, it has been shown that local cosmology and religious tradition both influence people's understanding and utilization of these foreign minerals which move on a global commodity chain.

The change of *fengshui*'s materiality also brings improved potency of commoditization and an easier connection with a commercial mechanism. Due to the new forms of material culture, especially crystal objects, embodying *qi*, the concept of *qi* has also been objectified with weight and volume, even by other qualities which people can directly sense. Consumers can easily catch the *qi*'s objectiveness through their physical interactions with a *fengshui* object. Based on this, the intangible and invisible *qi* could be transformed into commodities and

bestowed with exchange value by a currency system. This implies that this fetishism which has been influenced by the cosmological change also has the characteristics of commodity fetishism, inspired by Karl Marx (1981), in which people's consumptions alienate the original relationship between *qi* and people, and form a relation constructed by the interaction between commodities and consumers. This is to say, the crystal *fengshui* object has the characteristic of "the commodity fetishism of fetishism". I will discuss it more in next chapter. Moreover, while these objects have become well accepted, these objects reversely influence the level of cosmology. In the past, the Taiwanese only realized the operation of *qi* through the five elements, *bagua*, or other traditional concepts. While crystals have become more commonly used for *fengshui*, the reinterpretation of *qi* with scientific concepts is better accepted by the Taiwanese. By rephrasing Stephen Feuthwang's words, *fengshui* is still a self-defining model, but the definitions have been introduced from the commercial world.

To sum up, I, in this chapter, have reviewed the evolution of Taiwanese architectural forms and provided a discussion in relation to the change of local cosmology in terms of a phenomenological approach. In the next chapter, I will connect the ethnography in relation to Brazil, China, and Taiwan and theoretically interpret the flowing materiality of crystals on its global commodity chain.

## **7.0 CRYSTAL'S FLOWING MATERIALITY ON A GLOBAL COMMODITY CHAIN**

In previous chapters, I have presented ethnographical materials about different sections of a GCC for crystal *fengshui* objects. In this chapter, I turn to provide theoretical discussions about “glocalization”, “materiality”, and “the commodity fetishism of fetishism”. Based on Appadurai’s idea about fluid “scapes” by the impact of globalization, I argue “materialscape” as the experiential foundation of glocalization. With regard to the materiality, I will have a dialogue with Daniel Miller’s, Chris Tilley’s, and Tim Ingold’s concepts about this theoretical issue and try to solve their theoretical disputes by drawing from Arjun Appadurai and Igor Kopytoff’s ideas. Based on my research of a GCC, I will provide a comprehensive framework by which to refine the methodology and theory of materiality. Furthermore, I will review the concept of fetishism and argue that the flowing materiality presented on this GCC of crystal *fengshui* objects embodies a “commodity fetishism of fetishism”.

### **7.1 GLOBALIZATION, GLOCALIZATION, AND THE FLOWING MATERIALITY AS A MATERIALSCAPE**

Along the GCC, different forces of globalization connect different locations together and move the goods from Brazil to China and then to Taiwan and shape the forms of globalization

happening on this chain, such as international transportation moving people and goods; the borderless economy exchanging labors, goods, and capital; and the transnational communication technology introducing the cultural information about goods from the West to the East. However, as I presented in the previous chapters, globalization only partially explains the operation of this GCC. While many scholars discuss the cultural homogenization, because of the hegemonic influences following the forces of global capitalism, this thesis has shown disparate examples presenting the influence of local agency. I claim that we need to understand these local cultural phenomena on a GCC from the perspective of “glocalization”.

In the business development or management category, glocalization refers to a global company’s strategies to adapt the local market or enhance the management efficiency overseas (Svensson 2001; Thompson & Arsel 2004; Tixier 2005). From the political economic perspective, Erik Swyngedouw argues that “glocalization” refers to the twin process whereby, firstly, institutional/regulatory arrangements shift from the national scale both upwards to supra-national or global scales and downwards to the scale of the individual body or to local, urban or regional configurations and, secondly, economic activities and inter-firm networks become simultaneously more localised/regionalised and transnational (2004: 25). In 1995, sociologist Roland Robertson, in his article “Globalization: Time-Space and Homogeneity-Heterogeneity”, argues the necessity to concern “glocalization” with having a better understanding of the local response to globalization. By tracing its etymology of Japanese “*dochakuka*” which refers to global localization in Japanese business, Robertson claims the process of globalization is not just homogenization of all cultures, but also a process of heterogenization and shows the locals’ active role of responding to these impacts (1995: 30-36). Sociological and anthropological studies of glocalization highlight the simultaneity or co-presence of both universalizing and

particularizing tendencies in globalization and heterogenization (Robertson 1994; Robertson and White 2005; Giulianotti and Robertson 2007). In this research, most theorists following Robertson's argument try to disprove the dualism of globalization and localization to homogenization and heterogeneization. Indeed, the latter reminds us that the process of cultural adaptation is not only learning or imitating the introduced one but also the local culture's development of its own ways to understand or manipulate it. Additionally, glocalization highlights how local societies may critically adapt or resist 'global' phenomena and reveals the ways in which the very creation of localities is a standard component of globalization.

In the majority of glocalization research, we find that the researchers are inclined to focus on one type of foreign object, good, or service introduced by a global force and study how local people develop their own ways to respond to the following cultural changes. These studies highlight the locally cultural responses but easily trivialize the originally intrinsic connection among sections distributed on a GCC. We may easily figure out how a group of people respond to the effect of globalization but overlook that many groups simultaneously correspond to it with their connection and interaction with each other. Of course, it could be a scholars' research strategy; however, our understanding of a global commodity chain and the relevant cultural phenomena may be sectioned by this and make it difficult to have a holistic interpretation.

On a GCC, crystals' movement crossing geological borders has become a unique "scape". Appadurai, in *Modernity at Large* (1996), claims the five "scapes" which followed the development of globalization: ethnoscapas, mediascapas, technoscapas, finanscapas, and ideoscapas. The five scapes respectively represent the movement of population, technology, capital, information, and concepts in a global scale. Each of these five scapes is not fixed and

concrete, but flowing and fluid. Moreover, they construct every individual's imagined world. Appadurai uses these five dimensions of cultural flow to propose a cultural image:

The image, the imagined, the imaginary - these are all terms that direct us to something critical and new in global cultural processes: the imagination as a social practice. No longer mere fantasy (opium for the masses whose real work is somewhere else), no longer simple escape (from a world defined principally by more concrete purposes and structures), no longer elite pastime (thus not relevant to the lives of ordinary people), and no longer mere contemplation (irrelevant for new forms of desire and subjectivity), the imagination has become an organized field of social practices, a form of work (in the sense of both labor and culturally organized practice), and a form of negotiation between sites of agency (individuals) and globally defined fields of possibility. This unleashing of the imagination links the play of pastiche (in some settings) to the terror and coercion of states and their competitors. The imagination is now central to all forms of agency, is itself a social fact, and is the key component of the new global order (ibid.: 31).

However, the movement of objects could be prior to the local adaption and contribute to local people's experiences and understanding of the global and then develop their own ways of interpretation and utilization of these foreign things. That is to say, the movement or the shape's variation of objects on a GCC is one type of "scape", or could be called "materialscape" which it embodies a local adaption to globalization. It is one part of people's daily lives and connects the local with the global by providing concrete material experiences. On its GCC, the crystals' movement is regular and represents the economic links between different sections. From the angle of production, mining and processing, local products and goods are not for the local, but for the remote market. Likewise, the goods we use and consume are also from different corners of the globe. Living within such a materialscape, the territorial borders become vaguer than ever, and it becomes difficult for the majority of people to discern what is local and what is foreign.

The materialscape paves a way for us to trace how different forces work to form the more diverse glocal/global scapes and indicate the material changes' connection with local people's adaptations. On the one hand, this scape is constructed by people, technology, capital, information, and ideas, as stated by Appadurai. Tracing how these forces work on the local level is just to connect the local materialscape with a global framework. On the other hand, these materialscares also provide materials for the process of reconstructing the local. Living in a material milieu with foreign goods or goods for exportation directly provides people's life experiences about the global.

Actually, a materialscape of a GCC is composed of numerous materialscares in different sections. These materialscares remind us that glocalization should be plural and intersubjective on a GCC in which each location influences the others. The materialscape of globalization indicates a synchronicity by which each location's responses to locality and globalization are dynamically tied with the others. While we see how local culture plays an important role in leading the adaption process, it is required to remember that it is embedded in a GCC.

Multiple examples have shown that global goods have shaped this materialscape and local people's need to respond to them, such as foods (Matejowsky 2007; Jourdan 2010) or clothing (Kjeldgaard & Askegaard 2006). Compared to these, the materialscape composed by the GCC of crystal objects owns its specialties in the process of glocalization. Moreover, these materialscares accompany other "scapes" shaped by global forces and local agency. For example, the GCC of crystal objects does not have a giant commercial brand to promote this business. The formation of the GCC, the management of mining and processing, and the marketing strategies for stimulating consumers' consumption are all relatively loosely linked when compared with the branded products under the management of a transnational enterprise.

From Chapter 3 to Chapter 5, I have presented that a monopoly of crystal business does not exist on this GCC. This commodity chain is composed of business institutions which only have a relatively smaller scale and limited capital.

Furthermore, in Brazil, the materialscape of crystal is more connected with the production of raw material for the following stages of the GCC. Behind the movement of crystal goods, local miners and middlemen, and the businessmen from China and Taiwan have formed a unique social network and material culture. Miners search for potential lands with crystal mines; middlemen collect crystals and classify them according to their potential market values; and businessmen from Taiwan and China purchase crystals as well as share the information of the market in return. Brazilians have all heard about how the Taiwanese and the Chinese use what they mine, but they care more about how to find more crystals and sell to these foreign buyers. The market change in Taiwan also influences how Brazilians view their work and what they should mine. To these miners and local dealers, crystals should not stay in their home but instead need to move on because the crystals' disappearance in front of them implies economic revenue.

As China is located at the middle of the GCC, its materialscape of crystals also owns in-between the characteristics. Take a processing factory as an example. On the one hand, the piled raw crystals with mining marks indicate their connection with where they are from. On the other hand, crystals are classified and piled as raw-materials, semi-products, and finished goods where each category responds to the factory's management and workers' labor division. Furthermore, the classification of finished products based on their potential market value also implies the cross-strait connection between the production in China and the consumption in Taiwan. Take a carving workshop for another example. The gravers concentrate on carving Chinese deities' images on large pieces of white crystals imported from Brazil with six months' ocean shipping.

These crystal statues are no longer original raw materials, but own religious appearances and the potential to access the craft market.

In Taiwan, the materialscape is more connected with religious practice and consumption. Crystal shops have become a unique landscape representing this material culture. The crystal users consume foreign crystals for alternative healing, religious meditation, or *fengshui* purposes. Behind the placement of these crystal objects, the information from the globe all feed the development of the material culture surrounding crystal consumption. Foreign concepts of the New Age Movement and crystal healing have been absorbed by Taiwanese culture. *Fengshui* consultants have developed a complete discourse to interpret how to apply these foreign minerals, which is based on the five element theories and other relevant concepts. All these factors contribute to the popularity of crystal shops and the relevant commodities. Furthermore, the utilization and the consumption both imply that the traditional concept of *qi* has been modified and modernized, and some scientific concepts are also simultaneously glossed with religious elements.

From these examples, it is apparent that these materialsapes are chained to each other and create dynamically interactive forms between crystals and people on the GCC. In which, we may find different forms of crystal's materiality in different sections or social groups on a GCC. So that, the following question is: how to better discuss these forms of materiality?

## **7.2 THE FLOWING MATERIALITY ON A GCC**

It is helpful to review the material properties of crystal before I continue to discuss its materiality. First of all, even though, as a mineral, it does not have biological life as humans do,

this does not mean it will not grow or have physical variations. In Chapter 3, I have mentioned the geological conditions for forming crystals and amethyst geodes. These conditions all indicate that crystals are not merely inert minerals underground, but that their growth requires specific geological conditions and rich geological effects; and they may also grow with other sorts of minerals. SiO<sub>2</sub> is the most important element of crystals. Some crystals have more SiO<sub>2</sub> than others, which is decided by geological conditions. With regard to its appearance, a crystal may be completely transparent or have other ingredients inside. The difference of crystals' appearances and volumes indicates the various forming process or geological conditions. In addition, according to Mohs Scale of Mineral Hardness, quartz hardness is 7, and most crystals' hardness is between 6 and 7, which means it is harder than orthoclase feldspar but softer than topaz.<sup>66</sup> SiO<sub>2</sub> has the physical feature of piezoelectricity and it releases electricity by receiving pressures and this material property contributes to its technological applications.

The above are the material properties of crystals. However, they mean nothing to an anthropological research unless we can put them into a social context and find their cultural meaning to people. About crystals' relevant geological conditions, it becomes meaningful when we study how miners conduct their excavation jobs. Its hardness is significant when processing workers or carvers change a crystal's shape. Furthermore, volume and appearance also decide crystal products' transportation cost and exchange value. That is to say, the material properties become relevant to an anthropological discussion when they encounter people and become a part of human activity. The mining jobs, transactions, carving, processing, applications, and appropriations are all activities happening between people and crystals which construct the materiality. Without concerning the social and cultural meaning constructed by the interactions

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<sup>66</sup> Because of its hardness, crystals are usually classified into the category of semi-precious gems.

between the subjects and objects, the discussion of crystal's materiality will only become a mineralogical report.

Phenomenologically, to interact with an object could be viewed as a type of ritual, either to the subject or the object. Without each side, the other side cannot complete a specific task. Just as a writer could not write without a pen, and a pen never writes anything by itself. The interaction draws the subject and the object out of their original contexts into a collectively new one driven by inter-subjectivity. Within this, the border between the subject and the object become blurred and ambiguous. By treating this interaction as a ritual, we could appropriate Victor Turner's term "liminality" (1957) to interpret the process. Within the process, each side leaves their original context and enters to a specific time-space. Simultaneously, they both are the subjects performing agency as well as the objects receiving effect. In the process, the social context, the subject and the material properties of objects are both influencing each other. The social context provides the subject with ways of thinking about the objects, and the material properties provide, or limit, the potentiality of utilization or application.

The interaction between subjects and objects could be indirect and not easily sensed by people. The material space, the display of commodity items, or the infrastructure of daily life, are all sorts of activities, or rituals, filled with objects' influences. In the long term, or in a more complicated setting with multiple subjects and objects embedded in complex designed structures, the border between subjects and objects becomes even more vague and ambiguous than the direct interactions. The material milieu constructed by the subjects makes people become the objects and this has formed an infinite loop. Bruno Latour and his discourses about actor-network theory (ANT) (2005) and scholars in the category of Science, Technology, and Society (STS) have provided plentiful discussion about this.

Even though they all stress that intersubjective interaction creates materiality, Miller emphasizes the objectification, but Tilley and Ingold emphasize the material's physical features. Miller states: "It is not just that objects can be agents; it is that practice; it is that practice and their relationships create the appearance of both subjects and objects through the dialectics of objectification, and we need to be able to document how people internalize and then the normative. In short, we need to show how the things that people make, make people (2005: 39)." Miller's ideas related to consumption are presented in *Theory of Shopping* (1998), *Stuff* (2010), and *Consumption and its Consequence* (2012), which all indicate that people consume things to objectify the social relationship and project it onto the goods which they purchase. Additionally, the social relationship could also be shaped through the process of consumption as well.

Tilley's research about landscape and the selection of ritual sites indicate that the materials lead specific perceptions and people's religious activity (1997, 2004). In order to describe a stone in the landscape, he walked around or over each monument, or crawled through it at different times of day, in different seasons, and under different weather conditions. This phenomenological approach helped him capture the sensory experiences when people may have been within the landscape and interpret the materiality constructed within it.

Ingold, in his article, 'Materials against Materiality' (2007), chooses a stance by which to criticize Miller's approach and discussions in relation to materiality which mainly focus on consumption. In the article, Ingold uses the example of making tents which required complex materials and skills to propose that materiality is difficult to reduce to a single material feature and that we also need to study the proprieties of material and how people utilize them (ibid.: 8). To Ingold, the proprieties of materials, then, are not fixed attributes of matter but are processual

and relational. Moreover, things are active not because they are imbued with agency, but because of the ways in which they are caught up in these currents of the lifeworld (ibid: 1).

While Miller's concepts about materiality are developed from his discussion of consumption, and Tilley and Ingold stress a directly interactive approach to interpret materiality based on material properties, we could find that each one does not provide a holistic explanation to the materiality flowing on a GCC of crystal products. It is apparent that consumption is not the only interactive form occurring between crystals and people on a GCC. In this thesis, mining, processing, and carving may directly touch on the material, but they are also driven by the market demands and connect with people who are far away. Likewise, the approach of studying material properties may help us grasp miners and processing workers' direct working experiences with crystals, but it cannot provide a better interpretation for the application of the five elements theory on crystals for *fengshui*. Therefore, it would be biased if we only take one theoretical stand to interpret all of this ethnographical data and ignore other useful approaches.

Even though Ingold criticizes Miller's research on consumption for misleading anthropologists' views to the issue of materiality, the extent of their theoretical concerns is coherent. Both stress that the materiality is not just the properties of material, but also a dialectical relationship embedded in a social relationship. However, they all focus on one type of interaction and overlook a broader and important framework: the object's life history composed by its social life on a time line. Because of this, I claim that the methods of "the social life of things", by Appadurai, and "the biography of things" by Kopytoff, in *The Social Life of Things* (1986) are required when we study materiality. Both approaches have a macroscopic framework to discuss the interaction between subjects and objects. "The social life of things" stresses that an object may have diverse types of interactions with people; and "the biography of things"

concerns a long term description of a thing. From the scope of an object's life history, Mill, Tilley, and Ingold only discuss a flash moment and ignore the rest of its lifetime. In terms of the viewpoint of the social life of things, they only care about one type of the social life of things, but are blind to see an object's diverse faces of social life in different settings.

Drawing the discussion of materiality into the cultural biography of things and the social life of things also breaks the limits of both of two closed theoretical approaches. Appadurai claims that the social life of things embodies the politics of value which fluctuates between its "use value" and "exchange value" (1986: 56-57); and Kopytoff, in the same volume, has a similar conclusion and claims that the biography of things fluctuates between "commoditization" and "singularization" (1986: 72, 80). Even though both theoretical approaches provide analytical utilities by which to depict a thing's position and interaction with people, it is difficult to have an advanced and grounded interpretation of the social life of things or the thing's biography. Due to the lack of concerning materiality, both are closed approaches which easily lead researchers to fall into a dualism trap and ignore the dynamic properties of the relationship between subjects and objects. Both of their research focuses are based on a macro viewpoint, and choose a totally opposite research standpoint to that of Miller, Tilley and Ingold, which is built on a microscope stand.

The pros and cons of each side explain why we need to combine the discussion of materiality and the approaches of the social life and biography of things when we conduct research about materiality surrounding a specific type of object on a GCC. A GCC should be viewed as composed of the social life of things and biography of things. We need to treat the social life of a thing as the process creating materiality and the biography of a thing the progress recording the change of forms of its materiality. By focusing the movement of goods on a GCC,

the discussion of materiality could go beyond the limits of a relatively shorter time-frame and a narrower geographical border. Moreover, by drawing the materiality concern into GCC research, we also break through the closed model proposed by Kopytoff and Appadurai. By comparing different forms of materiality along a GCC, we could connect the change of materiality with the viewpoint of globalization/glocalization. That is to say, the discussion of crystals' materiality is exactly to review its biography by examining its social life interacting with people who practice and develop different forms of material culture in various locations distributed on its GCC.

However, we still need a refined theoretical tool to describe the multiple forms of materiality on a GCC. In the following section, I will propose that we could theorize forms of materiality in terms of the interactions between subjects and objects.

### **7.3 THE FOUR FORMS OF CRYSTAL'S MATERIALITY ON A GLOBAL COMMODITY CHAIN**

Ingold argues: I can touch the rock, whether of a cave wall or of the ground underfoot, and can thereby gain a feel for what rock is like as a *material*. But I cannot touch the *materiality* of the rock. The surface of materiality, in short, is an illusion (2007: 7). Indeed, materiality is a sort of illusion and we cannot touch it. But, as any anthropological concept, such as *habitus* or *communitas*, the concept of materiality becomes applicable when we can utilize it to better understand a type of object in a society.

It is obvious that the forms of crystals' materiality differ along the GCC. It is not just due to a researcher's judgment, but reflects the main interactive activities between crystals and people in the different sections of a GCC. We can of course conduct a consumption research

which tries to see how buying commodities objectifies a social relationship. Or, we could deal with the material properties to see how some people use specific matters to decorate or arrange a space to embody their spatial consciousness. However, both approaches could not satisfy the purpose of depicting the flowing materiality of crystal on a GCC. Both approaches are beneficial to explain a certain type of subject-object relationship, but also trap us so that we are not able to grasp a holistic picture which anthropologists always like to achieve.

Based on the main interactive activities between people and crystals along the GCC, I argue that we can point out at least four forms of materiality about crystals: semiotic materiality, social materiality, economic materiality, and ritual materiality.

### **Semiotic Materiality**

It is obvious that crystals are classified and categorized through semiotic practice in each section along the GCC. Our cognition and recognition with objects rely on semiotic systems, especially the linguistic capability. Language and its derivative semiotic logic frame our understanding of objects. Webb Keane uses the term “bundling” to propose the connection existing between objects and linguistic signs. This means any object can suggest possible future uses or interpretation (ibid.: 189). Keane reminds us that the Saussurean “semiology” makes it hard to perceive the role that language does play vis-à-vis material things “First, it treats language as something that things (material or conceptual) are found. It connects to those things only as objects of reference and denotation. Second, by seeing language only as coded meaning, Saussurean semiology fails to see the role of linguistic practice in the objectification of things. The problem is, semiotics has too often been treated, especially in cultural studies, as merely about the communication of meaning (2007: 185).” Keane follows a Peircean model of

signification and argues that there are two features of signs. First, signification is processual, is which signs give rise to new signs in an unending process. Second, he claims that the relationship between signs and their possible objects of signification, can be one of resemblance (iconicity), actual connection (indexicality), or rule (symbolism) (ibid.: 186). All these are associated with different levels of social activities. For example, the resemblance of things indicates an iconicity and the importance of “being the same” (ibid.: 188). Man’s productive activity leaves his marks on all objects he touches and we can trace the relationship through recognizing their indexicality. Further, the use of objects which follow the rule also has symbolic function. That is to say, the semiotic materiality is definitely flowing and could connect with a simple or a complicated semiotic system.

The sign of an object is not enough to explain its function. We still rely on the objects’ basic physical features or the function to interpret its interactions with people. By Keane’s clothing example, we can figure out a cloth’s semiotic value, but it still needs to be a cloth as a concrete object to embody (ibid. 193-195). There are more fundamental perceptions connected with objects’ material properties and need to be examined.

Crystals are endowed with semiotic values along the GCC. Following Keane’s model, we could also claim that the category of “crystal” is a sort of iconicity based on all crystals’ mineral resemblance. The processing work left of crystals with indexicality indicates the connection between the workers and the objects, and the use of crystals is with rules based on a symbolic system. People develop their own semiotic system by local culture and their ways of interacting with crystals, and this semiotic system lead and frame people’s interactions with crystals. Moreover, the connection between the signifier and the signified is not absolutely arbitrary. We could find that people name crystals according to each sort’s appearance, color, and inclusions.

People develop their linguistic classifications and terminologies of crystals based on what they can observe from the appearances and the language they own. Additionally, in Brazil, we can find that miners have developed a knowledge system of mining to decode the geological features and to value what they mine. In China, processing workers and carvers respectively use their own linguistic ways to interpret their interactions with crystals. Even though they all communicate with the same language, processing workers stress the manipulation of equipment and carvers emphasize more the aesthetic value which they can add to the material. We could find a more complicated semiotic system used in Taiwan, in which local religious traditions, such as Buddhism, Daoism, folk religions, *fengshui*, and foreign religious concepts all contribute to this system and frame Taiwanese understanding and interpretation of crystals.

### **Social Materiality**

As a semiotic system is embedded in social interactions, the materiality of crystal must be examined in a social context and I directly propose this as social materiality. In this thesis, the definition of social materiality does not follow STS scholars' discussions which focus on how social media, such as Facebook or Twitter, construct social relationships in a virtual world. Here, I want to stress the social relationship constructed through people's interactions with specific objects. Marcel Mauss (1954), in *Gift*, has argued the gift exchange could be a sort of material basis of social relationship of North American indigenous societies. Pierre Bourdieu, in *Distinction* (1984), also claims that not only social class constructs people's taste of consumption; what they construct also constructs their distinction with others. By interacting with the same sort of objects in a specific area, people form social groups and build social

relationships with each other. Coming into contact with the same materials, sharing the same physical working experiences, or conducting the same professional jobs centralize the object in a social relationship.

In previous chapters, I have shown that many people built their social relationships based on their interaction with crystals. In Brazil, there are plenty of villages and small cities whose main subsistence strategy is crystal mining. The social relationship between miners cannot exclude the mining process and selling what they mine. The collective experiences form an identity and group people together. In addition, dealers and foreign buyers from Taiwan and China also form a social group with each other. In China, processing workers, carvers, importers, and Taiwanese managers in a factory also form a social group by their jobs with crystals. In Taiwan, people working for crystal shops and the consumers buying crystals form social groups. Moreover, *fengshui* practitioners, New Age Movement practitioners, folk believers of Buddhism and Daoism could also have formed specific social groups, just like the example of the Light City and Shanfu Crystal. The social relationships in these groups are not just merely economical, but are based on concrete social activities.

Each social group may have its own background, but they all interact with crystals. However, these groups may have relatively lower political power or collective force than formal groups with political identity. In these groups, people can easily move in and out. In Brazil, a miner could easily change this job and leave for another mining job because of a higher salary. In Taiwan, crystal users, either for *fengshui* or New Age Movement, may form a social relationship with each other, and this relationship may be not be fixed and solid. However, this social relationship could develop deeper while it forms an economic exchange relationship or a ritual community. It will be interpreted in the following sections.

On this GCC, people can distinguish themselves from others by their ways of interacting with crystals. They can clearly understand their status on a GCC through the information shared on it. The miners and the middlemen in Brazil know well that their jobs differ with each other, or miners know that they may like to change their identity when they have any chance to become a middleman because it brings more economic benefits. In China, workers for processing crystals also distinguish themselves from their managers or bosses, and vice versa. Their jobs not only construct their understanding of the crystals but also their status in a factory. In Taiwan, *fengshui* consultants also distinguish themselves from average crystal buyers since they assume that they know better how to utilize crystals for metaphysical purposes. Crystal sellers also distinguish themselves from crystal users. In their eyes, they need to cooperate with other sellers to run their business and promote a crystal consumption fashion in Taiwan. In contrast, crystal users group themselves with other people who value and use crystals like themselves. These groups are more like the “tribes”, of Michael Maffesoli’s *The Times of the Tribes: The Decline of Individual in Mass Society* (1996), which are modern communities constructed by the same or similar aesthetic decoding capabilities or folk beliefs. Moreover, these identities are not only meaningful at a local level. Many informants also recognize their uniqueness on the GCC. Brazilian millers and Chinese processing workers knew very well that their products were consumed by the Taiwanese.

On this GCC, many social activities are constructed by economic activities. In the next section, I continue to interpret the economic materiality.

## **Economic Materiality**

On a GCC composed of production, transaction, and consumption, all goods own their economic materiality through being a part of economic activities. On the GCC, there are no more pure minerals, but only goods for chained economic activities. By being a part of a market exchange system, the goods not only have use value, but also own exchange value which makes an economic activity work. Within this, people could develop an abstract market system to operate the exchange mechanism according to demand and supply, which could be represented by currency.

It is important to distinguish the economic materiality of crystals since its global commodity chain is built on the countless network of economic exchange. By endowing crystal goods with exchange value and moving them across community borders, they connect to a broader and more complicated economic network. On its GCC, the local economy, which is composed of diverse sorts of economic activities with minor scales, and the global economy system, which is constituted by countless financial institutes, are connected through transactions and consumption. However, in addition to the price which represents the demand and supply, in order to have a better understanding of how crystals play their roles in different economic activities, we need to examine what is valued in each transactional field and what is reflected by the price in transactions. For example, in Brazil, the transaction of crystals not only reflects the difficulty of mining, but also represents the demand from the market in Taiwan and China. In China, the prices tagged on crystals sold in Liwan Plaza reflect the operating costs and the labor costs of a factory, as well as the profit expected by the dealers. In Taiwan, the transactions stress the knowledge and application surrounding crystals' meta-physical functions. The price somehow implies the crystals' functions of bringing good luck in people's minds. All of these economic activities have their material basis and could not be simplified to a single value

standard. They show that the standard of crystals' exchange evaluation is never coherent on its moving track.

In addition, the movement of crystals accompanies many capitalist market mechanisms and the crystals must flow forward in order to maintain the operation of this commodity chain. This means that mobility is one feature of crystal commodity's economic materiality. There are multiple factors contributing to the movement of crystals, such as the institutions assisting international trade, the people moving, selling, and buying crystals, and the communication technology used for confirming international orders. During the movement, the laborers' working force is alienated to modify the crystals' appearances in order to create the exchange value. Numerous people rely on the movement of crystals and the resultant economic opportunities and revenues. Furthermore, in order to create the market or increase the consumption, it is important to develop the semiotic value of crystals since they are not a necessity for people's daily lives.

Hirokazu Miyazaki, a Japanese economic anthropologist, argues that once economic theory is apprehended ethnographically as an object of learning, an instrument for justification, or a tool for social reform in addition to a descriptive theory, the materiality of economic theory goes beyond questions regarding the realization of theoretical assumptions (2007: 174). Many examples in this thesis remind us that social materiality and economic materiality in most cases appear at the same time in a community since most economic activities also own social functions. That is not to say that I deny the value of abstractive ration in economic activities. However, I prefer to stress that the economic reality is constructed through a series of social activities. The social relationships between Brazilian crystal miners, middlemen, and buyers from Taiwan and China definitely influence the process of transaction and the prices of goods.

Thus, the relationships are neither absolutely social nor purely economic. It is social as well as economical.

Economic materiality is also embedded in Taiwanese consumption on crystals and leads us to think: how much do the Taiwanese like to pay to buy good luck? How do the Taiwanese evaluate the necessity of buying a crystal product for good fortune? These questions become important when we observe Taiwanese consumption about crystals. For people who believe crystals' *fengshui* functions and expect their efficacy, they, in the process of transaction, are not only making an economic decision based on their concerns of use value, but also are involved in a broader economic complex in which, the costs of running crystal a business, transporting, warehousing, tariffs, all indirectly influence the price of goods and the consumers' willingness to buy.

### **Ritual Materiality**

Objects are required in most rituals, or, we could say, most rituals could not be conducted without objects. Religious anthropologists have recorded that deity statues, sacred containers, and divination tools are ubiquitous in global religious traditions. Keane claims that “religions may not always demand beliefs, but they will always involve material forms” (2008: 124). Ritual practitioners need to worship, eat, touch, use, play, manipulate, dismantle, or destroy things to achieve a ritual's purpose and earn a religious experience. Even though those actions may be just symbolic behaviors from an outsider's perspective, people treat their experiences as realistic. Through these behaviors with objects, the ritual practitioners also receive different sorts of feelings and sensations which correspond to their expectations of what a ritual should provide. The material properties of ritual objects may also reflect important concepts within a cosmology.

What material of object is used in a ritual may imply cosmological preferences. While a ritual embodies a cosmology, its objects may also share the ritual's power, since the objects represent what people think about the essence of a cosmos. All these indicate that religion or belief is not merely associated with mental activities, but also bundled with a complicated semiotic system and a relevant form of material culture with specific body experiences.

Crystals are globally used in alternative healing and New Age Movement practices. In Taiwan, we also found that crystals are more associated with ritual practices in addition to economic activities. In Chapter 5, I have presented that many Taiwanese New Age Movement practitioners also conduct meditation with crystals because they believe that the spirits living inside could connect them with Mother Earth. To conduct a meditation with crystals, to worship a crystal-made deity statue, or to place an amethyst geode in a prosperous position according to a *fengshui* consultant's suggestion all indicate that there are cultural and social intentions behind the material practices and these beliefs should not be reducible to mental activities.

On the surface, we can easily figure out the symbolic value embodied by these crystal objects. The crystal-made deity statues are carved to correspond to Taiwanese folk beliefs mixed with Daoism and Buddhism. Many uses of crystals are also based on the semiotic system in traditional *fengshui* practices or religious traditions. The *fengshui* crystal objects are responding to the analogical system based on the five elements theory, the functions of which Taiwanese *fengshui* consultants have a complete discourse.

Under the surface, these selections are not just arbitrary but exactly corresponding to the material properties of crystals. We can say that these religious practices, especially for *fengshui*, may not happen without the technological application of piezoelectricity of SiO<sub>2</sub> in Taiwanese daily life. The overwhelming application of silicon crystalline in high tech industry connects the

folks with these crystals and piezoelectricity. In addition, Taiwanese *fengshui* practitioners' preference for amethyst geodes with specific shapes also indicates that this cultural practice must require relevant material conditions. That is to say, crystals' material properties and the local culture both contribute to form its ritual materiality.

Many crystal users believe that their physical interactions with crystals go beyond the limits of language. They, especially those who practice the New Age meditation and *fengshui* practitioners, assume that they can touch the mythical interiority or the internal nature of a piece of crystal. They have developed rich discourses and a semiotic system based on their physical experiences with crystals. From their views, average semiotic logic can only explain how people manipulate the objects but hard to explain the motivations behind it. In their minds, the mystical experiences or unexplainable luck motivate them to consume and use crystals. That is to say, Taiwanese use of crystals for *fengshui* purposes may follow important symbolic principles, but the users' motivations are still personal or socially driven.

Ritual objects also lead us to contemplate the border between materiality and immateriality within a religious belief. The immateriality of a belief keeps room for interpreting a ritual object's power and its connection with a supernatural world embedded in a cosmology. Mathew Engelke argues that the extent to which religious communities objectify their authorities through the use of things deserves attention as much for what it tells about the immaterial world as it does about the persistence of the material one (2005: 136). In his African ethnography, he compares the things used by modern medical doctors and to those used by traditional ritual therapists and claims that the former present no religious alarm because their material things carry no immaterial pretensions for religious interpretation. In contrast, the use of ritual objects

connects with the process of objectifying immaterial concepts accompanied by the imagined healing power.

Back to the cases of crystals, the Taiwanese use of crystals for *fengshui* purposes definitely corresponds to issue of the materiality and immateriality of *qi*. *Fengshui* requires objects to transform the invisible and intangible *qi* into the modifiable; on the other hand, the objects applied for this manipulation indicate that there is room for interpreting the immaterial force of *qi*. In this context, the Taiwanese use the *qi* concept to apply crystals for *fengshui* and crystals lead the Taiwanese to rethink the nature of *qi* by crossing the border of materiality and immateriality.

In sum, to discuss these four forms of materiality is neither to discuss the four types of social interactions, nor to describe crystal's four material properties. It is to discuss how people find the material properties of crystals and apply them in their own ways. Moreover, the four forms are connected with each other, and we cannot divide the four forms of materiality of crystals when we try to interpret their cultural meanings on a GCC.

From the perspective of “the social life of things” and “the biography of things”, one form of crystals' materiality could transform to another. The religious materiality could be transformed into a social materiality; the economic materiality could also be transformed into social materiality. This is because, in the real world, it is impossible to separate a ritual from its social context, and we may also practice our religious beliefs through consumption.

Further, pointing out the four forms of materiality provides a better framework to view by which the materialscape of glocalization happening on a GCC. The GCC composed by flowing goods constructs the most fundamental material experiences and draw people in different sections into an economic setting which forms crystal's economic materiality. In this process,

people utilize the semiotic systems to build their understandings and classifications of these goods. Furthermore, the collective and shared experiences with crystals go beyond individual level and become a way of social interaction based on a specific material. Also, in the diverse social activities surrounding crystals, the relevant ritual activities redefine how to interpret crystals by people's own words. All these represent the local's agency and globalization's influence on prompting the forms' transformations of materiality on a GCC. More specifically, we could say that from the perspective of material culture, globalization is a process in which the objects' economic materiality is transformed to social materiality, or ritual materiality in specific contexts. These social interactions are based on a local semiotic system and could make this system more complicated, especially in a ritual context.

Last but not the least, imported crystals have made Taiwanese *fengshui* practices a completely varied material culture when compared with traditional ways. What makes this belief more complicated is that the present-day Taiwanese practice this custom through consumption, also called commodity fetishism. This commercial mechanism following the folk belief of *fengshui* glosses the relationship between the producers of *fengshui* commodity and the consumers. This cover draws the fetishism into an exchange system run by economic logics in which the presumed use value of objects is also glossed with the exchange value. For people who want to own the use value of these crystals, they must now concern their exchange value and their affordability. In order to push people to purchase crystals, delicate semiotic discourses are required in which, more convincing marketing strategies have been created to allure and abduct consumers, as in mass media's fortune telling programs which work with *fengshui* consultants and crystal shops to develop *fengshui* discourses for their goods. In the following section, I will continue to elaborate.

#### 7.4 THE MATERIALITY OF THE COMMODITY FETISHISM OF FETISHISM

At the beginning of this thesis, I state that I would like to know how to interpret the meaning of this new form of *fengshui* practice with foreign minerals. Through discussing the flowing forms of crystals' materiality on a GCC, I would like to say that it represents the "the materiality of the commodity fetishism of fetishism".

From observing Taiwanese *fengshui* practices, we could find the features of fetishism, or a religious belief for objects' metaphysical power. The practitioners expect that their uses of *fengshui* objects could bring good luck and solve bothersome issues. In their eyes, *fengshui* could be used to explain the fortunes and misfortunes in everyday life, which is similar to the Azande's witchcraft belief (Evan-Prichard 1957), and stresses more the manipulation of metaphysical forces of objects or material spaces. This indicates that the nature of fetishism is not only an explanation of why something works, but also to find something that works for solving people's anxieties. We could also find that many Taiwanese have extremely strong *fengshui* beliefs, which is labeled as superstition, or *baiwujiao* (the Chinese translation of fetishism). By insisting on *fengshui*'s efficacy, they are accused of irrationality and being fanatically crazy as they treat *fengshui* as pragmatic problem-solving strategies. Apparently, this folk belief in Taiwan never declined with the modernization of the society or the executive of modern scientific education. Furthermore, practicing *fengshui* becomes more convenient than ever since it has developed a mature commercial mechanism.

In Chapters 5 and 6, I have presented that contemporary Taiwanese *fengshui* practice links crystal uses with scientific concepts. This challenges the label of fetishism and leads us to rethink the nature of fetishism. Bruno Latour, *On the Modern Cult of the Fetish Gods*, claims that the Moderns try to utilize "facts" to replace "fetishes" (2011:9, 11). He asks why the

Moderns must resort to complicated forms in order to believe in others' naïve beliefs, or in knowledge without belief among themselves. Why must they act as if others believe in fetishes, while they seemingly practice the most austere anti-fetishism? From his perspective, the reason is that Moderns are strongly attached to the conviction that there is an essential difference between facts and fetishes (ibid.: 11). The Moderns, or anti-fetishists, need to denounce the value of fetish to claim that a fact has its own autonomy. To Latour, the Moderns' insistence to the fact has also become a "belief", or called "factish".

Latour's concept of fetishism also brings reflections of our understanding of *qi* and *fengshui*. It is easy to figure out the fetishism characteristic of *fengshui* which stresses objects' metaphysical force of interpreting and changing personal fortune. To ancient *fengshui* consultants, the five elements theory is an exact model to describe "facts", by Latour's words. Indeed, the five elements theory is based on observing natural phenomena and then inducing them to a theoretical frame. For example, the water growing wood and the earth growing metal are natural facts observed and could not be refuted. By understanding this world through the cosmology of *qi*, fortunes and misfortunes in daily life are assumed to be interpretable by fortune telling and manipulable by *fengshui*, which both are based the same cultural concepts. The belief in these natural facts in people's daily lives transforms these principles to a systematic strategy to manipulate immaterial *qi* with objects for satisfying their desires or solving their anxieties.

From the perspective of Latour, it is not the five elements theories that makes *fengshui* into a fetishism, but a paradigm shift redefining "fact" in order to create the modernity (Latour 1993, 2010). In this new paradigm, the "fact" should be examined through scientific experiments in order to maintain the objectivity, and humans are assumed to be outside of the operation of the cosmos. From the perspective of this thesis, all facts, in the Moderns' view, earn their materiality

through scientific experiments in labs in which humans discover them only through scientific process. This materiality involves a process in which humans could intervene, and only objective factors account for the phenomena.

However, the Modernism paradigm never replaces the fetishism of *fengshui*. This is not only because this folk belief has deep cultural roots in Taiwanese daily life, but also because this new paradigm of factitism cannot deal with “the immateriality” which fetishism could deal with. The immateriality of *fengshui*, or the more fundamental concept of *qi*, explains what the factish avoid explaining and answers what people really care about in their daily lives. While this factish is limited by its insistence on objectivity, it also steps back from humanity which looks for solutions to anxieties; and the fetishism of *fengshui* never evades solving these issues. Moreover, the new concepts following the use of crystals, or other modern *fengshui* practices and objects, blur the border between fact and fetish. What explains the physical effects of crystals, such as piezoelectricity, has been absorbed by *fengshui* and becomes one part of this fetishism. These concepts follow the local cultural attitudes, or we can follow Latour to call them “beliefs”, which have become reappropriated in Taiwanese *fengshui* practice.

However, it is more complicated when the Taiwanese not only practice *fengshui*, but practice it through consuming the relevant commodities, especially the crystals. These *fengshui* commodities change the traditional way of practicing *fengshui* through connecting the practitioners with a complicated economic network composed by the process of production, transaction, and consumption. This makes *fengshui* not only have the characteristics of fetishism, but also makes it obtain the features of commodity fetishism. In *Capital*, Karl Marx distinguishes the commodity from private property and interprets what commodity fetishism is:

There...is a definite relation between men, that assumes, in their eyes, the fantastic form of a relation between things. In order, therefore, to find an analogy, we must have recourse to the mist-enveloped regions of the religious world. In that world the productions of the human brain appear as independent beings endowed with life, and entering in the world of commodities with the products of men's hands. This I call the Fetishism which attaches itself to the products of labor, so soon as they are produced as commodities, which is therefore inseparable from the production of commodities (Marx 1975: 83).

In Marx's idea, the 'real' value of a commodity is analyzed as a social relation determined by the amount of labour that has gone into its production (Marx 1976: 165). The commoditization process conceals the fact that within the matrix of capitalism, labour as use-value is the source of profit. By the purchase of the commodity of labor power, the capitalist incorporates labor as a use-value into the lifeless constituents of the commodities. The exchange value of commodities appears to be something intrinsic to them as objects and their relationships. However, this form of their value is illusory since the fetishized exchange establishes a fantastic relationship between things that obscures the real relationship between people – workers whose labour produces things of value to others (Dant 1996: 7).<sup>67</sup>

Marx's approach interprets the alienation of labour and social relationship in the process of production, but he fails to provide an explanation for consumption. In Baudrillard's early work, he criticizes Marx's concept of commodity fetishism, arguing that use-value is a fetishized social relation just as much as exchange-value (1981: 131). The object that is to become a commodity, available for exchange, must be valued according to a code of functionality which

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<sup>67</sup> From my perspective, the process of alienation, on this global commodity chain, has dual characteristic. It originates from the relationship constructed by production and consumption and the formation of commodity fetishism, from the perspective of Marx, on the one hand; it also means a cultural process which could also a dialectical relationship between subjects and social collectivities, in terms of Sangren (2000: 63), on the other hand.

orders both human subjects and material objects (1981: 130-134). Use-value is neither an inherent property of the object, nor the functionality reflective of innate human needs or desires. By treating consumption as influenced by a logic of significations, Baudrillard claims that “the object is nothing but the different types of relations and significations that converge, contradict themselves and twist around it” (1981: 63). The objects of consumption do not exist in relation to pure, natural, and asocial human needs, but are produced as assigned in a system of relations of differences with other objects. The process of consumption Baudrillard understands not as the realization of objective needs or of economic exchange, a final intention of the subject towards the object, but as the result of social production in a system of exchange, of a material of differences, a code of significations and invidious (*statuaire*) and values (1981: 75). Baudrillard narrates objects as signs in a code of signifiatory value which can be manipulated between the two registers of functionality and ostentation. Both registers can be part of the same object, so the useless gadget combines “pure gratuitousness under a cover of functionality, pure waste under a cover of practicality” (ibid.: 32). It is the extent to which an object demonstrates ostentation that gives it a sign of value and assures this value to the processor and determines whether the object becomes a fetish. Sociologist Tim Dant criticizes that Baudrillard’s analysis becomes concerned with the indeterminate causality of the hyperreal and that this analysis has the advantage of not being reduced to a distinction between the ‘real’ object and the fetish, but it leaves him unable to analyze the complexity of lived human relations with objects and to describe the source of their social value (1996: 20).

Through reviewing Marx and Baudrillard’s analyses, Dant argues “the term fetishism can refer to the relative quality of desire and fascination for an object that is not intrinsic but is nonetheless part of it. The reverence shown for its capacities supplements its material form,

showing what it means how it is valued in its cultural context (1996: 20).” His review reminds us that the study of fetishism or commodity fetishism also should neither be simplified into the dialect in-between use value and exchange value, nor be trapped by the semiotic logic.

These discourses about commodity fetishism and commodities lead us to rethink the production and consumption of the crystal *fengshui* objects. We see how the capitalists transform the miners and processing workers’ labour into exchange value within a production process based on capitalism in which what is seen as functional to consumers is constructed by the capitalists’ exploitation on the miners and the processing workers. Furthermore, the exchange value of crystals is constructed on the consumers’ folk belief of crystals’ function. This belief also disguises the social relationship between the producers, the consumers, and the dealers in the middle. Moreover, this disguise of social relationship becomes much finer and more complicated while the production extends to a global scale. Geographically, consumers’ distance from laborers has become much greater than before, and they have fewer opportunities to be aware of the alienation that has happened between them.

On the other hand, the operation of this GCC relies on a specific semiotic production. The production of a semiotic system directly or indirectly mobilizes the “strategy of desire” (Baudrillard 1981: 85). Interpreted by Tim Dant, this strategy of desire is an ideological effect of the social system achieved through the generalized exchange of signs. It is through the circulation of objects as signs that the quality or use-value of objects is distinguished (1996: 12). In Chapter 5, I have presented how contemporary Taiwanese mass media creates a semiotic system about crystal uses, and, in Chapter 6, I have narrated how the *fengshui* experts absorb and internalize this foreign materials into the semiotic system of their profession and endow crystals with a more convincing status in a social milieu of modernity. The evolving semiotic network of

*fengshui* still lives well in Taiwan and fascinates the relevant material culture. When people are bothered by issues and anxieties, these commodities bring potential solutions to customers and reconstruct their understanding of *fengshui*.

To conclude, we could not just merely use fetishism or commodity fetishism to interpret the production and consumption of crystal *fengshui* commodity. The reason is apparent since this GCC simultaneously owns each characteristic of production and consumption. In the sections of mining and processing, we can find that Marx's idea enlightens our understanding of the capitalism running after the commercial mechanism. In the stage of consumption, we also need to rely on Baudrillard's insights of semiotics to interpret the complex commodities system. More importantly, the crystals show their versatile and adaption in each stage. The change of crystals' appearances along the GCC indicates not just a process of alienation of labour and social relationships, but also a process of endowing semiotic values into the goods. The materiality of crystal fluctuates because of its movement on a GCC as well as because of the fetish and commodity fetishism, which act as two bundled factors that push people to interact with them in various forms in different sections. That is to say, this flowing materiality just represents the commodity fetishism of fetishism on a GCC.

## 8.0 CONCLUSION

“In understanding the relationship between commodity and person, we unearth anew the history of ourselves (Mintz 1985: 214).” Sidney Mintz claims this of the historical value and significance of the first sweetened cup of coffee drunk by an English worker. Taiwanese crystal *fengshui* objects definitely have the same value.

Taiwanese application of crystals in *fengshui* extends far beyond a local issue. The popular application of foreign crystals for *fengshui* purposes in Taiwan raises my interests about the change of *fengshui* custom and the flowing materiality of crystals. This research begins with a local concern but extends to a global scale. I wondered how the Taiwanese adopt foreign crystals for *fengshui* and how this sort of commodity connects people around the world. This extremely simple inquiry led me to develop a multi-sited ethnographical fieldwork of a GCC of crystal products and to travel along the track of crystals’ movement from Brazil, to China, and then to Taiwan. This thesis is also framed by where crystals go and whom they meet. I recorded the crystals’ social lives in which crystals encountered diverse groups of people living in different sections of the GCC. And all these materials contribute to crystals’ cultural biography and provide a new angle from which view Taiwanese *fengshui* custom and its relationship with the world.

This research transcends the limits of ethno-groups and territory and views *fengshui* as a dynamic system of material culture. The ethnographical materials of this thesis have proved that

Taiwanese *fengshui* is not a closed local religious custom, but an open system varying with social development influenced by multiple forces, such as modernization, industrialization, and globalization. While Taiwan's economy started to become globalized, local *fengshui* custom responded to the relevant social changes with new concepts and new objects. In other words, the new objects indicate the development of *fengshui* and where it is practiced.

*Fengshui* custom has been dramatically changed in Taiwan. Crystal *fengshui* objects and relevant applications are ritual innovations and have challenged the static imagination of the cosmology of *qi*. As the crystals are not just from foreign countries, these objects also bring new stimulations from Western religious ideas and scientific concepts into contemporary Taiwanese cosmology. This change does not only happen in the East but could also happen in the West while more and more people connect the cosmology of *qi* with the material culture of *fengshui*. Moreover, by applying a phenomenological approach, this thesis also stresses how crystal *fengshui* objects construct the Taiwanese's new experience with *qi* in which *qi* is no longer treated as concepts, but as concrete experiences of which the material culture provides relevant perceptions.

From the perspective of globalization study, I also provided a grounded study on a GCC of crystal products by which we have obtained a better understanding of how different sites and their people are connected together, as well as form unique relationships under the operation of global capitalism. That is to say, the discussion about crystal mining in Brazil should not exclude the Chinese and Taiwanese buyers from the local societies grouped for mineral business; or, while we interpret Chinese workers' processing work of crystals, we cannot preclude the Taiwanese investors and factory owners as well. Furthermore, by using *fengshui* objects which originate from foreign sources, Taiwanese *fengshui* practitioners unconsciously connect

themselves with people conducting crystal mining, processing, and transaction. These correspond to Appadurai's idea about flowing "scapes" (Appadurai 1996) in which the local's ethno groups, capital, and technologies all have been fluid and globalized.

GCC is not only the embodiment of globalization, but also of glocalization. On a GCC, different sites are chained together and influence each other. Through the economic links, each section simultaneously contributes to the operation of a GCC, or GCCs, and adapts to the influences following the economic and social changes. Local societies lead the reaction to these influences as well as vary with the forces. Furthermore, also corresponding to Appadurai's "scapes", this ethnography has argued that "materialscape" could be more fundamental to people's experiences associated with a GCC. Influenced by transnational economy, the goods which move toward global markets and the commodities which are from global sources have become one essential part of everyone's daily life.

Furthermore, this thesis provides a theoretical interpretation of crystal's flowing materiality. It corresponds to anthropologists' concerns about how to study the inter-subjectivity between the subject and the object. Based on this concern, this thesis not only defines materiality as a dialectical relationship constructed through the interaction between the subject and the object, instead of defining it by material properties, but also tries to study it from "the social life of things" and "the cultural biography of things" on a global scale. By applying these strategies, this thesis argues that we could at least point out four forms of materiality by examining the interaction between people and crystals on the GCC: semiotic materiality, social materiality, economic materiality, and ritual materiality. Based on these theoretical discussions, the crystals greatly exemplify how materiality flows with its movement on a GCC. Diverse material properties, such as geological conditions, hardness, and piezoelectricity respectively impact

people's interactions with crystals at the different positions of a GCC. People in each section of the GCC also respectively view and apply crystals' material properties in their own ways, and these views and utilities are connected with each other and collectively shape the flowing materiality of crystals.

## 8.1 THE LIMITS OF THIS RESEARCH

It is obvious that this research has some defects because of multiple limits. The most ideal form of a field site for this research would be a network constructed by multiple GCCs in order to have a holistic understanding about the material culture of *fengshui* objects. Under the restriction of limited resources, budget, and time, I only selected the most representative and executable one to conduct my fieldwork. However, I have tried to capture the mobility and flow of crystals on a GCC of *fengshui* objects as completely as possible. With the the diversity of crystal objects which we could find in Taiwan's market was extensive, it was impossible and unrealistic to follow all sorts of crystal products' movements and put all of them into an ethnography which may blur my original research concerns and make it difficult to concentrate on the academic discussion.

In addition, the GCC of my fieldwork is just one among many and partially represents the whole. In this thesis, I mainly conducted the GCC associated with IAS jewelry and also tried my best to include more ethnographical materials accompanying this chain. Even though this chain is just one of the complex international trade networks, this ethnography has presented substantial materials for a successful preliminary research of the topic.

Many unanticipated events happened during the fieldwork period which also influence the final presentation and structure of this thesis. This always happens to anthropologists and definitely brings positive and negative impacts on the content of this ethnography. Fortunately, whether by crystals' mythical energy or not, most of the impacts are positive for this research. For example, during my stay in Brazil and China, my key informants frequently needed to travel and requested for me to travel with them. Due to this, I unavoidably needed to sacrifice the depth of research on each site. Nevertheless, these events also made me obtain the opportunities to better grasp the crystal markets' contours by visiting diverse crystal mining areas and marketplaces with my informants. This strategy enriches my narratives about the operation of economic systems with crystal business and the mechanism connecting people along the chain.

## **8.2 RESEACH QUESTIONS FOR THE FUTURE?**

It looks that I have answered my inquiries by conducting the fieldwork and completing this ethnographical analysis and writing. However, the truth is that this ethnography not only explores merely one part of a complex transnational business networks and partially answers my original concerns, but also brings more inquiries.

### **Other Sorts of *Fengshui* Objects**

There are more new *fengshui* objects shown in Taiwan and are waiting for anthropologists' interpretation. For example, the "salt lamp" introduced from West Asia and Middle Asia have become extremely popular and accepted by Taiwanese *fengshui* practitioners. In addition, Taiwanese businessmen and *fengshui* experts continuously develop new

commodities responding to people's anxieties from social life or the distressing economy. Each new type of *fengshui* commodity may imply a new concept about the custom, the change of cosmology, or another ritual innovation. Furthermore, they may also imply a new global connection, by which producers, dealers, *fengshui* consultants, and consumers from different countries may form different relationships than what I present in this thesis. In order to understand their meanings, we also need to examine the material culture with these new objects.

### **Other GCCs of Crystals**

While I only had the capability to conduct my fieldwork on the GCC associated with IAS Jewelry, there are also other GCCs connecting Taiwan's crystal market with China, Brazil, and other countries producing crystalline minerals. These GCCs also contribute to the change of Taiwanese *fengshui* customs and could reveal different stories. I could foresee that it will be extremely beneficial if we have more studies of the GCCs for a comparative study.

In this thesis, I sacrificed some ethnographical materials related to gemstone shown in order to concentrate my discussion, such as the annual gemstones show in Tucson, Arizona which is also the other important source of goods for Taiwanese crystal shops. Similar shows are annually held in Denver, Munich, and Hong Kong. Actually, according to my informants, these gemstone shows have become significant gathering opportunities for global mineral dealers. The dealers from the world get together in these shows not just for selling their mineral products but also for exchanging information about each mining area and market. In other words, these shows also present the mobility and flow of minerals, people, capital, etc., and become the best embodiments of "globalization".

The endless changing GCCs of crystal *fengshui* objects are worth giving attention to as well. In order to respond and adapt to the changeable market, these GCCs never stop varying. While I wrote my previous chapters, my informants in Brazil informed me that it had become more difficult to excavate crystals because the government announced new regulations on mining due to the concern of environmental protection; and Chinese informants informed me that more Donghai people had developed crystal purchase channels in Africa and Madagascar in order to keep the cost down. Simultaneously, in China, more and more *fengshui* consultants who absorbed the Taiwanese ways of applying crystals on *fengshui* are promoting the use of crystals in their services and more crystal shops are mushrooming in different cities. It also implies that the cosmological changes which happened in Taiwan in the past fifty years have the opportunity to occur in China as well.

### ***Fengshui's Globalization and Glocalization***

While crystals represent Western goods and concepts that enter the East in this thesis, *fengshui* as a symbol of the East has become popular in the West. When I studied for my Ph.D. program and wrote my thesis in Pittsburgh, I conducted interviews with many local *fengshui* consultants. Most of them are Caucasian females and they all have applied crystals in their services. It is apparent that their services and professions have adapted to the local architectural styles, weather, and people's folk beliefs which totally differ from the cases in Taiwan. Compared to Taiwanese *fengshui* consultants who needed to debate crystals' efficacy, these American consultants naturally use crystals and have not had difficulty with. I also did some online research about the combination of crystals with *fengshui* on other Western countries' websites. I found that this combination has been spread world-wide, and we can find this practice

around the world, such as in Europe, Latin America, and any country having *fengshui* practitioners. All these lead me to rethink *fengshui*'s materiality by which we could more or less view a connection between crystals and the West. Furthermore, from the perspective of glocalization, the West may have a completely different process for applying crystals on *fengshui*. All these indicate that *fengshui* is no longer local, but is globalized and glocalized. It absorbs new ideas from the world as well as brings new concepts to where it arrives. It can also influence the local and be influenced by the local. This corresponds to Ole Bruun's statement: "*fengshui* is a living tradition with an inborn capacity to survive changing societal circumstance is obvious from its countless historical and geographical modifications (2003: 255)."

### **Religious Practice and Global Commodity Chain**

By depicting Taiwanese *fengshui* practice as a commodity fetishism of fetishism, this thesis also claims the necessity of examining the connection between religious practice, especially its material culture, and the development of relevant GCCs. GCCs have become a factor which should not be ignored for studying religious objects. In the U.S., commodities associated with Christianity could be mass manufactured in China, Vietnam, Mexico, or factories in other developing countries in order to keep the decrease cost. While most religious research about globalization focuses on the expansion of a religion's territory or how people convert their beliefs with missionary forces, this research has argued another important relationship between religious practice and globalization.

All these indicate that GCC is not merely an economic affiliation of places, but also a concrete channel for cultural interactions. On a GCC of religious products, people, capital, and information all move with the global forces and influence people's religious practices. While the

production of the commodities could be outsourced or the material sources could have global origins, our understanding of a local religious practice should also expand to a worldwide scale and contemplate new questions. What does determine religious commodities' authenticity? How do religious consumers view the ritual objects manufactured by people who may have different religions? All these questions follow the development of religious GCCs and are waiting for future anthropological research. We need to continuously examine how people practice the material culture for their religious belief while the global/glocal materialscape has become a fundamental part of people's daily lives.

### **8.3 HIDDEN ISSUES OF DEVELOPMENT AND MORALITY**

This research also touches upon some cruel facets of a GCC. By pointing out a GCC's operation behind people's religious consumption, this thesis purposely implies many ethical issues which wait for future discussion and research. While the Taiwanese consume crystals, or buy imagined good fortune with crystal products, for solving their anxieties, they are also consuming the miners and the processing workers' labour, and even the environmental sustainability in Brazil and China. In Ametista do Sul, the same as other crystal mining areas in Brazil, the mining process has caused unrecoverable damage to the natural landscapes and has manufactured countless amount of wasted earth. In China, many factories caused water pollution and air pollution during the work of processing crystals. From the perspective of subsistence, Brazilian miners' economical sources are unstable and have potential risk because of the unpredictable global crystal market. Chinese processing workers are at the bottom of the local social class pyramid since they lack advanced skills for better job opportunities. All these

examples are similar to the “zone of awkward engagement” described in Anna Tisng’s *Friction* (2005) and become external costs of *fengshui* practice. Taiwanese consumers never sense that their consumption may bring such chain reactions in other countries and only expect these minerals could bring happiness and solve their worries. This may be against one ancient principle of *fengshui*: good places for good people, which stresses that the practitioners’ morality and ethical practice will bring good *fengshui* and luck. While consuming *fengshui* commodities has become the most efficient way to solve anxieties, it also replaces the concern of environmental ethics and humanity which could be important to traditional *fengshui* practice. It may be not reversible because the Taiwanese have already developed a consumption culture about crystals and a matured belief about crystal’s efficacy in *fengshui*. Thus it must be necessary to develop a fair-trade commercial mechanism or an environmental friendly business model on this GCC for the concern of humanity.

To conclude, *fengshui* is no longer only about how the Taiwanese use objects in order to earn good fortune. The use of crystals for *fengshui* tells the stories about the global connection among countries, the social and cultural biography of minerals, and the glocal cultural practices formed by a folk belief.

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