

Chapter 2

Harmony: A Delicate Dance of Symmetry

Introduction

Harmony is a concept that plays a pivotal role throughout Chinese history (Li, 2008) as much as love does in Christianity. Also similar to love in Christianity, much good as well as evil has been done in the name of harmony. It is important therefore to delineate the basic structure of this root metaphor in order to differentiate between optimal and suboptimal versions of harmony. This chapter shows how casting harmony in the framework of symmetry (Chap. 1) will help us in this endeavor.

Harmony may be defined as an aesthetic emotion, a pleasure derived from the pleasure of attaining multiple goals at once. Aesthetic emotions are defined by Deacon (2006) as “essentially emotional relationships between emotions” (p. 51). As such, harmony entails two essential elements—relations between terms, and awareness of the relations between terms. The topic of awareness, especially second-order awareness (pleasure of pleasure), will be briefly mentioned but not explored here, as it will be treated more fully in later chapters (especially Chap. 10). This chapter focuses on only one of the key elements of harmony—relations between terms.

My investigation is divided into three parts: First, a structural analysis suggests that harmony is a high dimensional complex system that is invested in symmetry maintenance. Second, I examine cognitive styles and associated strategies that serve the purpose of symmetry maintenance. Third, I put forward the argument that there are two factors that tip the balance between optimal and suboptimal versions of harmony—avoidance of symmetry breakdown, and lack of cognitive complexity.

The Structure of Harmony

Chinese notions of harmony in the classics. The Chinese term for harmony is “*he*” (和) which is derived from terms for musical instruments and the cooking cauldron (Lu, 2004). With regard to cooking, a statement in the *Tso Chuan* stated that

“Harmony is like soup. There being water and heat, sour flavoring and pickles, salt and peaches, with a bright fire of wood, the cook harmonizing all the ingredients in the cooking of the fish and flesh” (Fung, 1962, p. 107). In reference to music, it is said in another classical text, the *Book of Documents*: “When the eight instruments are in good accord and do not encroach upon one another, then the spirits and man will be brought into harmony” (Holzman, 1978, p. 23). Note the salience of multiplicity and diversity, as symbolized by the many ingredients of the soup and the large number of musical instrument, in the above discourse on harmony. Thus, Sundararajan (Frijda & Sundararajan, 2007; Sundararajan, 2010, 2013) defines harmony as a high dimensional structure that computes the equilibrium among multiple systems. This definition underlines two attributes of harmony that are relevant to the notion of symmetry: high dimensionality, and dynamic, not static, equilibrium.

High dimensionality. Harmony is intrinsically pluralistic in structure, as evidenced by the prevailing *yin* 阴 and *yang* 阳 polarity. This point can be illustrated by one well-known polarity—inner (*yin*) versus outer (*yang*). Wu Daozi (d. 792), the famous painter, had been working on a painting for the court for a long time. When he was finally done, the Emperor came to the unveiling of the painting. As Wu carefully drew aside the coverings, the Emperor gazed at the magnificent scene down to every detail:

... woods, mountains, limitless expanses of sky, speckled with clouds and birds, and even men in the hills. “Look,” said the artist pointing, “here dwells a spirit in a mountain cave.” He clapped his hands and the gate of the cave immediately flew open. The artist stepped in, turned, and said, “The inside is even more beautiful. It is beyond words. Let me lead the way!” But before the Emperor could follow or even bring himself to speak, the gate, the artist, the painting and all faded away. Before him remained only the blank wall with no trace of any brush marks. (Chang, 1970, p. 95)

Chang Chung-yuan’s (Chang, 1970) commentary of this anecdote is illuminating: “within the outward appearances of all beauty there lies ... the ‘unity of background’ ... It is through this ultimate reality that our minds are opened to see our own wholeness of spirit, and enter into the wholeness of the universe, the deep underlying harmony of all things” (pp. 95–96). Note the Russian doll structure in the binary oppositions of figure and ground or outer appearance and inner reality, where the lower symmetry subgroup (figure; outer appearance) is embedded in the higher symmetry subgroup (ground; inner reality), with the former deriving its significance from the latter. Thus, Chang (1970) writes: “According to the Taoists, our daily life gains its significance by being rooted in a deep underlying harmony, or ultimate reality” (p. 96).

This two-tiered structure—inner and outer—of harmony has direct implications for harmony maintenance strategies. A case in point is the way Chinese make compromises by conforming to conventions in one’s outer, public reality, while remaining a nonconformist in one’s inner reality. In one phrase, “obey publicly and defy privately” (Hwang, 2000, p. 172). An illustrious example of this approach to harmony maintenance is found in the physicist Nobel laureate Hideki Yukawa (1973), who attributed his scientific creativity to his rebelliousness in a

characteristically East Asian way—docile on the outside, but a rebel on the inside: “I can never work on a problem that I’ve been told to solve by someone else. My subconscious always rebels against being ordered to do something. Personally, I look on myself as a docile kind of man...” (p. 37).

Harmony as a dynamic equilibrium. In everyday life, harmony is generally understood as moderation, a form of self-regulation guided by the principle of the golden mean (*zhong yong* 中庸). One of the most insightful formulations of harmony is found in the text *Zhong Yong (The Doctrine of the Mean, 1971)*:

While there are no stirrings of pleasure, anger, sorrow, or joy, the mind may be said to be in the state of EQUILIBRIUM. When those feelings have been stirred, and they act in their due degree, there ensues what may be called the state of HARMONY. (p. 384, emphasis in the original)

Note here that harmony is differentiated from equilibrium along the divide between pre- and post-perturbation. Cast in the framework of symmetry and symmetry breaking, this passage tells a story that goes something like this: The original symmetry, referred to as equilibrium, is characteristic of the pre-perturbation state of the mind, which, often compared to still waters in the Daoist texts, is a condition in which homogeneity looms large. Emotional episodes result in symmetry breaking; and successful symmetry restoration is referred to as harmony, in the words of Fung, (1962): “To have the emotions welling up and yet in due proportion is also a state of the mean [equilibrium]” (p. 107). As such, harmony is not the original but the second, restored symmetry, otherwise known as dynamic equilibrium (Fung, 1962). Whereas the original symmetry before the Big Bang, so to speak, is an order of reality characterized by the absence of differences, harmony as second, restored symmetry is an emergent order contingent upon the shifting balance within the mix of differences.

As Sundararajan (2013) points out, the Chinese notion of harmony as a dynamic equilibrium has far reaching ramifications:

- First, not hankering after the primordial symmetry (Bolender, 2010) where homogeneity reigns supreme, harmony as a second, restored symmetry thrives in the aftermath of symmetry breaking (Bolender, 2010)—a world rife with difference and diversity.
- Second, subsisting in the aftermath of symmetry breakdown, the main function of harmony is necessarily symmetry maintenance and restoration—to prevent further symmetry break down.
- Third, as a symmetry maintenance and restoration mechanism, the Chinese notion of harmony may have a built-in aversion toward (further) symmetry breakdown.

There may be an inherent tension within harmony: Aversion toward symmetry breakdown can lead to rejection of differences, whereas harmony as dynamic equilibrium works well only to the extent that it gives importance to difference and diversity. Thus, aversion toward symmetry breakdown maybe a determining factor between the optimal and not so optimal types of harmony, to be elaborated later. For now, let us examine the optimal use of cognitive strategies for symmetry maintenance.

Harmony as Symmetry Maintenance and Restoration

The task of symmetry maintenance lies in neutralizing the effects of difference. Recall that symmetry is a structure in which transformations make no relevant difference (Zee, 1986). For instance, $a=b$, in which case $b=a$. This has been formulated by Bolender (2010) as unrestrictedness in admissible transformations. Put more simply, admissible transformations are differences that make no difference—in other words, neutralized. Neutralizing differences can be illustrated by the Chinese expression “It does not matter” (“*mei guanxi*”) (see Chap. 1) as a harmony maintenance technique. This expression can be paraphrased as follows: Whatever difference there is as a result of the transformation (e.g., the son lost money in the family business), it does not change anything so far as the relationship is concerned (e.g., we are still family). In the following sections, I examine important cognitive styles (see Table 1.1, Chap. 1)—*yin* and *yang* dialectics, holistic thinking, and low cognitive control—and associated strategies that help to neutralize differences.

Dialectic Thinking

One cognitive style privileged by harmony is dialectic thinking, best exemplified by the *yin* and *yang* dialectic (Fang, 2010; Li, 2012). The *yin* and *yang* dialectic may be understood as an order-preserving transformation (Bolender, 2010) that neutralizes differences by means of the principle of complementarity (Peng & Nisbett, 1999). According to the principle of complementarity, the opposing forces A and Not-A are needed antipode and complement to each other. Thus, it is stated in the *Tso Chuan* that “... the five-note pentatonic scale; the six-pitch pipes; the seven sounds ... all of which complement each other. There are the distinctions between clear and turbid, small and great ... plaintive and joyous ... all of which augment each other” (cited in Ames & Rosemont, 1998, p. 255). Here in spite of the multiplicity of musical instruments and the diverse and contrasting sounds they produce, harmony is maintained thanks to the dialectic of *yin* and *yang* which neutralizes differences by playing the terms of opposition off of each other. This is how the *yin* and *yang* dialectic works: No term can ever make an irrevocable difference, since whatever difference term A makes is counterbalanced by the opposing term Not-A.

But the *yin* and *yang* dialectic does more than preserving the existing order. It also creates a new order of harmony which has the capacity to encompass both A and Not-A. Thus, one unique feature of the complementarity principle is its inclusiveness toward difference. This point can be illustrated by the statement of Yen Tzu in the *Tso Chuan* that “The salt flavoring is the other to the bitter, and the bitter is the other to the salt. With these two ‘others’ combining in due proportions and a new flavor emerging, this is what is expressed in ‘harmony’ ...” (Fung, 1962, p. 108). Difference, referred to as the “other” in the above quote, is not to be eliminated but rather included and duly combined to create harmony. This is consistent with the observation of Cheng, Lee, and Chiu (1999) that Chinese dialectical thinking has a high

degree of inclusiveness, capable of reconciling seemingly inconsistent behaviors and ideas, thus contributing to the establishment and maintenance of harmony in life.

Due proportion. Another strategy to neutralize difference is to reduce excess difference and contradiction to a range that allows for coordination. In the words of Fung: “Harmony is the reconciling of differences into a harmonious unity ... But in order to achieve harmony, the differences must each be present in precisely their proper proportion, which is *chung* [*zhong*] (moderation or the mean). Thus the function of *chung* is to achieve harmony” (Fung, 1966, p. 174).

Keeping things in due proportion requires inhibition and constraint. Thus, the principle of moderation or the mean is often expressed in terms of negation. Similar to the Goldilocks formula, the principle of the golden mean (*zhong yong*) can be formulated as A but not A~, where A~ is the extreme of A (Lu, 2004, p. 145). To wit, Confucius said of the first ode in the *Book of Songs*: “The Kwan Tsü is expressive of enjoyment *without* being licentious and of grief *without* being hurtfully excessive” (*Confucian Analects*, 3/20, Legge, p. 161, emphasis added).

In everyday parlance, the golden mean (*zhong yong*) is known as taking the middle way in contrast to the polarizing tendencies of going to extremes. It is said in the *Book of Documents* regarding music: “When the eight instruments are in good accord and do not *encroach upon* one another, then the spirits and man will be brought into harmony” (*Shang Hsu*, II, 1/5, in Holzman, 1978, p. 23, emphasis added). “Encroaching upon” is a phenomenal description of hegemony in which A overwhelms Not-A or vice versa. This winner-take-all phenomenon may be understood as the difference that makes a difference, resulting in symmetry breaking. By contrast, the “middle way” maintains the multidimensionality and diversity of harmony by not allowing any difference to break the symmetry of differences, thereby preserving the dynamic balance between A and Not-A. Put another way, harmony as the dynamic relationship between terms is intrinsically pluralistic, thus its optimal functioning depends on the preservation of difference and diversity by preventing the hegemonic winner-take-all kind of symmetry breakdown.

Holistic Thinking

Another cognitive style favored by harmony is holistic thinking. Holistic thinking has two attributes: (a) it subsists in a high dimensional conceptual space; and (b) it specializes in forming sets. First, high dimensional conceptual space. The *yin* and *yang* dialectic can be understood as the logic of both-and in contrast to that of either/or (Li, 2014a). The either/or framework entails a one-dimensional space, which allows for only one term at a time to operate. By contrast, the both-and framework consists of a multidimensional space that allows for parallel processing on multiple levels at the same time.

Second, holistic thinking is sensitive to relations between terms, thereby capable of combining multiple terms into one unit of analysis or a set. In everyday life, holistic thinking approaches life not in terms of a choice between different orders of

reality so much as affirming both realities, and negotiating for a viable relationship between the two. In science, holistic thinking is the basis of the mathematical model called dynamical systems or chaos theory, which approaches diverse systems such as the predator and the host as one unit of analysis (Sabelli, 2005), in contrast to the conventional linear, causal analysis.

Since holistic thinking contributes to symmetry maintenance and recovery by forming sets, we can expect a corresponding aversion in holistic thinking toward symmetry breakdown. There is some empirical evidence for this conjecture.

Set and set breaking. You are asked to choose for a friend two puppies from five photographs and then learned that the landlord would allow only one pet per apartment. What a bomber! This is the type of experiment known as the blocked-choice paradigm. Consider this scenario: You get to choose a drink and a snack from three bottled beverages (milk, soda, fitness water) and three packaged snacks (cookies, chips, fitness bar). Say you picked soda and chips. Then you are told, “Whoops! A mistake had been made: Instead of getting to choose two options, you can select only *one*.” How would you like to proceed? Pick one out of the selected pair (soda or chip)? Or start over and choose one from the unelected items (milk, fitness water, cookies, or fitness bar)? It turns out that the choice you make in this type of situations depends on whether you have a collectivist or individualist mindset, according to a series of studies conducted by Mourey, Oyserman, and Yoon (2013).

Mourey et al. (2013) found that compared with those in the individualist-mindset condition, “participants in the collectivist-mindset condition listed more reasons their initial snack and beverage selections went together and then, when told that one of their selected items was unavailable for consumption, chose to select a new snack or beverage instead of consuming their other initially selected item that was available” (p. 1620). Participants in the individualist-mindset condition seemed to be more “rational”—they would simply go for soda or chips, if they are allowed to pick only one, as can be predicted by the theory of rational decision-making. For instance, the dominance principle in choice (Kahneman & Tversky, 1984) predicts that if prospect A is as good as prospect B in every respect and better than B in at least one respect (for instance, you picked it), then A (soda or chip) should be preferred to B (the rest of the items you did not pick initially). But participants with the collectivist mindset thought otherwise.

Proceeding with only the available products meant that participants had broken up their selected set, whereas not willing to proceed with it suggests an unwillingness to break up with their initially selected set. Mourey et al. (2013) found repeatedly that an accessible collectivist mindset “increased the likelihood of rejecting a partial set and the willingness to pay more to complete the set” (p. 1618). And again: “Latinos and people randomly assigned to the collectivist-mindset condition were more hesitant to break up a set, more willing to pay extra to restore a set, and more sensitive to the existence of a relationship among members of a set” (p. 1620).

Why is a set, even an arbitrarily chosen one such as the soda and chips pair, so important to people with a collectivist mindset? For an explanation, Mourey et al. (2013) attributed this to the penchant for forming relationships in collectivist cultures: “a collectivist mind-set creates a momentary attunement to the possibility

of a relationship, such that people with collectivist mind-sets can and do create relationships among objects on the spot and are loath to break up these relationships” (p. 1620). Following this line of reasoning, one would expect Asians to be especially prone to the minimal group effect (Tajfel, 1970). In a series of studies conducted by Tajfel (1970), individuals were randomly assigned to groups on the basis of some bogus group differences. Regardless, participants seemed to have readily identified with these arbitrarily formed groups as evidenced by their in-group favoritism. The minimal group effect has been widely replicated in the West, but not in the Chinese population. In fact studies (e.g., Brewer & Yuki, 2007) show that the very opposite seems to be the case—Asians are less likely, relatively to Westerners, to form relationships on the spot.

A more cogent explanation for the findings of Mourey et al. (2013) lies in the robust finding (Nisbett, Peng, Choi, & Norenzayan, 2001) of the difference between the holistic thinking style of collectivist cultures in comparison to the analytic reasoning of individualist cultures. In holistic thinking, when items combine they form a new entity—a set. Thus, if:

$$a = \text{soda}; b = \text{chips}; a + b = C$$

The question of *C* did not arise for analytic thinking, which sees (a) and (b) as individual items only (a, b), even when combined. Thus to the individualist mindset, the blocked-choice paradigm simply means a reduction of the number of one’s choice from two items (a, b) to one—(a) or (b). But to the holistic mindset, the blocked-choice paradigm entails the symmetry breakdown of *C*, which is something to be avoided if possible. This is consistent with my hypothesis of an aversion toward symmetry breakdown, which predicts that when confronted with the blocked-choice problem, this particular mindset would prefer choosing from the unselected items that have never formed a set over choices that involve breaking a ready-made set. This is exactly what the researchers (Mourey et al., 2013) found.

Low Cognitive Control

As a multidimensional system, the emergent order of harmony entails the proper coordination of multiple and diverse subsystems. Proper coordination raises the question of cognitive control, which can be either high or low. High levels of cognitive control are exemplified by controlled serial processing, whereas low levels of cognitive control are evident in automatic parallel processing. More specifically, “High levels of control are best suited for explicit, rule-based, verbal tasks that depend on the capacity limits of working memory, whereas low levels of control are best suited for implicit, reward-based, nonverbal tasks that can be accomplished irrespective of working memory limitations” (Bocanegra & Hommel, 2014, p. 1254).

The difference between levels of cognitive control seems to fall along the divide between symmetry maintenance and symmetry breakdown. High levels of cognitive control entail symmetry breakdown. For instance, controlled processing filters out

irrelevant information; and explicit, rule-based reasoning reduces ambiguity in the service of greater clarity. Low levels of cognitive control, by contrast, contribute to symmetry maintenance through the use of a more inclusive approach to information processing. For instance, implicit, associative reasoning helps to maintain the free flow of information without the interference of top-down control.

Different levels of cognitive control are adaptive in different ecological niches (Bocanegra & Hommel, 2014): Low levels of cognitive control with their characteristic bottom-up parallel processing are adaptive in the predictable environment of strong ties, whereas high levels of cognitive control, characteristic of rule-based reasoning, are needed for the reduction of uncertainty and ambiguity in the relatively unpredictable environment of weak ties. Control can be translated into cost, thus the relatively low cost of low cognitive control in the predictable environment is consistent with Dunbar's (2014) observation that "Family relationships come at less [cognitive] cost because we need to know only how they relate to us, not the detailed history of our past interactions" (p. 111). One implication of this formulation is the possibility of interference in cases of mismatch: High levels of cognitive control can impair and interfere with the otherwise automatic exploration of information privileged in the predictable environment (Bocanegra & Hommel, 2014). In the following paragraphs, I apply this insight from cognitive psychology to an analysis of harmony.

Cognition without control. Moderation entails the due proportion of things. Growth and decay of impulses, onset and release of restraints, oscillation of balances between impulses and restraints may be out of proportion or of due proportion. How to achieve due proportion of things in the mix of competing subsystems? There are two possible ways to accomplish this goal: One is to increase control, for instance, to streamline things by the suppression of differences in a top down fashion. Another, somewhat counterintuitive approach favored by the harmony principle is to increase diversity and difference. The essential insight of the harmony principle is that moderation is the result of the inherent capacity of the system to regulate itself through the mutual inhibition and restraint between competing cues. This insight is supported by the studies of Köpetz, Faber, Fishbach, and Kruglanski (2011), who found that the simultaneous activation of multiple goals resulted in a restricted set of acceptable means that benefited the entire set of active goals. This regulatory strategy that capitalizes on the bottom-up processes of the system is an example of cognition without control.

According to Thompson-Schill, Ramscar, and Chrysikou (2009), tasks that capitalize on cognitive control are performance tasks which require focused attention to filter out task-irrelevant information, and selectively maintain task-relevant information. By contrast, learning and creativity require cognition without control, since these tasks capitalize on holistic, defocused attention (Sundararajan, 2004) which facilitates competition between multiple cues. The authors claim that the competitive process—or what the Chinese refer to as the *yin-yang* balance—among multiple cues in learning and creativity can be interfered with by cognitive control, and facilitated by the absence of the same.

Cognition with and without control (see Chaps. 5 and 7) can be illustrated by two different approaches to cooking—recipe versus harmony. The difference between these two approaches may be explored along the two components of cooking:

- A. External regulation, which refers to what the cook does.
- B. Internal process, which refers to transformation of the food stuff in the cooking pot.

Recall the code approach to cooking at McDonald's (Martin, 2009, Winter; see Chap. 1). This is an example of the recipe approach, in which A directly controls B such that emphasis is placed entirely upon A, which attempts to get the cooking process down to a science by specifying with precision the ingredients, the proportion, and the exact sequence of action. By contrast, according to the harmony approach, cooking is considered a "subtle art." The *Lushi chunqiu* puts it this way:

In combining your ingredients to achieve a harmony, you have to use the sweet, sour, bitter, acrid, and the salty, and you have to mix them in an appropriate sequence and proportion. Bringing the various ingredients together is *an extremely subtle art* in which each of them has its own expression. The variations within the cooking pot are so delicate and subtle that they cannot be captured in words or fairly conceptualized. (Ames & Rosemont, 1998, pp. 257–258, emphasis added).

Approaching cooking as a creative task, rather than a recipe-based performance, the above passage evinced a clear demarcation of A and B—the former refers to the cook combining ingredients, paying attention to sequence and proportion; the latter to the "delicate and subtle" process in the cooking pot. Whereas A can be formulated into instructions or recipes, B defies conceptualization, so we are told. With its emphatic distinction between A and B, this passage advocates cognition without control by making it clear that A does not directly control, so much as facilitate B, which is a process that presumably lies beyond language and conceptualizations.

The key to harmony, from this perspective, lies in the internal process B, in which it is the competition among multiple constituents—suggested by the "various ingredients" each having "its own expression"—that results in the overall harmony of flavors. Thus in the harmony framework, the role of the expert system A, be it the cook or cognition, is to facilitate the process B, rather than to micromanage it the way cookbooks do.

Priming versus planning. Daniel Siegel (2007) makes the distinction between planning and priming. Planning is a top-down, prefrontal intervention, involving the use of abstract concepts, and is outcome oriented. Priming by contrast is a bottom-up, parallel-distributed process of the brain that is always readying itself for the next moment. As an illustration of priming, consider the following recommendation from *The Doctrine of the Mean* (1971):

It is said in the Book of Poetry: "Happy union with wife and children is like the music of lutes and harps." When there is concord among brethren, the harmony is delightful and enduring. Thus may you regulate your family, and enjoy the pleasure of your wife and children. (pp. 396–397)

How to achieve harmony in the family? The recommendation is “enjoy the pleasure of your wife and children.” Enjoyment (Sundararajan, 2009) is a form of savoring, in which the object of one’s pleasure is one’s own experience, rather than the stimuli per se (for more details, see Chap. 10, this book). What is savored is apparently harmony, as evidenced by the allusions to music, and to experiences of concord seemingly “delightful and enduring.” However, the argument seems to be circular—one attains the emotional goal, such as harmony, by having a foretaste of the same in one’s anticipation.

This non-suppressive and non-avoidant regulation strategy is different from the mechanisms of self-control, which may entail global deactivation of both action schema and its underlying intentions. For instance, in delay-of-gratification situations (Mischel, 2014), consummatory ideation (“yumminess” and “chewiness” of the marshmallows) is discouraged in favor of task-oriented ideation (“I am waiting for the marshmallows”). By contrast, in the approach canvassed here, consummatory ideations are utilized to stoke desire and foster intent. Presumably, once a certain intention is in place, the rest will follow. It is in this vein that Siegel (2007) claims that in the cultivation of mindfulness, “If you have a COAL stance, the rest takes care of itself” (p. 19). COAL is acronym of four mental states which are part and parcel of mindfulness: curiosity, openness, acceptance, and love. Once again, the outcome (mindfulness) is foreshadowed by the intentional stance (COAL), which although makes a circular argument works well by priming.

Now, we are ready to tackle the question of what tips the balance between optimal and suboptimal versions of harmony.

What Tips the Balance Between Optimal and Suboptimal Harmony?

Not all harmonies are created equal, some are optimal, and some not so optimal (Lun, 2012). The optimal version of harmony is associated with psychological well-being in both Western and Chinese samples (Chen, Chan, Bond, & Stewart, 2006). The suboptimal version of harmony has been found to fuel the violation of basic individual rights (Weatherley, 2002). This section will examine two possibly inter-related factors that can discriminate between optimal and suboptimal harmony: avoidance of symmetry breakdown, and lack of cognitive complexity.

Avoidance of symmetry breakdown. In light of its invested interest in symmetry maintenance and recovery, harmony may be beneficial or not depending on the extent to which it succumbs to aversion toward symmetry breakdown. Put another way, avoidance of symmetry breakdown may be a discriminating factor between optimal and suboptimal harmony. There is some empirical support for this conjecture.

Leung (1997) has identified two harmony motives—harmony enhancement and disintegration avoidance. Disintegration avoidance—which corresponds nicely to my formulation of aversion toward symmetry breakdown—puts a premium on

keeping the status quo and fitting in. By contrast, harmony in the classical Chinese texts is pursued as an end in and of itself. A similar distinction is made by Huang (1999) between true and surface harmony—the latter is found to be a contributing factor to the Asian preference for usefulness/conformity over novelty (Leung & Morris, 2011), whereas the former is found to be beneficial in creative conflict management (Leung, Koch, & Lu, 2002).

The same applies to the two corresponding versions of *zhong yong* 中庸 (the golden mean). The disintegration-avoidance version of *zhong yong*—characterized by the preference for moderation and the avoidance of extreme positions—was found by Yao, Yang, Dong, and Wang (2010) to be a contributing factor to the suppression of creative ideas. By contrast, the harmony enhancement version of *zhong yong* plays an important role in emotion refinement (Frijda & Sundararajan, 2007), emotional creativity (Sundararajan, 2002, 2004), and aesthetic savoring (Frijda & Sundararajan, 2007; Sundararajan, 2010).

In sum, since the structure of harmony is intrinsically pluralistic as a relation between terms/systems, avoidance of symmetry breakdown would result in reduction of diversity hence compromising the structure of harmony. Thus, the difference between optimal and suboptimal versions of harmony may be measured by the commitment to diversity or the lack thereof. In the optimal version of harmony, neutralization of differences is intended to preserve diversity by preventing the hegemonic takeover by extreme differences. In suboptimal versions of harmony, avoidance of symmetry breakdown invariably results in reduction of difference and diversity. Let us examine, in the following sections, how optimal harmony is committed to the preservation of difference and diversity.

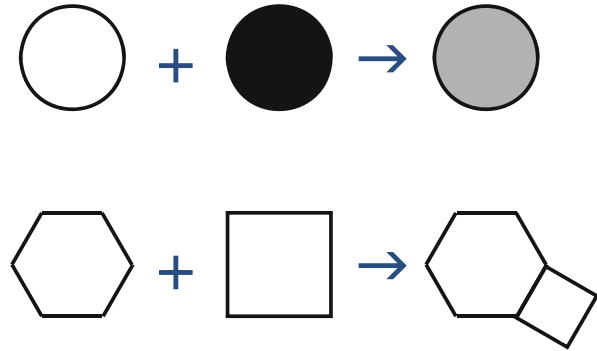
Preservation of difference and diversity in harmony. Historically, the distinction between optimal and suboptimal harmony goes all the way back to Confucius, who once said explicitly: “Exemplary persons seek harmony not sameness; petty persons, then, are the opposite” (*Analects*, 13/23, in Ames & Rosemont, 1998, p. 169). Lu (2004) explains that the Confucian gentleman can be in a harmonious relationship with the world without losing his individuality, whereas the petty person simply follows the crowd (p. 182). Thus contrary to the collectivistic stereotype of the Chinese culture, Confucius argued emphatically against simply blending in.

The distinction drawn by Confucius between the optimal and suboptimal versions of harmony can be further clarified by the difference noted by Abler (1989) between particulate and blending systems (see Fig. 2.1).

As Fig. 2.1 shows, novelty in a blending system is an averaging of inputs, such that repeated blending results in decreasing difference and increasing uniformity. By contrast, combination in a particulate system results in greater variety. In this light, optimal harmony, as represented by the Confucian gentleman, is a particulate system, whereas the suboptimal harmony, as exemplified by the petty person, is a blending system.

Besides Confucius, other thinkers in ancient China have also recognized the importance of difference and diversity. For instance, an association of diversity with growth, and uniformity with sterility, is found in the *Kuo Yü* which states,

Fig. 2.1 Blending systems (upper tier) and particulate systems (lower tier). In the former, repeated combination of things may lead to greater uniformity, while in the latter, to greater variety. Adapted from Abler (1989, Fig. 1, p. 2), with permission from *Journal of Social and Biological Structure*



“To ameliorate one thing with another is the meaning of harmony. The result is flourishing and growth, and thereby creatures coming into existence. But supposing uniformity is supplemented by uniformity, nothing new can be produced” (Fung, 1962, p. 107). In sum, consistent with the blending versus particulate systems divide (Abler, 1989), suboptimal harmony operates like a melting pot, whereas optimal harmony toss salad or stir fry (Sundararajan, 2010), in which the diverse ingredients contribute to the overall flavor of the whole by each retaining its uniqueness in taste and texture. The insightful statement of the *Lushi chunqiu* is worth quoting again:

In combining your ingredients to achieve a harmony, you have to use the sweet, sour, bitter, acrid, and the salty, and you have to mix them in an appropriate sequence and proportion. Bringing the various ingredients together is an extremely subtle art in which *each of them has its own expression*. (Ames & Rosemont, 1998, pp. 257–258, emphasis added).

Harmony: A delicate dance of symmetry breakdown and symmetry maintenance. Cast in the framework of symmetry, optimal harmony entails a dynamic interplay of symmetry breakdown and symmetry maintenance/restoration. Difference and diversity, so essential to optimal harmony, depend on symmetry breakdown. To ensure that the diverse subsystems can coordinate without sacrificing their respective integrity, one needs symmetry maintenance strategies to prevent the winner-take-all phenomena. When diverse subsystems coexist in peace, and be “nurtured together,” the state of affairs would approximate optimal harmony, as is envisioned by the *Doctrine of the Mean* (1971): “All things are nurtured together without their injuring one another. The courses of the seasons, and of the sun and moon, are pursued without any collision among them” (p. 427, italics in original).

This dynamic process of symmetry breakdown and symmetry maintenance can be illustrated with a contemporary example. Li Xin (2014b) has proposed a business model based on the golden mean called Zhong Yong’s four-stage process model. The four stages are: inclusion, selection, promotion, and transition: Inclusion means one should always include at least two contrary elements; selection refers to prioritizing some elements according to circumstances; promotion means promoting the other un-prioritized elements to prevent the potential crowding out of the un-prioritized by the prioritized; transition means shifting to new prioritizing when

circumstances change. Cast into the framework of symmetry, we arrive at the following algorithms:

1. Inclusion: A and its other, Not-A, are intentionally paired up to make a set. This helps to build a model of harmony as unity in diversity.
2. Selection: Symmetry breakdown by prioritizing one of the binary oppositions in the set, say, A.
3. Promotion: Symmetry restoration by neutralizing the difference made in (2), by promoting the un-prioritized element, Not-A.
4. Transition: If circumstances change, the shifting balance of A and Not-A can change accordingly. Neutralizing change helps to maintain symmetry.

Another discriminating factor between optimal and suboptimal harmony is cognitive complexity. To the extent that cognitive complexity tends to break down under anxiety, high pressure for harmony will only produce suboptimal versions of the same. It is in the pressure-free private pursuits of the individual, ranging from cooking to self-cultivation, that harmony in its optimal functioning as a particulate system, rather than a blending system, is most evident.

These possibilities are explored in the following sections.

Harmony and cognitive complexity. According to Triandis (2009), cognitive complexity is a matter of cultivation of the mind, not of speed of learning or execution of cognitive tasks. Cognitive complexity can be examined along three aspects: Discrimination (does the person see a number of shades of the concept? e.g., different political parties), differentiation (does the person use many dimensions when discriminating among concepts? e.g., many dimensions for discriminating among political parties), and integration (does the person see many relationships among these dimensions?). Central to this formulation of cognitive complexity is the premium placed on difference (discrimination and differentiation) which are not possible without symmetry breakdown. Thus just as uniformity renders harmony sterile, avoidance of difference also results in cognitive simplicity. Indeed, avoidance of difference is the thread that runs through suboptimal symmetry maintenance strategies such as self-effacement as a means to maintain group “harmony” (Matsumoto, 1989, 1990). Optimal harmony, by contrast, consists of a dynamic interplay of differentiation (symmetry breakdown) and integration (symmetry restoration).

It is well known that cognitive complexity deteriorates with anxiety (Metcalf & Mischel, 1999). Thus suboptimal harmony, such as fitting in or maintaining status quo to avoid differences, can be predicted to prevail when it is difficult for cognitive complexity to be sustained, such as in settings where there is high social pressure. By contrast, optimal harmony can be predicted to flourish in conflict-free zones, such as in private life where one may pursue the art of cooking and self-cultivation. Indeed, Chinese cooking is testimonial to the Chinese penchant for harmony as the particulate system, in which repeated combination of *yin* and *yang* types of foods does not ever end up with a bland blend, but instead generating ever more creative innovations. The same can be said of the art of self-cultivation, as evidenced by emotional refinement (Frijda & Sundararajan, 2007).

Optimal harmony in emotional refinement. How do the Chinese make compromises? Take the middle road, be moderate in what you say or do—this is the *zhong yong* (the golden mean) way of thinking, according to Ji, Lam, and Guo (2010). This formulation raises the question as to whether emotion moderation of the Chinese results in more refined and differentiated experience as would be the case of a particulate system, or more blunted, less differentiated affect as would be the case of a blending system. The foregoing analysis of optimal harmony suggests the possibility of the particulate scenario and that emotional refinement (Frijda & Sundararajan, 2007) would therefore be a more appropriate framework for our understanding of the “moderate” emotions in China.

For an illustration, consider the following description of Confucius as a moderate, well-balanced person:

The Master was mild, and yet dignified; majestic, and yet not fierce; respectful, and yet easy (*Confucian Analects*, 7/37, 1971, p. 207).

Emotional refinement requires two capacities: awareness and cognitive complexity—the former serving as the scaffold for the latter. First, awareness: To appreciate the very fine quality of Confucius as portrayed here, one needs to sense in oneself the tension that arises from reactions to personality traits that belong to two diametrically opposed—vertical versus horizontal—dimensions of collectivism: authority versus friendliness; austerity versus easy going; standing on ceremony versus being casual. To have an emotional experience—such as tension, relief, and so on—of these complex reactions rests squarely upon the capacity to be aware of one’s own responses and experiences at multiple levels, a skill known as intrapersonal attunement (Siegel, 2007), or savoring (Frijda & Sundararajan, 2007). The levels of awareness along with the feedback loops between them can be adumbrated as follows:

- (a) Awareness level 1: A juxtaposition of discrete emotions: fear, respect, and awe toward an authority figure, on the one hand; and feeling at ease, comfort, and casual toward a friend, on the other.
- (b) Awareness level 2: The mind presenting to itself, unconsciously, a mental representation of (a) as a matrix of relationships between emotions—contrast and complementarity, or the *yin* and *yang* dialectic.
- (c) Awareness level 3: Conscious awareness of one’s own affective responses to the mental representation of (b), resulting in an experience of the emergent aesthetic emotion known as harmony.

According to Deacon (2006), aesthetics constitutes an emergent domain: “Emergent in the sense that its function is more a reflection of the form of the relationships that have been brought into being than of the component emotions that are necessarily constitutive of the experience” (p. 52). As an appreciative (i.e., savoring) awareness of the intricacies of relationships between multiple subsystems that are fostered by the cognition without control mode of processing (Thompson-Schill et al., 2009), harmony constitutes a fine example of aesthetic emotions.

As for cognitive complexity, the refined emotions evoked by the portrait of Confucius as the model of a life governed by harmony cover all the bases of cognitive

complexity: Discrimination—many shades of the notion of a harmonious personality as embodied by Confucius; and differentiation—personality traits of Confucius are plotted along two opposed dimensions (vertical versus horizontal) of collectivism. Lastly, integration—the dialectic relationship, such as contrast and complementarity, among one's emotions evoked by the perceived personality traits of Confucius assumes center stage of an aesthetic experience of the Master.

Summary and Conclusion

To sum up the foregoing analysis, I cast harmony in the framework of concurrent goal pursuit. According to Orehek and Vazeou-Nieuwenhuis (2013), there are two strategies for the pursuit of multiple goals: one is sequential, the other concurrent—the former capitalizes on analytic, the latter holistic reasoning. One major difference between these two strategies is instrumentality versus value considerations. Thus when the dominant concern involves making immediate and steady progress, sequential goal pursuit will be preferred; whereas when the major concern is making *the best possible choice*, concurrent goal pursuit, namely the harmony approach, will be preferred. The instrumental approach of the sequential goal pursuit entails goal shielding which consists of high prioritizing of the focal goal and inhibition of alternative goals. By contrast, concurrent goal pursuit entails low prioritization to enhance inclusiveness of multiple goals, an approach that is driven by a value concern—namely to make the best possible choice for all. To satisfy the multiple goals all at once, not one at a time, is to find multifinal options. The conditions for multifinal options, according to Orehek and Vazeou-Nieuwenhuis (2013), sum up very well the key principles of harmony:

- Two goals must be activated at the same time—thus the importance of pluralism and diversity in harmony.
- When one's goals are of *similar priority*, the same block of time can be allocated to each goal and a multifinal means can then be sought—thus, the need for moderation to avoid polarizing.

Now let us revisit the blocked-choice paradigm of Mourey et al. (2013). Cast into the framework of multiple goal pursuit, the blocked-choice paradigm goes something like this: First, the participants were asked to engage in a multiple goal pursuit (picking a pair of puppies, etc.) to come up with a multifinal means, namely a set; then, the multifinal means was blocked, forcing the participants to make a choice—either to find an alternative multifinal means to the same goals, namely to form another set, or to break up the multiple goals and switch to a strategy of sequential goal pursuit. As predicted, those primed with the individualist mindset readily switched to the sequential goal pursuit—items are chosen one at a time; if one is not available, pick the next one available. But not those primed with the collectivist mindset. How do we understand the persistence of this group?

According to Orehek and Vazeou-Nieuwenhuis (2013), since concurrent goal pursuit entails the activation of more goals, and the pursuit of those goals either succeeds or fails in unison, succeeding in attaining multiple goals at once should garner more overall value and lead to relatively greater positive affective experiences—or what we have been referring to as harmony—than sequential goal pursuit. This observation is consistent with the finding of Mourey et al. (2013) that for those primed with the collectivist mindset (which entails holistic thinking that prefers concurrent to sequential goal pursuit) even an arbitrarily formed set carried relatively more value.

Finally, the concurrent goal pursuit of harmony has one important advantage over the sequential goal pursuit strategy, namely moderation—especially in the domain of morality. Orehek and Vazeou-Nieuwenhuis (2013) point out that due to its goal shielding which inhibits competing goals, sequential goal pursuit has relatively greater potential for morally questionable behavior. By contrast, concurrent goal pursuit has to satisfy multiple goals, which necessarily constrains behavior in ways that limit some of the most extreme options. Kirk Schneider would have agreed. In his analysis of human atrocities across cultures, Schneider (2013) argues persuasively for the moral imperative to use moderation as an alternative to the ravage of polarizing tendencies that have contributed to the pursuit of extreme options resulting in much suffering throughout history.

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