

Sustainability from a Chinese cultural perspective: the implications of harmonious development in environmental management

Ying Li¹ · Hao Cheng² · R. J. S. Beeton¹ · Thomas Sigler¹ · Anthony Halog¹

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Abstract Sustainable development has broad consensus in environmental science and policy discourse, but its implications differ in specific cultural contexts. This article articulates sustainable development from a Chinese cultural perspective by tracing ideas from Chinese traditional culture and exploring China’s concept of harmonious development with emphasis on environmental management. Ideas that resemble sustainable development are not new to Chinese culture, but have roots in ancient Chinese thoughts, which in turn influence current governance and policies. Notably, Chinese traditional philosophies such as Confucianism, Taoism, Legalism, and Yin–Yang contain philosophies fundamental to sustainable development. As a distinct local discourse, such concepts were well interpreted and understood in the ancient meaning of harmony, giving China unique sustainability perspectives with institutional implications for policies of harmonious development and environmental management. Currently, China is driven to create a new national identity of harmonious development that involves Chinese traditional philosophies and values in its modern administration. The slogans “harmonious society” and “Chinese dream” reflect this new way of responding to the world with the aspiration to achieve cleaner growth, personal prosperity, and social stability. The Chinese and Western roots of sustainable development are conceptually, ideologically, and historically different, and this paper articulates how the convergence of the two underlies contemporary international debates.

Keywords Sustainable development · Chinese traditional culture · Harmony · Harmonious development · Institutional evolution · Environmental management

✉ Ying Li
y.li19@uq.edu.au

¹ School of Geography, Planning and Environmental Management, The University of Queensland, Brisbane, St Lucia, QLD 4072, Australia

² Shandong Tri-Fluoro Advanced Material Co. Ltd, 217 Changguo East Road, Zhangdian District, Zibo City 255000, Shandong, People’s Republic of China

1 Introduction

An emerging trend in sustainability research involves implementing and experimenting with sustainable development pathways in Asia (Berkhout et al. 2010; Tseng et al. 2013; Bai et al. 2010). However, few researchers have attempted to understand the Western conceptualisation of sustainability in the context of Chinese culture. We seek to contribute to this by considering how the shift in world economic power to East Asia will determine the future of “sustainable development” as a multidimensional and culturally determined framework for development (Geels 2011).

The Chinese economy has become one of the dominant economies of the world (World Bank 2014). Today, China’s rapid development has been anchored by policy expressions using the traditional Chinese administrative methodology of slogans to reflect developed policy. Though “New China” has radically altered many aspects of socio-economic development since 1949, its development-oriented slogans reflect ancient traditions of Chinese public administration. Chinese traditional governance and public administration is based on the belief of “divine right” (君权神授 *jun quan shen shou*) (Eberhard 2013; Zhang 2002). In New China, the central organs of the party have assumed this authority and the obligation associated with it. In fact, the separation of powers doctrine, that is, a theme in Western democratic thought, is the antithesis of Chinese tradition (Jiang et al. 2013; Feng 2010). A central thesis of this paper is that modern China can only be understood when research is underpinned with this historical context.

In the context of human–environment relations, how the natural (and supernatural) worlds are mediated by the state becomes important (Riva et al. 2004). As we ultimately argue, China’s deep political and environmental histories reveal that modern concepts such as sustainable development can be found to have roots in ancient Chinese thinking and current policies. These concepts revolve around “harmonious development” reflecting a way of Chinese thinking that is being blended with new approaches from the developed world to deal with issues of environmental management at local, national, and global scales.

This paper is framed by China’s dramatic economic growth accompanied by significant environmental decline, such as water pollution, smog, and climate change concerns. As millions of Chinese people have escaped from relative poverty, environmental degradation has escalated to a national-scale priority (Tie and Cao 2009; Chan and Yao 2008). Though new technologies, platforms (e.g. Weibo), and interventions have been used to deploy recent society–environment interactions, we contend here that this in fact represents the convergence and arguably the hybridisation of Chinese and Western philosophies and cultural settings that influence developmental policies. As such, does China offer an alternative developmental model for the world?

2 Cultural power and sustainable development

Cultural influences are significant in effecting collective action in individuals (Nye 2004). This is a fundamental determinant of human’s relationship with nature. At one extreme is the desire to fully manipulate the natural systems, with disastrous consequences (Diamond 1997; Layzer 2012), and at the other end is a mediated and harmonious relationship of humans with nature.

2.1 Evolution of sustainable development in Western cultural domains

Although harmony with nature has had strong ethical advocates in Western contexts since the mid-nineteenth century (Callicott 1989; Nash 1989; Katz et al. 2000; Marsh 1965), it was the coining of the terms sustainability and sustainable development in 1980 by IUCN, UNEP, and WWF (1980) and their subsequent development WCED (1987), Caring for the Earth (IUCN et al. 1991), and the adoption of the Millennium Development Goals by the UN (2011) that have fuelled the integration of economy, society, and environment as an exponentially growing area of Western scholarship (Fig. 1).

This recognition of economic and ecological stresses creating natural limitations has seen developmental doctrines around the world to become increasingly linked to resource conservation and environmental protection with socio-economic development (Daly 1993; Smith 2011; Hopwood et al. 2005). The concept of sustainable development is emblematic of this, especially if resource use and waste disposal capacity exceeds the carrying capacity of the earth (Grooten 2012; Wackernagel et al. 2002).

This integration of scientific research with governance contributes to improve sustainable management of the complex human–nature systems (Beeton and Lynch 2012). Recent multidisciplinary attempts to couple human and natural systems to achieve sustainable solutions involved transitions from resource conservation and environmental protection to social progress in a cultural context (Hopwood et al. 2005; Todorov and Marinova 2011). The view that sustainability “must take root in the consciousness and cultures of society” (Calder et al. 2002) is increasingly accepted, but most work has focused in a cultural context that is Western. This begs the question, “what about its application in New China”?

2.2 Culture as soft power in China

Chinese culture has been evolving for thousands of years, and has not been impervious to outside influences demonstrating internal integration and external adaptation (Triandis

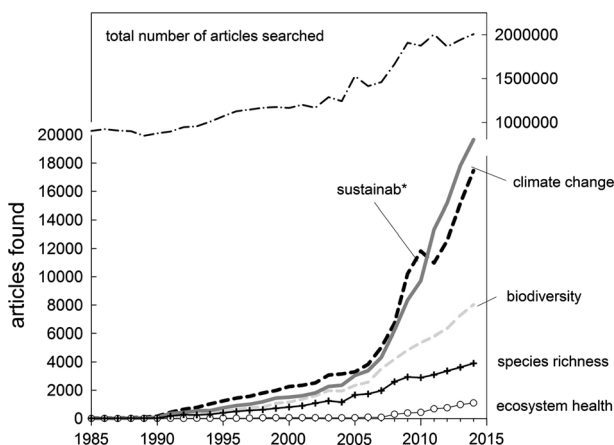


Fig. 1 Number of publications using specific words of “sustainab*” in topics from 1985 to 2015. Data were provided by G. B. Witt (pers. comm.) derived from the “Web of Knowledge™” database. Note that “sustainab*” using an asterisk allows for a search of both sustainable and sustainability

1996; Pan et al. 2012). There is no brand new culture or institution in Chinese civilisation. Consistent with this, the main theme of management philosophy in New China has been a mix of traditional Chinese culture as the core with modern Western management (Fan 1998; Zhang 2010). The widespread adoption of traditional cultural values and philosophies which has been inherent in the ancient Chinese state is now redeployed as part of the communist political project in various forms (Yang 2012). Most recently, this has taken the form of “soft power” (Nye 2004), in contrast to what has been a more militant and domineering “hard” approach (Zhang 2010). Soft power has been considered as a core concept in the Chinese cultural development framework. This concept was captured by the intellectuals and converted into “a new way to conceptualise and exercise power” (Wang and Lu 2008). Former President Hu (2007) stressed the importance of stimulating cultural innovation as part of the country’s “soft power”. The cultural development dimension in the current Chinese administration is a manifestation of “soft power”, which could be regarded as part of China’s comprehensive national power (Zhang 2010).

Soft power in China is interpreted as “using power softly” (Zhang 2010). In Chinese philosophy, there is a strong relationship between soft power and a harmonious world. Confucianism, the dominant Chinese ideology for over 2000 years, advocates leading by moral authority rather than force (Denecke 2010). Cultural power forms Chinese values and the way of living with the natural world. On the other hand, “hard power” is the legalistic tradition, exemplified by the first Emperor of Qin (259 BC–210 BC), which is also a recurring theme especially around dynastic changes when power was being consolidated (Peerenboom 2002).

Soft power is important in the context of the Chinese Government and Communist Party of China (CPC)’s approach to environmental problems as it provides a culturally acceptable adjunct to regulation and places it in an acceptable Chinese cultural context.

3 Thoughts of harmony as the essence of emerging thinking on Chinese sustainability

From an outside perspective, Chinese culture has always maintained its independence and has resisted much of the Westernisation that has accompanied globalisation. The ancient philosophy of harmony in China underlies what has more recently been a pragmatic focus on sustainable development. Although parts of its ideas resulted in some negative impacts on Chinese social construct and governance system, such as the complexity of the interpersonal relationship of “Guanxi” (Chen et al. 2011), the thoughts of harmony has been reflecting an aspirational foundation of contemporary Chinese society and culture together with a pragmatic response to the environmental costs of China’s phenomenal industrial development since 1978.

3.1 Chinese traditional philosophies

Chinese traditional philosophies contributed to norms of harmony (和 *he*), morality (德 *de*), ritual (礼 *li*), and benevolence (仁 *ren*) (Shambaugh 2011). They cover the domain of human activities from state government to self-cultivation, theoretical construction to practice, and the macroview of nature and humans as a whole to individual initiative. All of these philosophies amalgamated to form the characteristics of Chinese society (Song 2001).

Three principal philosophical systems of Confucianism, Taoism, and Buddhism coexist, inheriting and respecting the spirits of each other. Founded during the Warring States Period (475 BC–221 BC), Confucianism has had great influences on Chinese culture, social progress, and management philosophy. Its management ideology ranges from moral education, self-cultivation, organisation management, to world management as a whole (Lin and Chi 2007). The thought of harmony between humans and nature is the basic foundation of Confucianism's ecological view, which advocates ideas of cherishing life, being kind to all creatures, respecting the discipline of nature, and rationally utilising natural resources (Tian and Tan 2009). Taoism describes the origin, form, and change in the universe with the idea of “law of nature (天道 *tian dao*)”. According to this, all creatures are from nature, and there is no God or Lord of all, as Taoism advocates “following nature (顺其自然 *shun qi zi ran*)” and “no-action (无为 *wu wei*)” (Cao 2008). Developed in China since the Han Dynasty (202 BC–220 AD), Buddhism also contains rich ecological ethics thoughts of which the basic ideas focus on “holism, self-denying doctrine, view of life value, pure land view, and daily ecological practices” (Yan 2011).

Since the Han Dynasty, Confucianism and Neo-Confucian traditions have dominated the Chinese traditional culture, and this can be traced to the current political and economic lives of Chinese people. Contrary to Confucianism's benevolent government and Taoism's intuitive development, Legalism represents classical Chinese governance that emphasises strong rules against infractions (Schafer 1967). Typically, this approach accompanies dramatic change that is infrequent but historically significant.

3.2 Spirit of Chinese culture on harmony (和 *he*)

The core value of Chinese traditional culture could be conceived of as “peace is most precious (以和为贵 *yi he wei gui*)” or “harmony without uniformity (和而不同 *he er bu tong*)” (Wang 2007; He and Zou 2005). The word “harmony” in Chinese culture derived from “和” (*he*) that has the meaning of moderate, coordinated, and reconciled. In philosophy, harmony represents unity in diversity, a development status of different perspectives living together in an orderly and vigorous manner (Zhu 2010). Confucianism values harmony above all else, believing that harmony is the highest ideal in conflict resolution (Feng 2010). It also has the idea of finding the appropriate way to solve problems at the lowest cost. The fundamental spirit of Chinese traditional culture could be summarised as: “harmony and moderation (和与中 *he yu zhong*)”, “more spirit less material (崇德利用 *chong de li yong*)”, “coordination of humanity and nature (天人协调 *tian ren xie tiao*)”, and “integration and freedom (融合自由 *rong he zi you*)” (Zhang 2003).

The Book of Changes (易经 *I-Ching* or 周易 *Zhou yi*), an ancient masterpiece in the history of Chinese civilisation, has been widely accepted and has brought great inspiration to the culture of harmony by advocating universal peace and harmonious relationships (Tian 2007). It encourages people to gradually cultivate a harmonious spiritual state, persist in a virtuous kind, create a harmonious political situation, and maintain a living environment of harmony with nature (Tang 2005). There are collections of thoughts relating to harmonious ideas in I-Ching, which include the ideology of integrity and harmony in the notion of “keeping the balance of Yin and Yang (阴阳之谓道 *yin yang zhi wei dao*)” from the view of the universe; the supreme ideal of harmony as “harmony without partiality (和而不偏 *he er bu pian*)” from the perspective of governance which includes the interpersonal harmony between officials and public; and the harmony of mind and body known as “continuous self-renewal and development (自强不息 *zi qiang bu xi*)” from the view of individual initiative (Cui and Jiang 2007; Xiang and Zhang 2010; Dai 2006).

3.3 Relations between humans and nature

The relationship between humans and nature and the social relationships among peoples are two basic relations of the cultural nature of human development (Rogof 2003). The philosophies of Confucianism, Taoism, and Yin–Yang have rich philosophical thoughts on the relationship between humans and nature, including the association of humans with nature, the integration of knowledge and morality, the unity of universal laws and knowledge specification, and the conjunction of “inevitability” principle and “ought to be” judgement (Zhao 2009).

3.3.1 Respecting and loving nature

Love and respect for natural values are embedded within many traditional ethical influences. Confucianism states that “the wise likes water, and the kind likes mountain (智者乐水, 仁者乐山 *zhi zhe yue shui, ren zhe yue shan*)” (Yang 1980). The characteristics of water imply continuity, equality, politeness, and knowing its destiny, while the mountain represents accepting all things, which teaches people to learn from nature. On one hand, Confucius advocates, “know the rule of nature”, meaning that humans should understand and grasp the diverse rules controlling the development of all creatures. On the other hand, they should “respect the rule of nature”. This respect is not like religious worship, but the learning of accumulated human experiences of nature. From his perspective, human beings should know first and then respect (Meng 2005). Similarly, another famous Confucian scholar, Xunzi, proposed his perspective in a naturalistic ideology saying, “there is a rule for all the creatures to live and grow harmoniously on the earth (万物各得其和以生, 各得其养以成 *wan wu ge de qi he yi sheng, ge de qi yang yi cheng*)” (Gao 2003).

3.3.2 Utilising and sustaining nature

Many statements that refer to the harmony between human beings and nature in Confucian ideology focus on the quantity and time of this relationship (Zhou 2008). In terms of quantity, it means that humans should be moderate without being lavish. As Confucius says, “fishing with rod instead of net and shooting flying birds instead of sleeping birds (子钓而不网, 弋不射宿 *zi diao er bu wang, yi bu she su*)” (Yang 1980). The concept of allowing the population of creatures to multiply is consistent with the principle of sustainable development. Xunzi proposes the concept of resources conservation stating “do not cut off the woods when they are growing (草木荣华滋硕之时, 则斧斤不入山林 *cao mu rong hua zi shuo zhi shi, ze fu jin bu ru shan lin*)” (Gao 2003). Mencius warns people not to overexploit resources to guarantee their future utilisation saying “pay attention to the season and quantity of resources and use them wisely (食之以时, 用之以礼, 财不可胜用也 *shi zhi yi shi, yong zhi yi li, cai bu ke sheng yong ye*)” (Yang 1960). All these ancient ideologies advocate controlling human desire to utilise nature rationally.

3.3.3 Harmony between humans and nature

Living harmoniously with nature was a well-established concept in ancient China, also a fundamental issue of cultural direction. Early in the Spring and Autumn Period (770 BC–475 BC) and the Warring States Period (475 BC–221 BC), Taoists suggested establishing a harmonious relationship between humans and nature and indicated this status of

coexistence conformed to the purpose and rule of nature (An 2008). The ancient ideology of “heaven–human unity (天人合一 *tian ren he yi*)” has fully reflected the integrated value of this relationship (Zhang 1985). In accordance with modern geography, the “heaven” and “earth” in ancient China could be interpreted into “climate” and “land” which comprise the natural environment. The outstanding thoughts about the relationship between humans and the natural environment rely on the recognition of natural environment restriction, active adaptation to the natural environment on the premise of this restriction, and pursuit of harmony between humans and natural environments (Fang and Mu 2005).

From the Confucian view, the three interactive elements of heaven (atmosphere/climate), earth (environment), and humans (society) unify the world (Zeng and Liu 2002). It puts humans between the heaven and the earth, like a bridge to connect two sides. In Confucianism, harmony is the basis for everything as well as an important ethical principle, which has put an end to the difference between heaven and the earth and permitted all creatures to secure their ecological rights. Based on this, Dong Zhongshu (179 BC–104 BC), a famous Confucian in the Han Dynasty, escalated the meaning of “harmony” from a natural order to the level of ideal moral state and suggested that “the biggest virtue is harmony” (Zeng and Liu 2002).

The notion of “harmony between humans and nature” is not only a philosophical, but also an ecological and economic ideology. Although the word “ecology” does not appear in the literature of ancient China, Chinese civilisation has a continuous history of recognising ecological principles (Jiang 2004). In Chinese philosophy, the natural system consisting of the five basic elements (五行 *wu xing*) of metal, wood (living organisms), water, fire (energy), and earth (nutrients and land) maintains the balance of ecological systems by supporting and controlling one another. This dynamic balance is used to describe the interrelationships of basic phenomena within the natural systems (Xiao 2012; He 2011). Similarly, the concept of Yin–Yang balance is used to describe how seemingly disjunct or opposing forces are interconnected and independent in the natural world, and give rise to each other in turn. Many natural dualities, such as dark and light, female and male, low and high, are viewed as manifestations of Yin and Yang. As Kohn (1993) states, “Yin and Yang embody each other in harmony and engender manifold transformations”.

Ancient Chinese ideas about harmony and balance do differ in their ontological and epistemological foundations from modern ecological and sustainable theories, but they

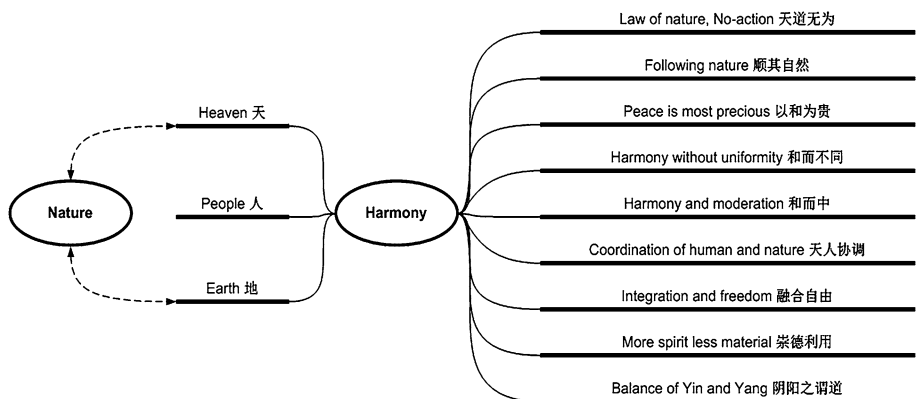


Fig. 2 Chinese traditional philosophies of harmony

Table 1 New China's policy evolution and its related slogans, movements, institutional changes, and environmental management

Slogan	Time	Movements	Institutional changes	Environmental management
科学技术是第一生产力	1978	Deng stressed China should develop its scientific and technical education to modernisation	This asked CPC to modify its institutional policies to boost the economic development	
解放思想，实事求是	1978	Deng used this to change the working emphasis of CPC	This provided a theoretical foundation to open and reform since 1980s	
改革开放	1980s	Dramatic economic development since the third session of the 11th Central Committee of CPC	This was the main theme of China's economic change over the last 30 years	
建设中国特色社会主义	1982	Deng provided the nature of the open and reform	Foundation of Chinese economic policies reform	
社会主义市场经济	1992	Deng defined what the Chinese economic reform is	Officially frame out the socialist market economic policy on the 14th Central Committee of CPC	
可持续发展	1992	Balance the gaps between the economy and resources, the environment and population, and humans and the environment	Made sustainable development to the national policy of PRC	Issue 10 measures to China's environmental problems and formulate the first Five-Year Plan on environmental protection

Table 1 continued

Slogan	Thought of three represents	Time	Movements	Institutional changes	Environmental management
三个代表	Thought of three represents	2002	Jiang proposed on how to build up a healthy party	This became one of the principles of CPC	Control the total amount of pollutant emissions, prevent environmental pollution in "Three rivers and Three lakes, Two districts, One city, and One sea"* and control human-made ecological damage in other key areas. Water pollution control and ecological protection in three Gorges Reservoir area and upper reaches. South-to-north water diversion project
构建社会主义和谐社会	Building a harmonious society	2004	Hu asked CPC to focus on social and ecological development after more than 20 years of economic development	This is the current principle policy of CPC to implement economic regulations	Establish environmental management systems, improve environmental quality in some cities and regions, and build a number of environmental protection model cities and demonstration areas
科学发展观	Scientific outlook on development	2007	Hu defined this concept to focus on social development and reconsidered the cons and pros since open and reform	This becomes the method of CPC to implement policies and regulations	Reduce energy intensity and major pollutant emission, and protect drinking water safety for urban and rural people
中国梦	Chinese dream	2012	Xi explained this concept with military strengthening, economic prosperity, social harmony, and the improvement of people's livelihoods	This becomes the important guiding ideology and important concept of governance	Strengthen the importance of social harmony and ecological civilisation, and build a resource-saving and environment-friendly society. Environmental pollution can be investigated for criminal responsibility according to law

* The "Three rivers" refers to Hai River, Huai River, and Liao River; "Three lakes" are Taihu Lake, Dian Lake, and Chaohu lake; "Two districts" represents the sulphur dioxide pollution control areas and acid rain control areas; "One city" is Beijing City; and "One sea" is the Bohai Sea

share the common basis of systems thinking and evolutionary theories. Sustaining nature is a basic spirit of Chinese philosophy and has evolved as “harmony”. The philosophies of harmony could be summarised as combining heaven, earth, and people into one, and handling their relations with the idea of living harmoniously with nature and other people, which has the variety of expressions and understandings (Fig. 2).

4 Shaping of Chinese sustainable development

Contemporary Chinese society and the modern Chinese state have merged ancient and recent development philosophies, particularly as environmental issues have grown more acute in the past few years.

4.1 Institutional implication of harmony in China

The nature of China’s institutional development links contemporary socio-economic thinking with the Chinese thoughts leading to the concept of “New China”. Since the 1920s, the Chinese management elite has been informally, and more recently formally, exposed to sophisticated management training where ancient Chinese understandings and knowledge have been blended with Marxist–Leninist thinking and Western management philosophy (Shambaugh 2008; Schram 1963). The Party School of the CPC is an institution dedicated to this process. Consequently, the relationship between the ruling party of CPC and the government is the fundamental political relationship in China. The ruling status of the party is achieved through the leadership of the organs of state power with the ruling principle of “control overall, coordinate all” (Wang 2009). The idea of revolution is concentrated on the concept of “struggle”, while the idea of ruling puts much emphasis on the concept of “harmony” (Dong 2009).

The influence of Chinese culture derived from Confucianism and other philosophies is magnified by the leaders in the group. Since the advent of New China, the cultural and social changes are defined in accordance with the succession of leaders. Successive leaders used slogans to call for social movements and deliver ideas (Liu and Li 2011). This is historically consistent as the Chinese are fond of their literary culture and concluding the essential meaning into a few words as slogans. The generation process of slogans also shows the transition of ruling ideas of the CPC and social changes. Table 1 outlines the main slogans and related movements, institutional changes, and the focus of environmental management since China adopted the policy of “reform and opening up” around 1978. Each slogan and movement added to or changed the principal pathway of institutional change.

Institutions are the sum of regulations and political rules, while leadership is the key to the institutional change (Lieberthal and Oksenberg 1988; Zheng 2003). Each leader’s thoughts on management and social control vary. However, all of them are orientated towards a kind of harmony both inside the Party and the country. At different stages, the institutional pursuit of harmony has had different themes. Former President Hu’s “harmonious society” and “scientific outlook on development” are examples of displacements that changed the main objective of policy from economic development to social development. Currently, the administration is using the “Chinese dream” proposed by President Xi as the main institutional guideline with the intention of achieving a great renaissance of the Chinese nation by linking each person’s specific interests with the interests of the state

and nation as a community (Wan and Xie 2013). Rayner and Howlett (2009) demonstrate the relationship between the high levels and programme levels of the policy elements in an integrated strategy. With this interpretation, each “Five-Year Plan” can be regarded as a high-level policy guide, while shutting down companies responsible for pollution is an example of the programme-level policy implementation. The high-level governing policies, such as the “harmonious society” or “harmonious development” and “Chinese dream”, are the principles that link the general concepts and concrete goals.

4.2 Building a harmonious society

China’s former President Hu put more emphasis on resolving social problems by advocating scientific governance and proposing the thought of building a “harmonious society (和谐社会 *he xie she hui*)” (Zheng and Tok 2007). Consequently, “harmony” became the value orientation for building “socialism with Chinese characteristics”. The objective of building a harmonious society was based on the traditional Confucian concepts of benevolent governance, which is considered to be a return to the long-established faith (Yang 2008). The main contents of a harmonious society comprise democracy and the rule of law, fairness and justice, honesty and amity, vitality, stability and order, and harmony between humans and nature (Guo 2005). Recently, China has cooperated with the World Bank and worked out the strategy of “China 2030: building a modern, harmonious, and creative society” to further accelerate the transition for China’s sustainable future (World Bank 2014).

The latest guideline of the “Chinese dream” is based on an amalgam of sustainable and harmonious development. The “Chinese dream” could also be interpreted as a “harmonious and happy dream” in Mandarin (Friedman 2012). It represents a hope that “marries people’s expectations of prosperity with a more sustainable China” and gives a new expression and approach for Chinese sustainable development (Friedman 2012). From this point of view, the “Chinese dream” is a dream of sustainability and prosperity for both individual lifestyle and the nation, which can be achieved through advanced green techniques, moderate consumption, and harmonious society (Liu 2012). Underpinning this is the enabling condition of good governance.

4.3 The influence of harmonious development on sustainable development in China

Sustainable development is now broadly understood as a global environmental philosophy. However, it has to be integrated with local conditions and cultures when applied to each respective context. The ancient Chinese ideology of harmony has direct significance in practicing environmental protection and sustainable development (An 2008).

In the context of Chinese culture, sustainable development and harmonious development have many points in common. Li et al.’s (2015) research on public perception about sustainable development and harmonious development in China reveals that there is a common view that they are closely linked, mutually promoted, and complementary to each other. Harmonious development could be simply understood as the Chinese iteration of sustainable development, but with a distinct lineage, traceable to millennia of historical development.

Harmonious development considers both material and spiritual dimensions. The material level of harmonious development is sustainable development, while the spiritual level refers to interpersonal harmony. From the common view that the spiritual

requirement is higher, sustainable development could be regarded as the prerequisite of harmonious development. At the same time, social harmony is essential for sustainable development to promote stable economic and cultural development. Confronting this philosophical problem is difficult, and there is no absolute sequence of sustainable development and harmonious development but a simultaneous and contemporary progression. This poses special problems for a traditionally centralised and prescriptive governance system.

People-oriented thought has always been an essential part of Chinese culture. Many traditional ideas attach great importance to the role of people, and they continue to be crucial in the modern governance system. Therefore, harmonious development places more emphasis on the tangible qualities of people's lives.

4.4 Chinese sustainability adaption in environmental management

The perspective of sustainability provides useful ethical boundaries within which to pose questions about the environment and the use of knowledge for environmental decision-making and governance. To meet current and future environmental issues, Chinese sustainability and environmental management has been progressively developed.

In 1983, the second National Environmental Protection Conference confirmed environmental protection as a fundamental national policy that needs long-term persistence and proposed three main policies: putting prevention first and combining prevention with control, polluters are responsible for pollution control, and strengthening environmental management (Fu et al. 2007; He et al. 2012). After the United Nations Conference on Environment and Development (UNCED 1992), a Chinese version of Agenda 21 was developed. This incorporated environmental protection into the annual and medium-term plans of national economic and social development (Wang et al. 2008). China's Agenda 21 attached great importance to the sustainable utilisation of resources and environmental protection, and considered environmental protection as an inevitable component of sustainable development. In accordance with the commitment to UNCED, the Chinese government issued "10 measures to China's environmental problems" in 1992. The first measure was "implementing sustainable development strategy", and the first Five-Year Plan on environmental protection was worked out in 1996 (Fu et al. 2007). In 2004, the State Environmental Protection Agency (SEPA) announced a blacklist of the 10 most polluted cities to draw local attention to urban pollution and discourage their environmental irresponsibility (Zhang 2007). In the 11th Five-Year Plan (2006–2010), China set ambitious goals to reduce major pollutant emissions with special emphasis on SO₂ emission. By 2010, the total emission of SO₂ declined by about 14 % from the level of 2005 (Schreifels et al. 2012; Li et al. 2014). The latest 12th Five-Year Plan (2011–2015) further strengthened the efforts to cut down the water and energy consumption intensity per unit of GDP (Friedman 2012).

These measures recognised that environmental protection in China has rejected the previously held idea of developing first and treating the pollution later (Zhang 2007), and evolved from a reactive to a proactive strategy (He et al. 2012). It also emphasised that development must involve environmental planning to achieve economic, social, and environmental benefits at the same time. In addition, China has been dedicating to build countrywide harmonious development, demonstrated by the south-to-north water diversion project and the harmonious development between south-eastern and north-western regions, which not only focus on the socio-economic cooperation but also permeate into the field of resource coordination and environmental rehabilitation.

Currently, every newly built, modified, and improved project in China must have an environmental assessment. Only if environmental requirements are met and confirmed by a government acknowledged expert will the project be approved. The government will force factories with heavy pollution and energy consumption to invest in environmental protection input or close them directly. For instance, in Linzi District, one of the famous chemical industry cities in China, the local government closed over 1000 small factories in 2010 and the sulphur dioxide decreased dramatically in the following 3 years (Cheng 2013). Recently, the serious smog including PM 2.5 in large areas has refocused people's attention on environmental problems, and many cities have started to publish daily environmental statistics. These data embarrass polluted city administrators and push them to make changes. This is a change from the GDP-oriented approach in the past, and environmental indicators are now used in the final assessment of the local administrative officers seeking promotion.

Based on China's experience in environmental management, it can be demonstrated that monetary penalties cannot solve environmental problems because they do not provide sufficient incentive to control emissions (Lin 2013). Therefore, China's 11th Five-Year Plan (2006–2010) linked environmental performance to local government officials' due diligence as an approach in local pollution control and sustainable development, which suggests the failure to meet environmental standards would lead to criticism or demotion of responsible officials (Li 2013; Liu et al. 2012; CPC 2006). The approach of making officials responsible is taking hold. In 2005, the Director of SEPA resigned due to the water pollution in Songhua River (Wang and Tian 2005). Similarly, the Director of the local Environmental Protection Bureau of Baoding in Hebei province resigned because of the lax enforcement of several paper companies' emission in 2006 (Pang and Xu 2006). Correspondingly, officials who succeeded in implementing environmental improvement have been promoted. In 2012, the articulation of the "Chinese dream" strengthened this approach to policy and regulation. This is reflected in the new environmental protection law proposed for 2015, which requires that officials should resign if the pollution is not under control (China Environmental Protection Net 2014). With this kind of assessment of officials, local government is placed under more pressure to pay attention to environmental protection.

5 Conclusion

Industrialisation and its economic implications have allowed many societies to accumulate considerable wealth. This surplus allows a transition to sustainable development, in theory at least. Such an opportunity does not exist for developing countries trying to adopt sustainable development. In fact, the precepts of sustainable development may often challenge cultural practices in developing countries. Is it possible for developing countries to redefine and evolve their culture, to adapt to green thresholds and move quickly in the direction of global sustainability? The answer is probably no if current models persist. Solving the sustainable development problem is not just an economic and environmental issue, but also a cultural one that requires new thinking to enter the mix.

The transition towards sustainable development has become a societal framework that is shaping contemporary development around the world. Sustainable development is a way to modify and improve the current socio-economic paradigm to achieve better intra- and intergenerational development and environmental improvement. Though this concept

originated from Western culture for the purpose of mitigating a looming environmental crisis, the ideas of sustainability have parallels in Chinese traditional culture in which the concepts of sustainable development are best understood as harmonious development. In the Chinese context, we argue that sustainability is a contemporary variant which is built on Chinese traditional philosophies—a confluence of multiple traditions that date back nearly five millennia. The primary implication of this is that it allows modern Chinese governance systems to align with sustainable development.

China, as the world's most populous country, has learnt from Western experiences and developed to a position on sustainability that merges the traditional philosophies of harmony with established cultural practices. Though it clashes with concepts inherent in Western culture, harmonious development is being redefined to become a conduit to gain acceptance of a form of sustainable development in Chinese society. The trends in China suggest that the next revolution could be the application of the same level of social and economic investments in environmental governance that we have seen in industrialisation. This is harmonious development with a strong environmental overlay. Such powerful thinking as the “Chinese dream” coupled with the rise of BRICs (Brazil, Russia, India, and China) and proposals for new financial intuitions suggest that the harmonious development model warrants serious consideration in world thinking. In China today, Western constructs of sustainable development are intangible, while harmonious development and its articulation in “Chinese dream” is a culturally acceptable way of facilitating China's development. It is aligned with the economic and political circumstances in the world while driving environmental improvement without compromising China's governance system.

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