

## *Conversing with the Other: Complexity, Chinese Culture and Curriculum Reform*

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“What makes a difference is a difference.”

- Gregory Bateson, *Mind and Nature*

In his book, “Mind and Nature,” one example Gregory Bateson (1979/2002) uses to illustrate how “difference” makes a difference is binocular vision. He says the seemingly undivided binocular image is in fact a complex synthesis of information received from both eyes—the “difference” between the information provided by one eye and the other is “itself information of a different logical type” (p. 65, original emphasis). Bateson argues this difference adds an extra dimension to the seer’s seeing and thus creates the information about depth. When I attended the biannual conference of “Complexity Science and Educational Research” hosted by the East China Normal University in Shanghai, I felt again and again, as suggested by Bateson, how difference can make a difference. Over 230 educational researchers, educational commission administrators, school principals and teachers participated in this conference in 2010 with the theme of “Complexity, Chinese Culture and Curriculum Reform.” The participants from five countries discussed a variety of educational themes and topics from their historical, philosophical, and culturally different perspectives. It was in this complex and dynamic process of conversing with the other that new ideas and new ways of thinking emerged.

When I read the four Chinese articles selected from the complexity conference into this issue, the beginning quotation of Bateson comes to my mind again. The four articles, “Listening Pedagogy” by Zhang Hua, “Confucius and Socrates” by Zhong Jianwei, “Curriculum Study based on Complexity Science” by Jiang Shihui & Guo Shaodong, and “A New View of the Relationship between Teaching and Learning Based on Complexity Theory” by Zhang Guanglu, explore differing themes in the field of education while looking for new possibilities in curriculum studies and classroom teaching and learning. Dynamic conversations between the East and West; the ancient, modern, and post-modern; theory and practice; local and global; simplicity and complexity are woven through all of the four articles. The tensioned “difference” generated in the conversations forms a pedagogical bridging between Eastern and Western thoughts through a bridge “which is not a bridge” (Aoki, 2005, p. 228).

In this sense, Zhang Hua’s conceptualization of listening pedagogy and Zhong Jianwei’s comparative study of Confucius and Socrates are two fascinating bridges that “we are in no hurry to cross over; in fact, such bridges lure us to linger” (Aoki, p. 438). In

Zhang's paper, he first critiques the traditional "lecturing" pedagogy which values the teacher's control of students and so called knowledge or truth in the textbooks. Then Zhang advocates the "listening" pedagogy, emphasizing the importance of the teacher's listening to students, mutual listening between teachers and students, and the listening among students. In his article, Zhang critically examines the origins and development of both lecturing and listening pedagogies in the ancient, modern, and post-modern history of not only the East but also the West. Similarly, Zhong's comparative study of Confucius and Socrates contextualizes the two cultural icons, both of whom declared they did "not know" but held different concepts of knowledge, teaching and learning, in two culturally and historically different social systems of the East and West.

In the complex conversations between the East and West in the articles of Zhang Hua and Zhong Jianwei, it is interesting to notice the intricate different slants of some perspectives of Zhang and Zhong. For example, the images of Confucius constructed by Zhang and Zhong are not the same. Zhang regards Confucianism as "the first educational school all over the world to set up a pedagogy of 'listening'" as Confucius argues, "that people "who are clever speakers and maintains 'too-smiley' faces are seldom humane individuals" (The Analects, Ch.1), while those "with firmness, strength, simplicity and caution in speaking" are "close to humaneness" (The Analects, Ch.13). In Zhong's article, compared with the open ended dialogues of Socrates, the structure of the dialogic teaching of Confucius generally begins from "not knowing" and ends with "knowing" in a closed circle. Zhong argues that in this teaching, Confucius becomes "an incarnation of a knowledge standard." In other words, all words from the mouth of Confucius become absolute knowledge and truth for his students to follow. Zhong adds that the strong emotional attachments of the students of Confucius to him also "prevented them from debating with Confucius." The two Confucius or teaching models of Confucius presented in Zhang and Zhong do not mean that one is right and the other is wrong. The two different interpretations, however, create the depth of our understanding of Confucius by adding a third dimension to our seeing of Confucius and therefore improve our resolutions of Confucius "at edges and contrasts" (Bateson, p. 65).

Another two articles by Jiang Shihui & Guo Shaodong and Zhang Guanglu explore the implications of complexity theory for teaching, learning and curriculum studies. Complexity theory has been widely researched and applied in a great number of disciplines, but it is still a brand new word in education, especially for Chinese educators. However, about one fifth of over 230 participants of this biannual conference of complexity and education were not educational researchers or university educational faculties, but school principals and teachers. Moreover, among the forty-eight conference presenters, three were middle school principals, two elementary school principals and one elementary school teacher. The data shows the great interest and even compassion of Chinese educators, not merely educational researchers, in complexity theory and its influence in daily classroom teaching and learning. The two articles by Jiang, Guo and Zhang not only review the most recent development of complexity theory in education in the West, but also explore seriously how this new science can influence teaching and learning in Chinese classrooms in current National Curriculum Reform<sup>1</sup>.

The focus of Jiang and Guo's research is on the following characteristics of curriculum as a complex adaptive system: nonlinearity, uncertainty, self-organization and emergence. The three critical incidents in three different Chinese classrooms Jiang and Guo use to analyze how school teachers can apply complexity theory in their own classrooms are very fascinating. One incident is when an elementary teacher taught a

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<sup>1</sup> In 1999, the Ministry of Education of the People's Republic of China officially declared the beginning of the National Curriculum Reform in the grades 1-12 schools. Until now, this grand project is still undergoing further development.

traditional Chinese fable to his students in a Chinese language class. The fable tells that a frog has been living at the bottom of a well since he was born. The frog is completely satisfied with his life in the well and has never thought of jumping out of it to see the world outside. The fable is supposed to instruct the students that we as human beings should not be as easily satisfied with present life and shortsighted as that “silly” frog. To the teacher’s surprise, one student in his class claimed that even if the frog jumped out of the well and took a look at the outside world, he might finally still choose to jump back into the well. Then the student was teased by the class, including his teacher. However, that student insisted his own opinion and wrote a wonderful reflection upon the fable after the class. He wrote about how disappointed and scared the frog might be in the outside world when he saw that his siblings were caught to be cooked in restaurants and rivers were polluted by factories. Jiang and Guo wonder what would happen if the teacher in that class had not teased the student but asked him “Why did frog jump back into his well?” They think the whole class would “cheer for his amazing imagination and creativity.” Therefore, Jiang and Guo critique that “the teacher’s curriculum implementation stayed only on the default level of the curriculum implementation; he was afraid of the appearance of ‘uncertainty’ during the curriculum implementation process.” At the end of the analysis of this incident, Jiang and Guo challenge all school teachers to resist the “temptation” of a prematurely closed curriculum system with absolute certainty.

As both Jiang Shihui and Guo Shaodong’s article and Zhang Guanglu’s article emphasize that curriculum is a dynamic nonlinear system, Zhang focuses on the recursive characteristic of the nonlinear curriculum system. Zhang thinks that in essence, recursion is “mutual understanding between teacher and student”: “both teacher and students are not stubborn, but open to each other, and everyone keeps open the possibility of an others’ truth and each communicates with the other.” Zhang writes that the recursion thus leads to the “continuous transformation of the roles of teacher and student.” In other words, he says that “teachers needs to listen attentively to the viewpoints of students, especially on the basis of different opinions of students; teachers should rethink their opinions and former views constantly, and realize the locality and limitation of their views.” Recursively, this emphasis on the listening of teachers to students in Zhang Guanglu goes back to the powerful advocate of “listening pedagogy” in Zhang Hua, the first Chinese article in this issue.

As suggested by Zhang Hua in his listening pedagogy, “it is necessary to switch various perspectives to see the world differently and respect the differences between them in the process of description; on the other hand, many describers constitute a community of inquiry to collaboratively describe the same person or thing in order for a deeper disclosure.” The four Chinese articles in this issue provide a good example of such a collaborative community of inquiry which not only approaches to complexity and educational research from a variety of perspectives but respects the differences generated in the complex process of conversing with the other. Let us go back to the beginning quotation of Bateson again: “What makes a difference is a difference.”

## References

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