# A Brief Response to "The Changes in Cultural Continuity" by Dr Bent Nielsen, presented at *The Second International Conference on I-Ching (Yijing) Studies and Contemporary Civilization*. (Published on pp274–282 of the conference proceedings).

Dr Andreas Schöter

Nielsen's paper presents the Yijing as a vehicle both for cultural continuity within China, linking the thoughts of its ancient sages with the work of its contemporary philosophers, and as a medium for intellectual exchange between the East and the West in the present day. In doing this he draws out both the historical significance of the book and the ongoing contemporary relevance of the Yijing to everyone.

## *The Yijing Contains Everything*

In discussing the frequent Chinese assertion that the Yi contains everything that has ever been dreamt of in philosophy and science, Nielsen begins by raising Legge's description of this as "an hallucination". Nielsen himself is sympathetic to the Chinese claim, presenting a wide range of philosophical and scientific ideas that have clear connections with the cosmology of the Yijing to support it. However, I want to approach this idea from a different direction and, in the process, explain why in Nielsen's words (p275), the Yi "does lend itself rather easily to numerology and cosmological and metaphysical theories."

It used to be the case that hard line reductionists in science thought that everything would ultimately reduce to physics. It's easy to see why, the argument starts something like: chemistry certainly reduces to physics, and what is biology other than complex organic chemistry? From there psychology could be integrated via neurobiology, and thence sociology and everything other domain of study. Now, instead, there is a strong move towards the idea that information theory underlies everything – everything from quantum physics to economics. Although science is not free of its fashions, with the latest explorations frequently being put forward as explanations and metaphors in apparently unconnected domains, there is a lot of sense in this current idea. After all, any theory, regardless of its domain of application, must be described in language of some form, whether it is mathematics or a less formal expression. And the function of language, in this role at least, is to carry information.

Now it could be claimed that the Yijing, from some perspectives, is really an early study in information theory. In particular, the symbols of the book are binary, and binary is the fundamental representation in modern information theory. In that case, the symbols of the Yi certainly are going to contain, at least implicitly, a great deal of the science and philosophy that arises later.

Elsewhere in his paper, Nielsen talks of "the pervasive principle", *li*. To know the principle is to know the way of everything. Again, in the light of the comments above, I would connect this to information theory!

## *Arithmetic or Algebra?*

This is a minor technical point, but I'm afraid that I feel it needs to be clarified. Nielsen says that Leibnitz's system of binary arithmetic forms the basis of Boolean

algebra (p275). Whilst Boolean algebra could not have developed without the earlier work on binary arithmetic, Bertrand Russell[1] speaks of "the chasm" that divides the two subjects of arithmetic and algebra! That is, binary arithmetic and Boolean algebra are two quite distinct subjects that just happen to both use binary representations. Shao Yung's arrangement of the hexagrams certainly is a binary counting arrangement and therefore has a direct parallel in Leibnitz's arithmetic work. But the algebraic connections can only come later, once Boole has begun the development of modern mathematical reasoning.

To make the distinction more concrete, in the case of counting and arithmetic the symbols of the Yi need to be interpreted as numbers; in the case of algebra, this isn't necessary (or even desirable). Formally, the arithmetic approach requires us to impose a total order on the symbols, which restricts us to a linear view of relationships between those symbols. However, an algebraic approach allows the relative freedom of a partial order and the rich relational structures that result.

## *Cultural Uniqueness*

Nielsen suggests (p276) that the Yi is singularly Chinese. Whilst I tend to agree with this assertion, it is interesting to raise the topic of African geomancy, which seems to have been known in Europe during the 13th Century. Whilst the African system is of uncertain origin and seems to lack the rich philosophical and cosmological background of the Yijing, it nonetheless is a divination system based on binary symbols. In the case of geomancy, 16 figures are formed from groups of four variable, represented by either two dots or one dot. There is a clear parallel with the symbolic structure of the Yi.[2]

Following on from the idea of cultural uniqueness, Nielsen discusses a number of Chinese authors who have used ideas from the philosophy of change to create contemporary applications in a number of different domains. One example that he cites is the work of Zhang Shanwen, who creates a literary theory based on the triple hierarchy of word, image and idea. This shows how the Yijing continues to be vibrant and relevant in Chinese intellectual life.

Nielsen also provides an extensive discussion of the ideas of Fang Dongmei, who studied the ideas of Western philosophers extensively, yet remained rooted in the ideas of the Yijing. In particular Fang was critical of the ubiquitous dualism that exists in Western thought, and emphasized function and unity in his theory. This work is carried forward and extended today by his student Cheng Zhongying. Cheng characterizes the difference between Western and Eastern approaches by pointing out that in the light of perceived polar opposition, Western *synthesis* creates a third possibility, eliminating the opposition; in contrast Eastern *harmonization* includes the poles together in a unifying pattern.

---

[1] Bertrand Russell, *Mysticism and Logic*, published by Routledge, 2004, p66.

[2] I've not investigated this in any depth, but Nigel Pennick has a book called *The Oracle of Geomancy* published by Capall Bann, 1995, which looks at this topic.

*Cultural Convergence*

It is important to note that this philosophical perspective on the difference between Eastern and Western thought is largely confirmed by empirical research in cognitive psychology. For example, Richard Nisbett brings together the results of a number of experimental studies in his book *The Geography of Thought*.[3] In this work, he shows that these differences are not confined to the rarefied domains of philosophical discourse, but are actually deeply embedded in the cognitive strategies of the respective general populations. These differences are culturally reinforced and are then reinforce the culture, in a cycle of mutual support.

Nisbett explores the relative advantages and disadvantages of the two approaches, suggesting that each has its place. He hopes for a convergence of cultural values, not merely through "Westernization" of the East, but also through "Easternization" of the West, creating "new cognitive forms based on the blending of social systems and values." (p224). Indeed, it was an explicit part of the intention of the conference, as set out in Cheng Zhongying's opening speech, to use the Yijing as a vehicle to facilitate such a blending of culture. In that spirit, Nielsen's paper goes some way to mapping out the initial territory being explored as these two cognitive strategies encounter each other.

[3] Richard E. Nisbett *The Geography of Thought: How Asians and Westerners Think Differently and Why*. Published by Nicholas Brealey Publishing, 2003.