THE INFLUENCE OF TRADITIONAL VALUES IN CHINESE REASONING *(A Case – Study)*

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Abstract:
In this case-study we try to emphasise how traditional value as mental programs can be find in a modern Chinese life and teaching. Using anthropological and ethnological methods we can better understand the universal reasoning and also, if they are, some differences, how they are operating in different areas and why? We made observation in Chinese culture and tried to compare them with western logic reasoning.

Key Words: Mental Program, Education, School Culture

Introduction:

The major theme we were focused on this *case-study*, realized in Zhangzhou, Fujian Province, R. P. China is about the influence of traditional Chinese values as logic reasoning in modern school and education. In this case study it was used as a main method the anthropological and ethnological immersion, participative observation in the real social and school environment.[13] Researcher have been living in campus, teaching students, and visiting several schools, taking notes, photos, recording a lot discussion in meetings with teachers and students. Not all of this will be discussed here. We choose only the importance of Chinese languages as mental organizer and show if traditional value like accepting together what we call opposite is working in their reasoning and which are the results of it.

At first, we have noticed everything we found, but in time we have been aware that we should select data. We try to forget our culture and presumption we've carried with (as they believe that everything is happening in China is about present official politic).

At the end, we found that the traditional values are preserved in the new models that they imported from West (curriculum, act, legislation, concepts) by mental program embedded in their languages, practices, and beliefs.

1. Mental programs

Chinese are using a different mental program as semantic memory (important in mathematic study), Ying-Yang philosophy and structure of Chinese language (that explain their ability in relative tasks and connections) stereotypes (about authority, community in social organization), and many others. Some parts of their achievement, supported by traditional presuppositions and tacit beliefs are successful and some parts are not. By example, they are successful in maths, techniques, sports because they preserve in national curriculum ancient practice (double system of numbering, traditional sports, calligraphy).

Natural Chinese language as mental organizer program enabled them, by example, to have a holistic view about the world, avoid controversies, but make them have difficulties to learn western languages as English, because their natural language creates a different mind.

2. Some pre-formal operators

We try to emphasize here, as an example, some points we found, following this topic: Some pre-formal operators, like Dasen and Ribaupierre [1] had showen, can facilitate mind to work in a specific way. (Of course, there are many others, we found during our research, like body language, the role of traditional sports, the role of music as mind organizer, or meta-programing solutions for other mental programs and so on and so on).

In this issue our purpose is to add some points to the Neo-Piagetian theory, which are extending the image about rational mind and education in different culture. There are already some contribution about cross-cultural researches in educational field, made by and Kniping [6]; Pepin [7];[8];[10] Pepin and Hargarty [9].

We have been focused only in logic reasoning; what is rational for Chinese mind and why? Because tacit value, assumptions are deeply embedded in languages our hypothesis was we can discover some clues searching Chinese language structure. Identification of different procedures from natural languages used to count and put together things called classifiers, leads us to the idea that they create a different image, map of the word. That image is important for many aspects embedded in life situations including education.

Researcher started this study guided by the philosophical framework of Chinese culture, more precisely the holistic presupposition in which "everything is connected with everything else"; and that the explanation of a phenomenon or process can't be isolated, alienated from its context and cuted from the relations with other phenomenon. Also, to be taken into consideration, the interdisciplinary ideas gathered from our lectures and cognitive neurosciences. To get to the point, we knew from recent studies that mathematical skills, language development and even movement reside in the same cerebral areas, the intra parietal inferior as Rickard et al. [11] showen.

If this is indeed the case, this means we can find indices of Chinese mental specificity by observing the way they combine seemingly different and unrelated activities (i.e. music, paper cutting, eating habits, and traditional medicine, beliefs including superstitions regarding names, colours and luck) and, mediated by culture, the way they develop complex cognitive scheme and, maybe, neuronal structures. Usually, cognitive schema as knowledge units, acquired non-critically, tend to be rigid and dogmatic. Counterintuitive, here we will observe a truly amazing plasticity especially in bi-cultural individuals or those that are becoming so.

3. Everyday life and school

Our observation began, of course, with everyday life and some about school curriculum. In everyday life they are using a holistic conception. In society or the relationship with nature, this takes the form of harmony, peace, understanding or merging, sustainability, following trough, group interest. We were surprised to find that the Logic as a subject is missing from the school curriculum. And the practice of logic reasoning, in the Aristotle manner, is not assimilated as an exercise. Contradictory discussion as controversy is difficult to spark and maintain, mainly due to the conflict avoidance scheme engrained in Chinese culture, they said.

The education in schools, with its general subjects, is similar to ours. They incorporated electricity, hygiene, biology as modern acquisitions and use them for explaining world phenomena, but they still keep and invoke their traditional knowledge as an alternative. Along those lines, their social interaction strategies are permeated with stories (in which the hero acted or said this or that) or a short poetry (usually learned as an early childhood imprint) aimed at defusing social tensions, empathizing, and basically changing one's point of view by appealing directly to the one's emotional core. Regardless of educational level, the bearers of Chinese culture maintain their immersion in traditional, archetypal world. At least, in this part of China, South-East, Fujian, the school is a way of anchoring the individual in modern life.

Nevertheless the official scholar, curriculum keeps feasible, elements of classical culture. The ancestral knowledge hasn't been pushed aside in the mythological realm (as it is the case with other cultures); it is still being enacted in everyday life. Y. G., our assistant, a student from English Department told us once, that he has to go buy "some herbal medicine" because he's got too much "fire" in his organism. He further explains in response to our inquiry that he's not talking about emotions or tiredness, but there's too much "red" and not enough "black" in the Ying-Yang, therefore it's his responsibility to re-establish the equilibrium in his organism.

We're asking more explanations but he cannot give us. Herbal ailments are now canned like Coca-Cola. "Nothing is special, he said, the modern Chinese civilization packages the tradition, so it can be easily used" (Wang - student). Again, we try to ask for a logical, hard faced explanation and in spite of the fact that his English is very good, he replies with a glint of pity in his eyes, that he doesn't has the necessary terms to convey the meaning. Such as it may be, we still look with suspicion on the

fact that, that kind of logic and rationality (as it is considered rational in our western mind) is not always an important factor in decision making in their everyday life.

Obviously, the surface culture did impose atheism as a conception about world and life. Therefore they've got days of political propaganda at which it's their duty to attend to evens, though, in student's own words, "there's nothing interesting there". Meanwhile, at global meta-programming level, everything that might not be integrate in Marxism is being marked by officials as tradition or superstition as a soft form of rejection, because they still play a major role in society as parental and ancestral respect. For example, even though marriages aren't prearranged, as they used to be in the past time and the feelings of the young maters a lot, their parents still have to agree before the wedding takes place. In order to determine the outcome of the marriage, the parents use the I Ching divination system by asking a "superstition expert", a fortune teller. This modern shaman compares the birthdates of the new couple to determine their compatibility. So, the magical past is still an integral part of their lives. If we ask them about such unusual things, they usually answer that they can't explain because of the cultural incompatibility that separates us. This is one of the reasons we have come to believe that there's more than just one form of logic and they are using other varieties.

4. Language as logical organizer

The hypothesis on going research was that logic thinking is deeply influenced by natural language and that language is using some different procedures of reasoning. Since 1960s some authors took this standpoint, the more preeminent being S. Dehaene [2]. He emphasized that Chinese students are good at mathematics because their natural language is simpler when they are composing the natural numbers like 11, 12 saying this of this effect: "ten one" and "ten two", and they are not using words permeated with complex meanings or complicate procedures.

Actually, we discovered the opposite: they are using more words and very strange procedures to organize the world. In order to better understand all this and because we don't have any other research tool of handling and studying, except the anthropological method of immersion in that new culture, we started to learn Chinese language. First, we had to reject any prejudge and became free and open minded. Therefore, two aspects of "language as logical organizer" become more and more relevant for us: the semantic of anecdotal stories and the role of numerical **classifiers** or **measure words** as Yang [12] said.

The reputed sinologist Marcel Granet writes in the first chapter of his book "Chinese thinking" about the suggestive power of Chinese language: "...the word, in Chinese, is not a symbol aimed at conceptual depiction. It doesn't correspond to a notion to which it should be attributed, as precisely as possible, the degree of abstraction and generality." And he wrote further: "The success of those fables is closely tied to the neutral power they emanate, a sort of archetypal evocation that takes place in the listeners mind. (...) in other words, they predispose the spirit or emotional competence, to accept a suggestion. Instead of building onto a logical framework of predetermined ideas, they appeal to the imagination and bend it into docility while the general purpose of the presentation invites the listener to take a defined path." Granet [5] All novels and tales had a profound influence on Chinese mind. When they are taking about righteousness they are thinking of hero like Guan Yu (160-219 C.E.) than of the abstract concept itself, or if they are talking about loyalty they are thinking naturally of Yue Fei (1103-1141 C.E.), the general and his story as a person who fought for his country and if they should talk about honesty or are thinking of military counsellor, Zhuge Liang (181-234 C.E) (Stories collected by our students)

More interesting became for us these words called classifiers. The natural languages used them for counting things. In Chinese languages, always when we count, we are using a special word between the real number like 1, or 2 and the word which are designating a group, having a determined propriety. This kind of counting is not used in European languages and we believed it is a new "kind of logic" of natural thinking. Western languages can build a "pyramid of notions", generalization and jump from one level to another to create the abstract notion (see any logic or psychology textbook).

This is a vertical logic organizer produced by natural western languages. In Chinese they are doing something different and organize the mind, logically speaking, in horizontal style. By example:

- 1, 2, 3 tiáo (Things which can modify themselves by curving their bodies) e.g. máo jīn (towel), lǐng dài (necktie),shé (snake), lù (road), hé (river);

- 1, 2, 3 zhāng (Things which can be modified by covering) e.g. chuáng (bed), zhuō zǐ (table),zhǐ (paper), zhào piān (photo), zuǐ (mouth);
- 1, 2, 3 bǎ (Things which can modify their position by manipulation) e.g. dāo (knife), yǐ zi (chair),shàn zǐ (fan), sǎn (umbrella), hú (teapot). (translation realised by Zeng Shuhui, student)

So, only the similar "object" can be counted using the special word, and only this on: **tiáo,** or **zhāng.** These kinds of classifications are organizing the world with criteria that Aristotelian logic never thought: "Things which can modify themselves by curving their bodies"; gathering objects even they are animated or not like in the first example „snake" and „road". The criteria are always "action" and never been the content, substance, nature of the object. It is important how they are behaving or could be influenced by human beings. Here is about non-monotonic, contextual logic and also inductive reasoning, not about deductive reasoning. Of course, the language has general notions, but those are integrative words like "nature". Also this notion is expressing the possibility of evolution from itself. In Nature's actions is not involved any cause or reason!

In Chinese languages the result is that: all this things can be together in the same class, but are isolated by other groups. The world is organized like many "islands" which can't be included each other, or builds a "pyramid" losing some proprieties.

If Western reasoning objects are substance, than they are using as criteria proprieties of substance, and are adding or rejecting some of them and can create new more general words. Chinese are thinking that objects can stay each other's, but never "lose proprieties". So, in order to organize things, process, phenomena, they use a special word, like this "classifier."

We can have a logical formula like this: Natural numbers chain 1, 2, 3, 4…are attached for a classifier word, that work as organizer (K_1,) for a object class (o, p, q, m...) having the propriety F. For the same numbering chain 1, 2, 3, 4 can be attached for K_2, another organizer for another object class (w, u, t, x...) having the propriety G. Propriety F is different from G, as tacit knowledge. Group (o, p, q, m...) is different from (w, u, t, x…);

Or we can have an correct sentence only like this: [1, 2, 3 (K_1) {F* (o, p, q, m…)}] v [1, 2, 3 (K_2) {G* (w, u, t, x..)}] v.....or [(1, K_1, o.....); (1, K_1, p..)...(3 K_1, q...)...and so on]; or [(1, K_2, w...);(1 K_2, u...)...(3 K_2, t...).... and so on] but never like this: (1, K_1 w....), or (1, K_2, o....) because of K (different classifier!)

Having this actionable criteria this language couldn't make possible abstract notions and syllogistic reasoning, but they can have an "actionably", defeasible reasoning, non-monotonic logic (they should check carefully before deciding to pick something). Classifiers make some constrains to the mind organizing the objects in exclusive classes and create the ability to choose and pick up from a large horizontal field.

Conclusion:

We have been very surprised to find all these and what we try to suggest here it is not about how they count and are doing arithmetical operation, but is about how the natural languages enabled us to use criteria and what kind of criteria and what for. That means here we found more than a holistic vision about the world, but a contextual logic, because they use tacit knowledge and defeasible procedure. Language keeps this as a pre-formal acquisitions (post-piagetian authors call them "organizers") Children use natural language after that they apply it to any daily life and after that school situation, learning or reasoning. Maybe they find our deductive reasoning sometimes difficult and not "natural" at all, they should convert themselves to our paradigm of reasoning and also we should made a big effort to understand them. For them this kind of isolation, qualitative horizontal pattern is not just inductive model of thinking, but is also useful for other situation, or accepting two different contradictorily point of view in the class, wandering why to choose only one answer to a survey, or the most cited nowadays saying about China as "a country and tow system", or three religions settled together from centuries (Confucianism, Buddhism and Taoism), or scientific education and magical practice, and so on and so on.

All these and perhaps many other strange things can stand as explanation for many things, that we couldn't yet explain properly using our reasoning. Maybe that western reasoning is not such

universal we believed before. Doing more researches it might be a good way to study culture school also, before labelling them as conservative, resisted school. The most important thing is to study hidden values and understand how they make their mind or school work better, or not. Cross-cultural comparisons point out to possible directions that could be followed and about which the researcher is not yet aware.

Thus, cross-cultural authors are forced to adopt a different cultural perspective, to learn to understand th processes of another culture and to see it from the native's viewpoint, meanwhile also reconsidering their own country from the perspective of a skilled outside observer**.** Of course, qualitative methods are required, may be a case study which enabled us to overlap some traditional value from cultural background in contemporaneous school life. Those tacit elements become responsible for different procedure, different style or behaviours in everyday life and school. So far, that new kind of enterprise needs to study before cultural products (believes, customs, rites, natural languages) that embodied tacit knowledge and can make them manifest.

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