The Cultural Models of the Origins of Life and Stem Cell Debate in Taiwan

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Abstract

Recent controversies in Europe as well as the U.S. on issues related to biotechnology, such as stem cell research, are in the forefront of public affairs. The latter, in particular, is extremely problematic and is nearly as divisive as the issue of abortion due to its implication on the definitions of life, Nature and God in the Christian tradition. Even in debates without religious overtones, the ethical and moral questions of the 'constitution' of a human being still remain unanswered. In either case, the rationale of relevant arguments is mostly rooted in the Western tradition of the Great Chain of Being that can be traced back to Aristotle (Lovejoy, 1936). Conversely, such debates are relatively low-key in some Asian countries such as China, Taiwan and South Korea, despite elaborate research is also under way in these countries. Most people may draw the line on human cloning, but are fairly tolerant about using embryonic stem cell methodology in Asia. In order to investigate whether this relatively 'pragmatic' view on such research is consistent with the Chinese overall view on life and nature or is simply due to lack of information and influence of global competition, some cultural models explaining the origin of universe and human beings in ancient Chinese mythology and philosophies (2953-206 BC) were examined. The result shows that human beings may still be at the top of the Great Chain of Being in Chinese culture; however, through the influence of Taoism and Confucianism, their connection to nature and the 'superior power' can be a very flexible one that allows a less dogmatic interpretation. Due to this, certain issues in Biotech research may well be treated differently.

Fragen der Biotechnologie gehören in Europa wie in den USA zu den in der Öffentlichkeit am heftigsten diskutierten Themen. Besonders die Stammzellenforschung wird als äußerst problematisch wahrgenommen und spaltet aufgrund der mit ihr verbundenen Implikationen für die Definition von Leben, Natur und Gott die öffentliche Meinung fast so stark wie die Frage der Abtreibung. Selbst in Debatten ohne religiösen Hintergrund bleiben die ethisch-moralischen Fragen der 'Konstitution' des Menschen immer noch unbeantwortet. In jedem Fall stützen sich die relevanten Argumentationen hauptsächlich auf die westliche Denktradition der 'Großen Kette der Wesen' (*Great Chain of Being*; Lovejoy 1936), die bis auf Aristoteles zurückgeführt werden kann. In einigen asiatischen Ländern wie China, Taiwan und Südkorea ist die öffentliche Debatte in Bezug auf obige Fragen eher schwach ausgeprägt. Meist werden Fragen des menschlichen Klonens thematisiert, hinsichtlich der embryonalen Stammzellenforschung herrscht in Asien indes eine recht große Toleranz vor. Um zu untersuchen, ob dieser relativ pragmatische Umgang mit der Stammzellenforschung auf die allgemeine chinesische Einstellung zu Leben und Natur zurückzuführen ist oder ob dieses Verhalten einfach vom mangelnden Informationszugang oder dem Einfluss der globalen Wettbewerbsfähigkeit herrührt, sollen einige "Kulturmodelle" aus der chinesischen Mythologie und chinesischen Philosophien (2953-206 v. Chr.) analysiert werden, die den Ursprung des Universums und des menschlichen Lebens erklären. Die Untersuchung ergibt, dass die Menschen im chinesischen Kulturkreis zwar als an der Spitze des 'Great Chain of Being' stehend angesehen werden, Einflüsse von Taoismus und Konfuzianismus jedoch bewirkt haben, dass die Beziehung zur Natur und zu übergeordneten Mächten eine sehr flexible ist und eine weniger dogmatische Interpretation erlaubt. Dadurch werden bestimmte Problemkreise der biotechnologischen Forschung hier unterschiedlich behandelt.

0. Introduction

As the debate on stem cell research in Europe as well as in the US is well known, which mostly converges on ethical, moral and religious considerations, there is very little as such in many Asian countries. Some people believe that it may derive from the differences in religious beliefs. For

example, as a CNN world report reveals (18, April, 2005) when reporting a breakthrough in the embryonic stem cell in treating Parkinson's disease in Israel, that there has been very little ethical debate in this regard over there as its religion, Judaism, seems to be able to accommodate such an act. However, in many Asian countries, such as China, Taiwan, and Korea, which also carry out stem cell research (*Mingsheng* Daily Newspaper, 29/11/04) religious argument carry less weight than those in the West. Therefore, the issue that needs to be raised here is that if it were not religion that makes public ethical debate scarce, what could be other factors that may have affected this public silence? Is it lack of knowledge caused by the reluctance of the government (Chen, 2002), or the influence of a more pragmatic Confucianism (Chang, 1991), or the pressure of a global competition (United Daily, 06/12/04), or all of them above? In order to provide a tentative answer to these questions, this article focuses on Taiwan, where the researcher has direct contact to.

1. Ethical Issues in the Debate of Stem Cell Research in Taiwan

The culture in Taiwan is Chinese in essence, despite recent political and military rivalry. In other words, it is also heavily influenced by various Chinese traditions, such as its philosophies and religions. Therefore, it would be very fruitful to examine those and what role they play in the construct of the definition of life for Chinese and, thus, Taiwanese. As the public debate in Europe and the US has shown that a great deal of controversy lies with the definition of human 'life' and the role God plays in the creation of it, similarly, it is vital to investigate whether these concepts differ in Chinese culture. And it is not sufficient to examine religions alone. Although there is a fairly dominant religion in this region, Buddhism, which basically respects life of all forms and sometimes that definition can even be extended to animals and plants (Bhikkhu, 2002), it has been blended with other Chinese folk theories or philosophies on universe in general and human life specially over the years. Therefore, it is crucial to uncover these factors that underlie people's attitude in order to gain insight to a cultural model that reflects Chinese world view.

Unfortunately, these factors remain at times opaque as the discussion on stem cell in Taiwan in the past few years since the breakthrough of embryonic stem cell technology by Dr. James Thomson and Dr. John Gearhart, whose research findings were published in the American journal, *Science*, separately in 1998, has been provided mainly by medical doctors, lawyers, ethicists and philosophers (Chen, *ibid*). Furthermore, most of them have attempted to draw inspiration from

various sources in understanding the definition of "life" so as to provide a blueprint for the government to set regulations that are both effective and humanitarian. The sources they often rely on are either the legal system mainly in Germany, the UK and the US or the ethical and philosophical definitions discussed by scholars of these countries (e.g. Shih, 2005, Lee, 2002, Chen, 2002, Chen, 2001, Chu, 2002). Against this background, Chen (2003:58), a law professor who has been commissioned by a government's think-tank organization, the National Science Council, to research on the legal issues on stem cell, points out that these concepts do not necessary stand for the public opinion. Instead, she believes that a good legal system should reflect the value system of local people rather than that of some other countries. Hence, Lee Shui-chuan, a renowned ethicist and philosopher in Taiwan has proposed to look to Confucianism for law-making (Lee, 1999, 2001) in the past few years, hoping to find a solution that is grounded in the Chinese value system.

He has discussed in length, for example, the concept of "personhood" in Confucianism, which is based on the understanding of "benevolence" and "do no harm to others", in determining the right of an embryo. In this way, he has managed to steer away from the circular discussion of the definition of "life" that is based on "consciousness" and whether God exists. Instead, he is suggesting a more realistic but still an ethical way of dealing with embryonic stem cell research that will benefit the majority of people (1999: 131). Such a pragmatic approach is indeed Confucian in essence, why is this so? In order to do that, it is necessary to look at some of the mythology and philosophy regarding the origins of life and the universe before or in parallel to Confucian time.

1.1 Cultural Models in Myths and Philosophies

The fruitfulness of examining Chinese mythological narratives and tenets of ancient philosophies in uncovering the cultural models on the concepts of ORIGIN OF LIFE and eventually the GREAT CHAIN OF BEING is eloquently summarized by Doty's statement of the significance, context, and function of myth (1986: 11, cited by Birrell, 1993:4-5):

> A mythological corpus consists of a usually complex network of myths that are culturally important imaginal stories, conveying by means of metaphoric and symbolic diction, graphic imagery, and emotional conviction and participation, the primal,

> functional accounts of aspect of the real, experienced world and humankind's roles and relative statuses within it.
>
> Mythologies may convey the political and moral values of a culture and provide systems of interpreting individual experience within a universal perspective, which may include the intervention of suprahuman entities, as well as aspects of the natural and cultural orders.

In short, stories in mythology are not merely stories, but reflect some crucial values, belief systems and experiences; understanding them can lead to a deeper comprehension of a particular culture. Due to the length and scope of the paper, it is not possible to examine each of the numerous narratives in Chinese mythology, nor is it possible to discuss laboriously the various philosophies in history. It will, instead, focus on a couple of most quoted stories explaining the origin of universe and similar concepts in Taoism, Confucianism as well as *I-ching* (The Book of Change).

1.2 Cultural Schemas and Models

In the past few decades, the theories of schema and model have been developed in parrallel in fields that cover cognitive psychology (e.g. Craik, 1943, Beck, 1967, and Mandler, 1984), cognitive science (Minsky, 1975), cognitive anthropology (D'Andrade,1995) and cognitive linguistics (e.g. Lakoff and Johnson, 1980, Fillmore, 1982, and Langacker, 1986). Researchers in these fields all seem to agree that both schema and model is a cognitive device human beings are equipped with to organize individual and collective experience and results of such organizations are demonstrated in our language, social rituals, human relationship and political decisions.

However, is a schema the same as a model? Beck, a cognitive psychologist, defines a schema as such (1967:283):

> A schema is a (cognitive) structure for screening, coding, and evaluating the stimuli that impinge on the organism... On the basis of the matrix of schemas, the individual is able to orient himself in relation to time and space and to categorize and interpret experiences in a meaningful way.

Geroge Mandler (1984), another cognitive psychologist, went further to explain schemas "are built up in the course of interaction with the environment", and he emphasizes that "The schema that is developed as a result of prior experiences with particular kind of event is not a carbon copy of that event. Schemas are abstract representation of environmental regularities. We comprehend events in terms of schema they activate.'' (*ibid*: 55-56). As for "models", Kenneth Craik, also a cognitive psychologist, sees a model as:

> If the organism carries a "small scale model" of external reality and of its own possible actions within its head, it is able to try out various alternatives, conclude which is the best of them, react to future situations before they arise, utilizing the knowledge of the past events in dealing with the present and future, and in every way to react to a much fuller, safer, and more competent manner to the emergencies which fact it (1943:13)

Based on all the above explanations, it appears that the definition of a schema and model overlaps greatly. They are both basically a (cognitive) mechanism used to interact and making sense of our physical and social environment. They provide a blueprint for problem solving and other future actions. Nonetheless, D'Andrade, an anthologist, believes that they are not always identical (1995:l51-152). He proposes that a model consists of an interrelated set of elements which fit together to represent something. Typically we use a model to reason with or calculate from by mentally manipulating the parts of the model in order to solve some problem, whereas every schema serves as a simple model in the sense that it is a representation of some object of event. For example, he points out that seeing a grocery store clerk hand a bag of apples to a shopper and accept money, a commercial transaction schema would serve as a probable model for what has been seen. However, many models are not schemas themselves, although they are composed of schemas. Models are not schemas when the collection of elements is too large and complex to hold in short-term memory.

In this light, the data that will be examined in this article: mythological narratives and tenets of ancient Chinese philosophy are models consisting of many schemas. These schemas can be those of *man*, *woman*, *animal*, *birth*, *sense of self*, *tree*, *stone*, *life*, *death*, and so on, which reflect basically the abstract representations of the archaic and ancient Chinese' views of the world around them. These schemas, in turn, formed several models, such as the ORIGIN OF UNIVERSE and CHAIN OF BEING, which have motivated and guided Chinese in the course of history in the way they have been dealing with issues relating to life, social order, nature, and even spiritual matters

Furthermore, Lakoff and Johnson (1980) point out in their development of Idealized Cognitive Model (ICM) that these schemas and models are not formed arbitrarily, nor purely as the products of collective social and cultural life. Their conceptualization, in fact, is motivated as well as constrained by the shared human biology and its interaction with the physical and socio-cultural environment. For example, the sense of time is based on our sense of space, which in turn is based on the structure and orientation of human body. This kind of conceptualization is supposedly universal since all human beings share similar physiology. Hence, the schemas and models

embedded in Chinese mythology and philosophies should be comparable with those in most of the cultures around the world (Birrell, 1993), and any peculiarity found should not be arbitrary, either. Lakoff and Johnson also suggest that it is unlikely that there is only one cognitive/cultural model underling any particular culture; it is more likely that there are multiple ones, which may derive from historical changes (Geeraerts & Grondelaers, 1995). This observation has also been supported by other researchers (Kövecses, 1986, Hu, 2002).

Therefore, it will not be surprising should the results of this paper yield conflicting models regarding the definition of life in Chinese. It is also expected that these models do not support a concept that is of an exact equivalent to the Great Chain of Being, a cultural schema known in the west, which reflects a hierarchical universe ordained by a Christian God. This difference may indicate the different approach to any biotech research between Taiwan and countries with predominantly Christian belief.

2. The Origins of Universe: A Chinese Cosmology

2.1 The Myths

As many researchers (e.g. Yuan, 1987, Chao, 1998) in their attempt to uncover a systematic and coherent mythology in Chinese that is similar to that of ancient Greece and Rome noted, Chinese mythology is filled with anecdotes that mostly occurred between 2698-771 B.C. from various sources, which may derive from a vast and diverse geographical area that is known as today's China. It is also possible for the same story to have different versions in different parts of China; nonetheless, there is at least one story regarding the origin of universe that has the most popular appeal and has been told from generation to generation. The corpus of the story is chiefly taken from the 1987 edition of Yuan Ko's *The Anthology of Chinese Mythology* that was first published in 1950 in Shanghais, China.

According to this story, before the appearance of human beings, the universe existed in a blur that there was no shape nor colour but darkness ("*hun tun*") and resembled a giant egg. Inside the egg, *Pan Gu*, a person, lived there, who slept for 18,000 years. Upon his awaking, he grasped an axe and cracked open the egg. When that happened, the light matters in the egg floated above and became the heaven, whereas heavier matters sank underneath him to form the earth. As he was afraid that heaven and earth would close up again, he used his body to stand in the middle. In doing so, his

body grew longer and longer each day for another 18,000 years. He finally died when he felt the formation of heaven and earth reached their stability. However, strange things occurred the moment he lied down dying, the last breath that came out of his mouth and nostrils became wind and clouds, whereas his voice became the thunder, his left eye the sun, right eye the moon, his limbs the mountains, and so on. In other words, every part of his body and inner organ gave rise to the richness we witness today in nature (Yuan, *ibid*).

Another one that tells of a creator is about a half man and half snake with one eye, whose eye and breathe controlled daylight and seasons. Yet, it did not capture that much fascination as this creator, unlike *Pan Gu*, was still half animal. The same fate happens to other stories that involve different forms of creators. Consequently, among so many various stories, *Pan Gu*'s story became the prototype of the origin of universe. It is best reflected in a well-known Chinese saying: "*Pan Gu Kai Tian*" (*Pan Gu* opened up the universe) to depict "since the beginning of time" in traditional Chinese story-telling. However, such a status did not come about arbitrarily. If we examine the schema in this story more carefully, it should yield some evidence that certain concepts entailed here are universal and demonstrate a bodily basis of meaning, as proposed by Lakoff and Johnson (1980, 1999).

For example, that *Pan Gu* looks like a human being illustrates the human tendency of "anthropocentrism" that is found in many myths and religions in other parts of the world, for example in Christianity, God made men according to his own image. Secondly, the phenomenon of *Pan Gu*'s various body parts to become all elements of nature such as mountains, river, trees and even thunder, may indicate an „embodied" mechanism at work. According to Johnson (1987), human body provides a basis for our cognition; therefore, much of our reasoning ability has its physiological foundation. In this light, even how nature had been formed was interpreted as an extension of a body in the eyes of ancient Chinese. Thirdly, this creator must have a supernatural power and omnipotence. For example, *Pan Gu*'s possession of an axe and his ability of grow as a giant when necessary require no logical explanation. This supernatural quality of creator, which set him apart from normal human beings, is in line with other myths in the world as well, such as those of ancient Greek, Indian, and Egyptian, just to name a few (Chen, 1995).

Nonetheless, there are some marked differences underlying this schema from that of Christianity. Most prominently, *Pan Gu* was not immortal as God and it is not clear who created the egg. What these differences suggest is that Chinese appear not to be of particular concerned of a coherent and

logical picture in explaining the origin of universe. The stories regarding the origin of human beings, which will be analyzed shortly, also support this postulation.

These stories also have several versions. One version says that the parasites on *Pan Gu*'s body turned into human beings but apparently this was not very complimentary to the human race, so such a version did not survive long. Another version also did not last very long, which says that *Pan Gu* in fact had a wife and their children became the first people. It made *Pan Gu* appear to be too ordinary (Yuan, *ibid*:109). Versions that do not involve *Pan Gu* are many, too. An earlier one before the story of *Pan Gu* took credibility, was about two Gods, *Ying* and *Yang*, who created the universe and used the good, clean air (*qi*) found in the universe to make humans, whereas air such as fume was to be made into birds and other creatures. Although this story did not appeal to too many people, it seemed to have an impact on *I-Ching*, *The Book of Changes*, in which *Ying* and *Yang* were the two major forces in nature that gave rise to a wide range of natural phenomena and the states of human affairs, details of which will be examined in the next section.

Apart from this story that mentions gods' role in creating human beings, there are other stories supporting that human beings were either created collectively by various gods or single-handedly by a goddess, *Nu Wa*. It is the latter that is most often quoted and known by most Chinese children (Jian, 1998). According to the story mentioned in *Zhu Chi* written circa 2,300 years ago, *Nu Wa* was wondering alone on earth feeling lonely so as she sat by a pond, she began to take the mud by her side, mixed with water, to make some small figurines that took after her own image in the reflection she saw in the water. Strangely, all these figurines came alive when she set them on the ground. Upon seeing them, *Nu Wa* was very pleased with her creation and thus decided to make more in both genders. However, after some period of time, this way of shaping human beings proved to be rather strenuous and not effective enough for her. She took a piece a rattan that was hanging down from a nearby cliff and dipped that in the mud. With mud on the tip of the rattan, she whipped the rattan so that dots of mud that were splashed on the ground became people again. Only in this way, she was able to produce masses of people in a relatively short time. Later on, she set up a system so that males and females could be together to produce their own offspring.

Interestingly, *Nu Wa's* status as the creator of all human beings was competing with that of *Huang Di* (the Yellow Emperor), who was also a god at the same time as *Nu Wa* was. As a cliché saying popular in China that asserts all Chinese are the "children of the Yellow Emperor", shows that the matriarchic way of interpreting the world was soon replaced by a patriarchal view to justify a

political system that has been favouring male kings.

Some may argue that stories before Christianity in Europe are perhaps more comparable to those in China than those that have just been mentioned here, suggesting differences may be resulted from various stages of development in civilization. However, at a closer inspection, there has never been a consistent theory, such as Christianity, to explain the origin of universe in Chinese history, and people have always felt relatively comfortable about conflicting stories. Despite that, the stories above indeed indicate a loose sense of the Great Chain of Being, which also place human beings above all other beings and gods or *shen* in Chinese are further above humans. This can be schematized as follows:

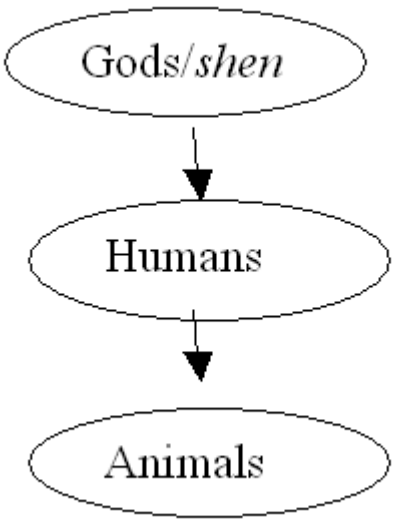

Figure 1: A loose Chain of Being in Chinese

It also illustrates that the concept of a unified God was not well developed in ancient China. However, it did emerge at a later date. First this supreme god, who was referred to as "*Di*" in Chinese, was mentioned in Shang period (circa 1600 -1066 BC), and it was nonetheless overlapped with the concepts of human ancestors (Chao, 1998:175). In Confucius' time (770 - 476 BC), this concept of "*Di*" which was known as "*Tian*", was more widely accepted, and was above all *shen*s. Even then nor later, this "*Tian Di*" has ever enjoyed that much high level of elaboration as the God in Christianity (Chao, *ibid*). Furthermore, major philosophers, such as Confucius, Lao Tzu and Chuang Tzu of that period of time would only address such a concept abstractly. Their major tenets will be summarized in the following section so as to sustain the postulation that there is no fixed

idea about God's way on human affairs, instead, only righteous men (Lee, 1999) or men of *Tao* (Chao, 1998) know the right way.

2.2 The concept of Universe in *I-Ching* and its impact on Taoism and Confucianism

The *I-Ching*, or Book of Changes, allegedly was written by the legendary Chinese Emperor *Fu His*, who lived between 2953-2838 BC. It describes how the universe was created by two major opposing forces and how these forces in turn gave rise to all living beings, which in turn gave rise to men and women who became husbands and wives so as to give birth to children and finally came social order (Chang, 1991:8-9). Its concept of universe is best captured in the schema presented in Figure 2. It illustrates that the universe is constituted of two forces: the *Ying* (in white which is also schematized as [—]) and the *Yang* (in black schematized as [--]) and from their various complementary interactions the all beings and phenomena in the universe emerged. Typically, *Yang* can stand for "heaven", "masculinity", "man", "dominance" or "hardness", whereas *Ying* can stand for "earth", "femininity", "woman", "obedience" or "softness", and the principle of their interaction is also referred to as "*Tao*". In turn, this principle dictates everything from the formation of universe to the relationship between men and women, husbands and wives, fathers and sons, lords and knights to superiors and subordinates in the society. It is important to note that these two forces are not simply a dichotomy, opposing to each other, as many people would wrongly conclude. When examining the schema presented below more carefully, it will become clear that these two forces are not positioned rigidly in a confrontational manner — they in fact "spill into" each other in a very fluid form so that the shape and size of each force are not really fixed. Furthermore, the presence of each force in the opposite field also indicates that the division of *Ying* and *Yang* is not absolute. Therefore, their relationship is a "complementary" rather than a "dichotomous" one.

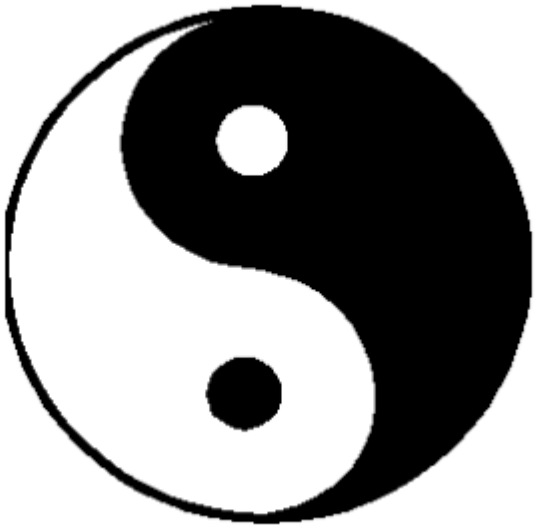

Figure 2: The schema of the two opposing forces, *Ying* and *Yang*, in a complementary form that symbolizes the origin of the universe, which is also referred to as *tai-chi*, in *I-Ching*.

However, due to the constant and various interactions of the two opposite forces, infinite changes occur, which are represented by the 64 combinations of Ying [—] and Yang [--] (see Wilhelm & Baynes,1950/1989 for elaboration). These changes make things appear to be in a constant transition and the concepts of good and bad, beautiful and ugly, young and old, difficult and easy, life and death and so forth, in this light, are a matter of what stages of transition we are referring to. Therefore, in such a world, sometimes, for example, things appear on their polarizing forms co-existing awkwardly and paradoxically, but sometimes they merge into one harmoniously at a different time and place (Chang, *ibid*:17-18). The schema above expresses exactly this particular worldview, which has its direct influence on Confucius and Lao Tzu, two crucial philosophers in Chinese history who only lived few years apart during the Spring and Autumn Period (700-476 BC). Despite having inherited a similar view of the universe, they were very different in how human beings should live in such a world.

The following schema (Figure 3) summarizes Lao Tzu's interpretation of *Tao* (Chang, 1991:230), which is slightly different from that shown in Figure 2. Nonetheless, they are similar as they are both in a circular form and the cycle shows the process of changes. This one shows changes from Nothingness (*Tao*, or *Wu*) to Something (*You*), then back to Nothingness again. Unfortunately, Lao Tzu did not provide very consistent explanation regarding his concept of 2 and 3; yet, it is sufficient to regard them as the various stages of changes (*ibid*). As for the concept of Nothingness, *Wu* or

Tao, it remains elusive to many people as well; however, it symbolizes a world without the polarization of opposite forces, such as the confrontation of good and bad, beautiful and ugly, rich and poor, kind or cruel and so forth, as the ultimate form of harmony. And if we allow things or people to develop in their natural course, according to his model, we will all return back to our original *Tao*, the harmony, again.

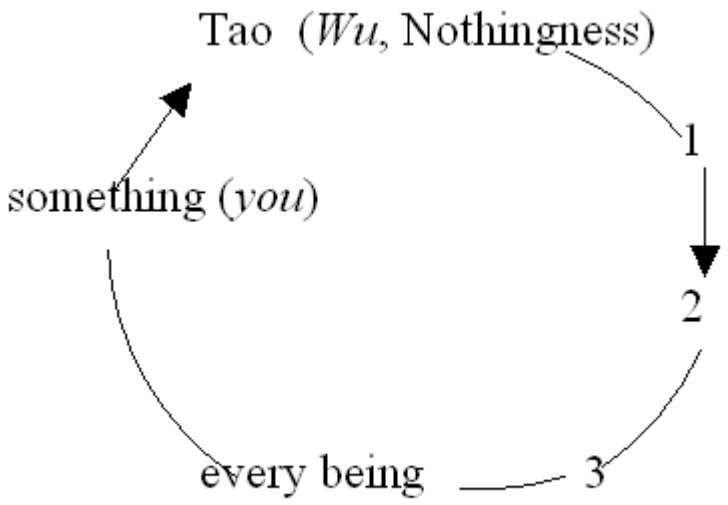

Figure 3: The schema of Lao Tzu's view on the origin of universe and life.

As Lao Tzu did not write extensive body of work in his life time, some of his concepts can be further explored in Chuang Tzu's (369-286 B.C) work later. Chuang Tzu enjoyed using fables to convey *Tao*'s philosophy, so for example the following moral tale explaining the origin of universe reveals exactly this sentiment (Yeh, 1996). In the story, there was a god (*tian di*) called *Tiao*, who lived on the South Sea, whereas a *tian di* called *Hu* lived in the North Sea and *Hun Tun* lived in the middle of them. Both *Tiao* and *Hu* often visited *Hun Tun* who always offered them great hospitability, and hence they would like to return his kindness. As *Hun Tun*, which means a blur in Chinese, did not have any particular shape and form, they decided to chisel out all the various organs on him, such as eyes, ears, nose and so on so he could see, breath, hear and eat like everyone else. So one day, they took the necessary tools to him and spent seven days in making seven holes (two eyes, two nostrils, two ears and one mouth) on his face. However, upon the completion of this major operation, *Hun Tun* died despite a world was born through his death (Yuan, 1987:88).

The story of *Hun Tun* and the concept of *Wu* echo both philosophers' belief in the beauty of having a world of no polarizing forces, which give rise to judgments that are in turn prone to prejudices. As

a result, prejudices would lead people further away from their true nature. When the true nature is upset, according to Lao Tzu, people would begin to do unjust things to nature as well as the society (Chang, 1991: 215). Interestingly, this concept is fundamentally shared by Confucius but there are two key differences — 1) who or what created *Tao* and 2) the ways of dealing with the imbalance of *Tao*. These differences have vital impact on the direction of the current situation of stem cell discussion in Taiwan. In order to revolve the questions as to the relatively public silence that were raised earlier in the paper, we need to examine these differences more carefully.

The first key difference between Confucius and Lao Tzu as well as Chuang Tzu, is the postulation who could have created *Tao*. Confucius reckoned more overtly than the other two the existence of a supreme god, *Shan Di*, who should be behind all the occurrences in the universe (Chao, 1998), whereas Lao Tzu and Chuang Tzu did not care for an hierarchical order and they saw *Tao* in all life forms as well as objects in our surroundings. However, despite the difference, Confucius, whose concerns were always on people and the education on them so they could resolve realistic issues in daily life, often stated that there should be a respectful distance to the matters of gods and ghosts and spent little time in exploring the concept of *Shan Di* in any metaphysical form. This particular feature of Confucius lends the pragmatic leaning in problem solving in cultures that claim to have been influenced by him and his teaching.

The second key difference is how his idea about dealing with paradoxes deriving from the imbalance of *Tao* differs from that of Lao Tzu and Chuang Tzu. Confucius was convinced by putting great effort in educating people to keep them on track and only by doing so, these people were able to change things for the better in the world. Lao Tzu and Chuang Tzu, on the contrary, saw interference would only further lead people away from their nature. They in fact believed in a so-called “hands-off” or “no-action” (*wu wei*) strategy as a better way of dealing with the corrupted world, and when everyone practiced *wu wei*, the world would go back to its original form (Chang, 1991).

These differences may explain why politicians throughout Chinese history have invariantly chosen Confucian concepts in managing people and regulating social affairs. They are pragmatic, active and hierarchical. This quality may prove once again useful in modern Taiwan when people are facing a moral dilemma that has no precedent in history. The following section will look at this possibility.

3. Implications on the Future Stem Cell Research in Taiwan

After having examined the major schemas regarding the origin of universe and life and man's role in it in Chinese early history, it has become clear that the concept of a supreme god may have existed and the order of different beings may loosely resemble the Great Chain of Being in Christianity; it was also discovered that such an order has never been regarded dogmatically due to the pragmatic influence of Confucianism and the co-existence of Taoism which does not hold any hierarchical view of beings. Presumably, all these models have asserted certain influence on the people growing up in such a culture. Increasingly, scholars in Taiwan have tried to look at these models and seek inspiration from them for an overall coherent Biotech ethics as well as a legal framework for stem cell research.

As Taoism represented by Lao Tzu and Chuang Tzu does not believe in any human interference in the law of nature (*Tao*), through which, quality of life will only be worsened rather than enhanced, scholars tend to turn to Confucianism for a more practical and realistic solution (Lee, 1999). Such a solution should be able to provide not only an ethical justification that is compatible to its equivalent in the main stream Western culture (Tsai, 2005), but also allows Taiwan to be world competitive in this cutting edge research.

Lee Rui-chuan (1999, 2001), the renowned ethicist in Taiwan who has done extensive research on Confucian ethics, for example, is a proponent of such a view. He has analyzed Confucian two basic concepts on personhood: *ren* (humanness or benevolence), and the ability of empathizing with other people, suggesting that as an embryo does not possess these qualities, it should not be considered as a person yet. However, human beings who supposedly have these qualities will do their best to protect any life, and also, according to Confucian teaching, to achieve a bigger good for the majority of the society. In other words, if embryonic stem cell research can benefit the majority of our society and we can ensure no abuse of our power, there is no moral conflict imposing on this issue (Lee, 1999:132).

Despite his eloquent arguments and persuasive evidence, it is difficult to judge whether his view stands for the general public in Taiwan**?** What do average people think about this issue? Unfortunately, the government has not been active in involving the general public in this debate, so there is little data. The people who are aware of the debate in stem cell research are mostly professionals or experts in related fields. For example, the only public survey that has been done

for research purpose was on medical doctors, and when a browse at the Taiwanese National Library electronic data of the 143 journal articles published between 1997 to present that address the issues of stem cells, they are all written by professionals for highly specialized periodicals discussing legal, ethical and medical consequences. Newspaper articles, on the other hand, merely inform people about the advancement in the development of stem cell research.

Such a minimum involvement with the public in raising the awareness on the controversy surrounding embryonic stem cell can be supported in an informal survey carried out by the author herself asking 44 university graduates whether they had heard of "stem cell" and "embryonic stem cell", 30 of them claimed no knowledge of them. Even those who have heard of them, tend to connect stem cell with either umbilical cords or spinal cords. Connecting stem cells with spinal cords can be explained by the Chinese translation in Taiwan for "stem cell", which is "tree stalk cell", and additionally, unlike the extended meaning of "stem" in English, which means "to originate, to derive", the Chinese equivalent of it, "*kan*" does not denote such a metaphorical extension. Therefore, due to this image of a tree trunk as "*kan*", most people believe that such cells must be found in the spine, which is seen by Chinese as the "stalk" or "trunk" of the human body.

At this point, it is difficult to say what the factors could be in producing such a phenomenon. However, the above investigation in pre-historical myths and influential earlier Chinese philosophies at least indicates that debate of God's role in creation is not relevant here, so people may oppose or approve of the use of embryos based on a different rationale.

4. Conclusion

This paper predominantly focuses on the cultural models of the ORIGINS OF UNIVERSE, CREATION OF HUMANS, and GREAT CHAIN OF BEING, in Chinese myths and ancient philosophies of *I-ching*, Lao Tzu, Chuang Tzu and Confucius. It was found that there is indeed a loose CHAIN OF BEING, but this schema is not elaborated nor filled with details. Instead, there are other models, such as a circular one found in *I-ching* and another circular one espoused by Lao Tzu and Chuang Tzu, to represent the origin of life and universe. Both models symbolise a fluid form of the interrelatedness of various beings in our universe and they are not ordered in any particular hierarchical sense. Even Confucius' interpretation of the universe, which does converge on a hierarchical order, does not emphasise on the issues of God or gods, nor any "superhuman"

matters. Confucius and his followers, in particular, encouraged people to deal with human matters with tangible measures, such as education, which is the cultivation of humanness in maintaining social and natural order.

These findings, this paper argues, explain an important reason why research in modern biotechnology, such as that of stem cell, is treated with greater flexibility in Taiwan or in other Asian countries where these cultural models also have some considerable impact. However, this paper is limited in providing a consistent picture of how these models are incorporated in other related issues such as abortion, euthanasia, animal rights, and environmental policies to demonstrate that such models are still palpable and they motivate people, either consciously or unconsciously, in solving dilemmas and making decisions in matters of life and death in Taiwan. Such a picture is important so that we understand their influence on stem cell research is not an isolated phenomenon; they, as cultural models, should be pervasive in many aspects of our socio-cultural life. Moreover, a systematic investigation of a corpus deriving from current discussions on any of the above issues using the frame work of conceptual metaphors (Lakoff and Johnson, 1980) would shed more light on the attitude the general public holds towards biotechnological research. This corpus can be either written or oral discourses reported in media or illicit from special and well-designed surveys. Both sources of corpus are apparently missing in this paper, but are definitely worth pursuing in any future research in this subject matter.

However, at this point, it suffices to conclude that the results from the brief analysis presented above demonstrate the influence of a circular view of universe and the pragmatic of Confucianism allow people here to show a higher tolerance to ambiguity in any ‘moral’ issues regarding the definitions of life and death. Consequently, people in Taiwan may tend to be more flexible and open to the ethic of stem cell research.

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