

Sex and Reproduction: A Cross-Cultural View

Introduction

Sex and reproduction is one of the oldest but also the hottest topics that attract attention from both the scientific community and the general public all over the world. For example, human beings are assumed to be the offspring of the seven daughters of Eve who lived in Africa about 100,000 years ago. Historically, human society was thought to evolve from matriarchy to patriarchy, and reproduction worship constituted a key element of ancient human culture. It has been predicted that in the foreseeable future the tremendous breakthrough in biomedicine and genetic science is likely to revolutionize human reproduction, which presumably will break down the traditionally interpersonal relations of sex, love, procreation and family. Are these human fortunes or misfortunes? Different people may have different beliefs in this regard.

Chinese anthropologists and archeologists have long believed that the ancestors of modern Chinese were not from Africa but were indigenous, although a recent Chinese population and molecular genetics study revealed the opposite (Chu et al 1998). Indeed, China is a country of great contrasts. It has the world's largest population, yet a relative dearth of natural resources per capita. It has a very long history and rich culture, yet an educational system the quality of which varies enormously as well as 150 million illiterate and semi-illiterate people. It has the fastest growing economy, yet has stayed in the socialistically one-party-ruling political system. It covers a vast territory, yet the level of development varies greatly from region to region. Since China launched its "one couple one child" family planning campaign in the early 1970s, and particularly promulgated its first eugenic law, *The Maternal and Infant Health Care Law*, in 1994, it has attracted wide attention from the international community. There have been many voices to be heard on the issues of population, birth control and eugenic policy in China. However, the majority of these are western opinions. In this paper, I would like to address sex, reproduction and the related issues using some of my research work as examples.

Sex and Sexual Deviation

Human sex is expressed in four dimensions, which include genetics (sex determining genes and sex chromosomes), biology (sexual organs and the secondary sexual characteristics), psychology (desire to be a male or female), and sociology (social identity of gender). In general terms, any dissociation of these dimensions means sexual deviation. Whether a person with a sexual deviation is thought to be normal or abnormal depends on what the situation is. For example, from a medical point of view, sexual deviation is, to a large extent, abnormal.

Although the prevalence and incidence of sexual deviation in China are unknown, people with sexual deviations including homosexuality are not uncommon historically and culturally. For example, in the old Chinese royal families, all male householders were castrated. In the old Chinese opera houses, a male-dominated community, only a male was allowed to play a female. Through long-term training and practicing, an actor gradually lost his male identity. However, the mainstream attitudes towards sexual deviation and homosexuals were very negative over a long period of time in China. In the mid 1980s, I conducted a survey among people with sexual deviations using bio-

logical and psychological means in Chengdu, China. I found that a small proportion of male homosexuals and their family members did show some changes in their electroencephalogram, sexual hormone and the Minnesota Mental and Personality Inventories (Mao et al 1989 and 1991). These results to some extent were in line with an old hypothesis that male homosexuality is likely to be inherited while female homosexuality is likely to be acquired, and probably support the claims for hunting the genes responsible for homosexuals in biomedical community today. The most interesting findings, however, were that the parents of those male homosexuals were much more anxious and concerned than their sons. This was partly because they feared that their sons might not have children, which would lead to the interruption of their family tree or pedigree for the next generation, and partly due to their worry about losing family face or dignity. Is this a reflection of reproduction worship another way around? Obviously this is an intrinsic question warranting further investigation.

After 20 years of reform and openness, people with a sexual deviation and homosexuality now appear to be more tolerated in China. This is because politically these people, unlike political dissidents or cult members, do not threaten the stability of Chinese society. Moreover, it is a very basic human right that people can have their sexual desire satisfied lawfully. Since the sex ratio in the Chinese population is imbalanced (men outnumber women by 30 million) it is necessary to create a harmonic social environment to meet people's needs. Another solution for these medical and social issues would probably be in the development of the advanced biomedical technologies such as human cloning and the artificial surrogate mother in China. These techniques would presumably offer an ice-breaking avenue for the people with sexual deviations and homosexuals to have their own biological children without coercively changing their sexual preference, and would therefore ease the fear of interrupting the family tree on the part of their parents or family members. However, at the moment China is greatly lacking both in funding and expertise to carry out scientific research in these areas. For example a recent report about a young woman who became her older brother's daughter's natural surrogate mother revealed how far the Chinese medical and legal professionals are lagging behind in dealing with issues of surrogacy (Yang Cheng Evening News, 7 June 2000).

Marriage and Family

It is hardly possible to talk about sex and reproduction without including marriage and family as they form a close circle of the social life of human beings. There have been many positive and negative descriptions of marriage and family in the world. For example, a popular Chinese exhortation said, "Marriage is like a castle. People who are outside want to get in, while people inside want to get out." Traditionally, Chinese marriage and family were quite stable due to the thousand-year influence of the three great teachings, i.e. Confucianism, Taoism and Buddhism. Following the economic reform and social openness in China, however, people's attitudes towards sex, marriage and family are changing. For example, a recent survey among Chinese servicemen, who are believed to be the most disciplined people in China, showed that half of 637 interviewees would not oppose extra-marital relationships (Sing Tao Daily, 31 May 2000). The change of the social environment in China is also leading to an increase in the divorce rate in general, and particularly in the younger generation.

Divorce is a major life event for the people involved. What are the attitudes of the divorced people in China? To address this issue, I conducted a social and psychological survey among the divorced people in Chengdu, China, in the early 1990s. When asked about the reasons for divorce, the majority of female interviewees said "third party

involvement" (74%), "lack of emotional exchange and communication" (66%), "intolerable personality" (59%), "extreme unhappiness in family life" (56%). Less than half said "distrust" (46%), "the time of living together is too short" (46%), and "problems in having sex" (20%). The male interviewees, on the other hand, listed "extreme unhappiness in family life," "lack of emotional exchange and communication," "intolerable personality," "third party involvement," and "problems in having sex" as the major divorce reasons. When asked about their future life, half the female and male interviewees said that they wanted to remarry. When asked why, both female and male respondents ranked "looking for a new life," "need to be loved," "loneliness," and "ones own happiness" as the major reasons. When asked about the characteristics of the future partner, the female and male interviewees regarded "healthy," "observing national laws and social regulations," and "honorable personality" as most important. In addition, the majority of divorced women would prefer their future partner to be older. In contrast the majority of male divorcees would like their future partner to be younger. The survey results also suggested that although psychologically both male and female divorcees are equally traumatized, women are, to large extent, much more vulnerable (Mao unpublished data). This may explain why a public debate has been intensified in recent years about whether to include special measures in the revised Chinese Marriage Law to punish those who are involved in adultery or extra-marital relations in order to protect women's rights.

Population and Family Planning

Population growth is one of the most challenging issues in the world. For example, in the last century the Chinese population increased 3 times from 400 million in 1900 to 1.2 billion in 1994. Meanwhile the natural conditions such as arable lands and natural resources have deteriorated due to urbanization, over-mining, and deforestation. In the past 20 years, the Chinese economy achieved the fastest annual growth rate in the world. However, the increased population has, to a large extent, consumed the newly increased part of the economy. Therefore China is still one of the poorest countries in the world.

To balance the growth of population and economy, the Chinese government has made population control and family planning a top national policy. For example, article 25 of the Constitution of the People's Republic of China stipulated that "The state promotes the practice of family planning in order that population growth may be in keeping with socio-economic development." Article 49 of the constitution and article 12 of the Marriage Law state that "Both husband and wife have a duty to practice family planning." The aims of Chinese family planning policy are promotion of deferred marriage and childbearing, fewer but healthier births, prevention of genetic defects, advocating the practice of "one couple one child," and encouragement of birth spacing for those who have practical difficulties with having one child (Wu 1994). This policy has been implemented most successfully in the urban areas. Because of this, the growth rate of the population in China has been controlled. For example, from 1980 to 1999, it is estimated that there were about 300 million babies not born. However, this policy has also led to several social problems. One of these is that a new generation consisting of only children has been produced in China who will be the major workforce in the future. If this policy continues without any sort of reform, China is very likely to become a country which lacks human resources or labor. The Chinese government appears to realize this serious social issue, and is adjusting its family planning policy in which a single-child-couple will be allowed to have one more child (Da Gong Bao, 2 June 2000). Although the relics of matriarchal society still can be seen in some of ethnic minori-

ties in China, patriarchy has dominated Chinese society for thousands years. This is because that for a very long period of time, China was a rural society in which men were the major productive forces. In addition, as I mentioned earlier, a son is thought to be an inheritor of a family's blood. To a large extent, Chinese people prefer sons. The Chinese "one couple one child" family planning policy implemented against such cultural and social background inevitably worsens the situation of already existing sex ratio imbalance. For example, from 1975 to 1979 the sex ratio at birth in Hebei, China, was 109.6 boys per 100 girls. From 1980 to 1984 this figure reached 115 boys per 100 girls (Wen 1993). The purposes of China's Maternal and Infant Health Care Law were to provide a legal basis for its family planning policy, to regulate the actual practice at the grass roots, and to tackle the problems emerging in the process of implementing this policy. For example, to avoid further imbalance of the sex ratio generally in China, this law stipulates that non-medical sex selection by any means be banned. Now this law has been adopted by most of the provincial and municipal governments in China.

Genetics and Ethics

Prevention of genetic defects is one of the most important goals contained in the Chinese family planning policy and the Maternal and Infant Health Care Law. This is because China has a large number of people with physical and mental disabilities. For example, a national survey of disabled people showed that in 1987 there were 51.64 million people with disabilities (4.9% of the entire population at that time). Among these disabled people, about 65% were due to postnatal diseases and injuries, and 35% were due to genetic diseases and birth defects (Guo and Meng 1993). Obviously improving ordinary people's living conditions and their basic health care could prevent the majority of these disabilities in China.

How to prevent genetic diseases in the general population is one of the most contentious and also most complicated issues in the world. For example, in the past western eugenicists believed that reducing the number of births of babies with congenital malformations and genetic diseases was possible by social and medical means such as banning marriage, sterilization and abortion in the people with physical and mental handicaps. Nowadays population geneticists claim that it is unlikely to reduce the prevalence and incidence of recessive genetic diseases in the general population unless the entire population is wiped out. By contrast molecular geneticists and genetic economists regard genetic testing and screening as a cost-effective approach to preventing genetic diseases, particularly those that are curable at an early stage. Clinical geneticists and genetic ethicists however argue that genetic education is the best way to reduce the occurrence of genetic diseases. Perhaps one thing is true – the more knowledge people have about genetics, the more views they will express.

In the last 20 years in China, genetics was reborn from a long time of political interference (Mao 1997). For example, in 1994, China launched its human genome project. This year, China completed sequencing of the short arm of human chromosome 3 (1% of entire human genome). In 1993, I conducted a national survey on ethics and genetics. The results showed that Chinese geneticists expressed very different views on ethical, legal and social issues of genetics compared with their western counterparts (Mao and Wertz 1997; Mao 1998). The Chinese Maternal and Infant Health Care Law has, to some extent, reflected these views. Recently some Chinese ethicists and geneticists claimed that Chinese geneticists were far from the eugenic movement (Chen et al 1999). However, reports from China did show that Chinese people, including medical professionals, are very enthusiastic about using new genetic technologies such as preimplantation genetic diagnosis and therapeutic embryo cloning to improve

the quality of humans (Sing Tao Daily, 5 June 2000). Obviously these are eugenic opinions. There are several explanations for these social trends in China. Firstly, there has neither been open discussion in the genetic community nor public debate on the ethical, legal and social issues of genetics, although the 1993 survey revealed that most Chinese geneticists thought that ethical guidelines were necessary to improve genetic services in China (Mao 1998). Secondly, nowadays most Chinese geneticists are only interested in the scientific aspects of genetics and do not care about the social issues involved although the 18th International Congress of Genetics held in Beijing, China in 1998 announced that it is a geneticist's duty to objectively advise the governments and to inform the public about the positive and negative sides of genetic technology. Thirdly, Chinese people lack knowledge of western eugenic history. Chinese culture plus current family planning policy make it easy for people to accept eugenic ideas. Therefore it is imperative that the international genetic community should not only maintain academic exchanges with the Chinese geneticists but also help the Chinese people be aware of how to use genetic knowledge ethically to avoid any potential harm (Mao 1999). This is exactly what the Eurasia Millennium Limited, UK, intends to do. We sincerely appeal for international sponsors and collaborators to work together with us in this field.

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