

INTERRELATIONSHIP OF ETHICS WITH CULTURE AND GENOMICS

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Ethics is a set of moral principles concerning human conduct. In all societies, Customary rules are by and large governed by ethical codes as underlying mechanism of their subsistence despite cultural oscillations. Culture is the crystalised form of human behaviour, which also encompasses morals. In Indian philosophy, a man must pass through several stages from birth to death. Each stage is marked by a set of ethical conduct, which is known as *Sanskar*. Besides family, clan, kin group or even the entire community is pivoted around ethical codes, which are basically mental make up and man acquires those ethical behaviour by virtue of his membership of the social group. Man as a biocultural being has to satisfy some basic and derived needs with the help of cultural tools. most of which are ethical.

Sometimes, deviant behaviour arises in the society and culture as a root cause of unethical human conduct. The unethical code of conduct may cause serious threat not only for culture but also for genomics, which in the long term may cause a threat to our existence. In the scientific enquiry, emphasis should be given to ethical principles in cultural behaviour and genomics. Society and the government should enact the ethically bound rules and regulations in genomics research to support human welfare.

In the present paper, an attempt has been made to show the inter-relationship of ethics with incest avoidance from the Biological and Cultural angles. The content of the paper is drawn from our own research experience and published literature. Based on our observation, we also urge the government to enact proper legislation for genomic research.

Introduction

Ethics is the set of moral principles concerning human conduct in the world. In all societies customary laws are governed by ethical codes, which are the underlying mechanisms of the persistence and environmental survival. Culture is a crystalised form of human behaviour, and includes moral values as well (Tylor, 1870). In Indian culture and philosophy a man has to pass through several stages or *ashrams*, as they are called. In each stage a man has to pass through a set of ethical conducts which are called the *Sanskaras*. The general principles of these *Sanskars* are pervading in the philosophy of the Hindu, Bouddha and Jaina great traditions that encompasses a large number of religious and ethnic groups and communities. The obedience² to the older people and following the precepts of the gurus, the teachers, for instance is one such code of conduct. Man as a biocultural being has to satisfy some basic and derived needs for the survival and development of the population.

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Cultural Behaviour of Incest Avoidance

Kinship has played a vital role in the regulation of marriage, in most of the societies. Marriage of the children of two cousin brothers or two cousin sisters is strictly prohibited, but the marriage of a cousin brother and a cousin sister may be permitted. (Hutchinson, 1989). Rivers (1964) elaborately discussed the marriage with relatives under classificatory system of kinship. The marriage among cousins, specially cross cousins, is frequent in a number of societies. Three types of cross-cousins may be distinguished in human societies. They are bilateral, matrilineal and patrilineal cross-cousins. Two intermarrying groups often exchange women as wives, and this constitutes a self-sufficient unit. Levi-Strauss (1949) called this form as "closed" or restricted exchange and correlated with disharmonic transmission. Needham (1958) and Dumont (1988) has partially modified Levi-Straussian theory, and advocated distinction between prescription and preference in marriage rules. However, wide prevalence of kin marriages is seen in many human societies. In spite of historical record of the existence of marriage between real brothers and sisters in the Royal families of Egypt, Persia and some societies of Siam, Myanmar, Sri Lanka, Uganada, and Hawaii islands (Hutchinson, *op.cit.*) marriage between real brothers and real sisters is neither prescribed nor permitted in the contemporary human societies.

The incest between real brother and real sister is a taboo. This would suggest to Freud and other psychologists that we naturally want to commit it but should not do it. But the Finnish anthropologist, Westermarck, argued that a remarkable lack of erotic feeling exists between persons, who have been living closely together from the childhood' (1922). Westermarck further remarked that men in such marriages resorted to prostitutes, took mistresses or sought extramarital affairs more frequently, and such marriages frequently resulted in separation or divorce. Weinberg (1963) also reported that contenders who had contemplated marriage with each other were those, who had been raised apart.

Westermarck took the Darwinian view that inbreeding was harmful. The avoidance that childhood association was an evolved human instinct. But Westermarck's views were largely eclipsed through some anthropologists' opposition to biological reductionism during World War II because they violated every canon of Anthropology (Murdock, 1932). But in 1950's Fox, (1962) realized that social experiments conducted in Israel provided remarkable evidence bearing on the matter of incest avoidance between siblings. The revival of Westermarck's ideas led to the studies. The communal villages, *Kibutz* founded early in the last century, and boys and girls of the same age were raised together in the peer groups of 6 to 8 children. They shared common living quarters from the time shortly after they were born through adolescence under the tutelage of nurses and teachers rather than parents. As small children they showed a typical sexual interest in each other but as they matured they disappeared. Although they were free to marry one

another, provided they were not in fact siblings, Spiro (1958) found not a single case of this happening nor even of sexual intercourse between children, who had been raised together in the same peer group. Fox (*op cit*) saw that the Kibutz data supported not only Westermarck but partly also Freud. He found that close physical intimacy of children, who are socialized together renders them sexually uninterested in each other after puberty. Among Freud's patients, most siblings were not raised with physical intimacy that was common in the kibbutz and they grew up harbouring sexual desires for each other.

Fox's summary of the pattern is that "the intensity of heterosexual attraction between co-socialized children after puberty is inversely proportionate to intensity of heterosexual activity between them before puberty". As illustrations, he quotes the Tallensi of Ghana, the Pondo of Southeast Africa, the Mountain Arapesh of New Guinea, the Tikopia and a Chinese situation fitting the Kibutz pattern. Most of the studies from the Mid-1960s onward have focused specially on Westermarck's position. The Chinese practice reported by Wolf (1970) and Wolf and Huang (1980) have provided yet another natural experiment that supports Westermarck. In many areas of China, there were two forms of marriage called major and minor. In the minor form, a young girl was adopted into the family of her future husband. The motivation of marriage came from the parents. In Wolf's analysis, the strain of daughter-in-law and mother-in-law was so serious among the Chinese that it made viable the strategy of bringing the future daughter-in-law as a very young child, so that long before she came a bride, she could adjust and more readily subordinate herself to her mother-in-law.

Wolf found, contrary to Freud and others, who argue that familial intimacy arises sexual interests that must be thwarted by the incest taboo and in support of Westermarck that minor marriages were 30 per cent less fertile and were unhappier. Weinberg, (1963) also found in Chicago that those who contemplated marriage were the ones who had been raised apart. Further support for Westermarck comes from the Near East. Justine McCabe (1983) who studied an Arab village in Lebanon found that the evidence supports Westermarck. The first cousins grew up in an association as close as that of siblings. The marriages between patrilateral parallel cousins produced 23 per cent fewer children than during the first 25 years of marriage and were four times more likely to end in divorce than all other marriages. Sepher (1983), born and raised in an Israeli commune, made the most thorough study of marriage in the Israeli communes. There was not a single case of marriage between a boy and a girl, who had spent the first 6 years of life in the same peer group. Shepher concludes that a negative imprinting occurred and it was complete by the age of 6.

In India, certain ethical codes emerged since time immemorial to prevent incestual relationships. A mythical story in one of the earliest sacred texts, that is the Veda, speaks about the incest avoidance between Yama and Yami, who were

the real siblings. *Bhatri dwitiya* or *Bhai dwig* and *Rakhi bhandahan* or Raksha bandhan are some of the festivals popular among the consanguinous or even ritual brothers and sisters in many Indian communities. One of the major thrusts of these pan—Indian festivals is to avoid sexual attraction between brothers and sisters, at least from the level of cognition.

Ethics in Genomic Experience

Reviewing the scanty literature on the empirical consequences of inbreeding in human populations, Shepherd finds 17% child mortality and 25% child disability in the offspring of sibling and parent-child incest. The negative consequences decline rapidly (Mukherjee *et al.* 1974, Mukherjee, 1984, 1992). Unlike other species, we lack innate mechanisms, we avoid incest via cultural prohibition. (Arens, 1986). Hopkins (1980) provides evidence that brother-sister marriages were common for a period in Egypt and that incest avoidance may not in fact be universal. About 44 years after Alexander, the Great, conquered Egypt in 332B.C., a Greek king divorced his wife and got married to his sister, who was 10 years older than him. Half-sibling marriages were alleged to be possible in certain ancient Greek communities. Egypt subsequently passed to Roman rule. The marriages between brothers and sisters continued from the evidence of invitation letters, and documents of marriage. But they have the weakness that in Egypt all women are referred to as sisters.

The biological considerations which dominated earlier anthropological understanding has for some decades has been banished from the mainstream social anthropological thought. The ethological discovery that humans are far from unique in avoiding incest has entirely reoriented the problem. The resuscitation of Westermarck's hypothesis has provided a successfully tested explanation for part of the phenomenon. In eliminating possible further hypothesis and in accumulating relevant data, there has been some progress. This experience suggests that anthropologists might do well to look into other lines of thought that have been neglected for no good reason. The importance in incest-avoidance example is the clear attempt to explain the phenomenon by clarifying the evolutionary conditions that generate the mechanism of avoiding incest as a prohibition of genomic intermingling with severe consequences.

Thus, the practice has been so near universal that there is an ethical construct to prevent incest so that a close degree inbreeding is avoided as a compulsion for every culture from the consideration of genomic health and inviability. The ethical principles have taken root in the tradition of avoiding marriage with very close relatives, depending on the culture of the group (Aberle, 1950). The incidence of even the approved consanguineous marriage gradually declines in the eastern side of the country (Mukherjee, 1992). The system of non-incestuous matings can thus be strengthened by governmental recommendations and legal prohibition in modern

times. The recognition of ethical principles in culture and genomic considerations can thus become useful for any society.

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