Lecture : 9

Science ,Technology and Society

Challenges : feminist, ideological, cognitive, moral, legal, and others

Feminist challenges

We have seen different positions taken by different feminist philosophers on this issue as a result of which there remain different possibilities for addressing the science question from these diverse feminist perspectives.There are feminist critics of the ideology of science for whom hermeneutics is right not only in pointing out that the ideal of pure objectivity is impossible, but also in stressing that real understanding is based on subjectivity - and that this is not a problem.

Dona Haraway and others have analyzed the departure from the classical Cartesian heritage and its dualism of observer observed, body-mind, towards constructivist epistemologies and post human concepts of cybernetics , artificial intelligence, immunology and brain research. Challenging the scientific discussion of truth , feminists argue that Nature, sex and biology are not given, they are agents in a high –stakes game. The so-called natural laws and empirical data are out come of cultural practices.

Science ,Technology and Society

Feminists like Lucy Irigaray believe that feminism should aim to create a society and culture, which recognize, cultivate, and accentuate the differences between the sexes, rather than encouraging sexual equality. Irigaray's 'sexual difference feminism' reflects her conviction that western culture subordinates women by denying and refusing to recognize their distinctiveness – an ethical failing that her philosophy aspires to put right. Irigarayan feminism poses an important challenge to mainstream understandings of feminism as a movement for equality. Irigaray's earlier writings criticize western culture as 'masculinist': pervaded by a hierarchical sexual symbolism that construes femininity as merely the lack or opposite of masculinity, its inferior counterpart. Irigaray traces how this symbolism recurs.

Irigaray's critique of masculinism underpins her positive project of reinterpreting femininity as an independent identity, different from masculinity but of equal value. Irigaray intends these often poetic and visionary texts to contribute to – perhaps, even,

initiate – the constitution of a 'sexuate' culture in which women, as well as men, can articulate their distinctive identity in positive terms.

Irigaray has no wish to replace traditional masculinism with a culture exclusively oriented around femininity. Instead, she explores how a previously unattainable level of dialogue and interrelation might become possible *between* the sexes once they acquire the cultural resources to be genuinely different. Unfortunately, her explorations of this theme tend to degenerate into a mythologisation of heterosexuality.(Philosophy online :Alison Stone, www.philoso**her**snet.com/cafe/archive_article.php?accesed Aprl 10 ,2010).

Science ,Technology and Society

Catherine Mac Kinnon(1982,83),in her article " Feminism, Marxism, Method and the State", suggests that feminists should transcend male epistemological categories altogether. As against empiricism that recognizes only a kind of truth that it can point to, Mc Kinnon points to consciousness raising as the feminist methodology. If truth is something that resides in object out there, the object that can be pointed to, it must be pointed so by a subject that owns its experience. Challenging traditional subject object dichotomy she says that women's' experience is not her own experience. Arguing that womens' consciousness has been invaded by male consciousness, consciousness is a material for women that can be controlled and possessed by others as well (MacKinnon :1982).

As Marxist method is dialectical materialism, for feminists it is "consciousness raising." To get it, according to Mc Kinnon, is to reject male way of thinking and the differentiation between knower subjects and known objects that is inevitable from the male epistemic stance. In order to avoid this inequal subject-object dichotomous relationship, Mc Kinnon dismisses objectivity and subjectivity altogether disregarding the fact that in order to know anything a relationship between the two ,in whatever form, is a prerequisite.

Science ,Technology and Society

Despite these different variations of feminist stand on science, there are some commonalities. Almost all kinds of feminist epistemologies have positivism as their focus for their critique of science. One way of this challenge is the cultural construction of STS and its critic. Gill Kirkup, Laurie S. Keller observe: "The same cultural tradition that names rational, objective and transcendent as male and irrational, subjective and immanent as female also simultaneously name the scientific mind as male and material nature as female." The feminist critics tend to dismiss this proposal of gender-neutral science and gender biased feminism. That the so-called universal man of science is not neutral observer of facts but a male scientist. This also   means that the feminist critique of positivist epistemology draws upon a lot of non-feminist critique of the same ideas, some of which is actually as old as positivism is itself.

Today the feminist critique of this particular theory of science - called positivism - is part of a broad critique of science in the western world - a critique coming from many different fields, using different angels, ideological, legal, ethical, post modernist, and so on.

Science ,Technology and Society

The combined stand of all these different positions have succeeded in destabilizing the claim for absolutist notion of truth that is universalizable and objective. Rather the position is such that now we are not so sure whose truth is better truth .This apparent confusion has made many others critical of the true nature of scientific truth and its ideal of exactness. Both inside and outside of the academic world, more and more people have turned skeptical or critical toward the scientific production of knowledge.

The   so feared autonomy of science is already compromised of research conducted under   the materialist strategies. On the   other hand a feminist approach to science may extend "knowledge seeking "practices into hitherto neglected domains, though how fully it can be implemented remains a matter for further empirical investigation and political activity", Lacey comments ."This view gains support from the further view that theories consolidated under the materialist strategy broadly characterize the world 'as it is.', not from the 'objects grasped from the stance of control. "!" In view of the way in which modern values of control are among the values highly expressed in the dominant contemporary economic, social and political institutions, so that their claim appears to be universal, this may be inevitable. Nevertheless, there is no sound argument for singling out the alternatives in this way. That they are so singled out, antecedent to the outcomes of research under the alternate strategies, I guess we can say, is "ideological." (Lacey *,2004.)*

Science ,Technology and Society

Science and Ideology

In social studies, an ideology is an idea that explains how the society should work and offers the basis for a certain group of people who pursue their interests. It can be a construct of political thought, often defining political parties and their policy. An ideology largely concerns itself with how to allocate power and to what ends it should be used. A certain ethic usually forms the basis of an ideology.

"The word "ideology" was first used in the late 18th century to define a "science of ideas." (De Tracy, Destutt :1801)). Ideology can be thought of as a vision, as a way of looking at things .One of the most influential and well-defined ideologies during the 20th century was communism, based on the original formulations of Karl Marx and Friedrich Engels. Examples of ideologies include: neoliberalism liberalism, Christian democracy, socialism, social-democracy nationalism, communism, fascism, nazism, Neo-nazis o neo

fascism, anarchism. Ideology studied as ideology (rather than examples of specific ideologies) has been carried out under the name systematic ideology. "

Science ,Technology and Society

Even when there is a discipline of challenging beliefs, as in science, the dominant paradigm or mindset can prevent certain challenges, theories or experiments from being advanced. The philosophy of science mostly concerns itself with reducing the impact of these prior ideologies so that science can proceed with its primary task (according to science) of creating knowledge. However, some view science as also an ideology in itself, called scientism . As NPR's Christopher Joyce reports, some of their research suggests that when people encounter new information, facts may not be as important as beliefs.The reason why scholars prefer one paradigm to another is not just scientific but also ideological. For example, neo classical economics is closely connected with logical positivism as a theory of science as exclusive growth on economic growth in GDP terms and on monetary profits and this is merely an ideological orientation toward deal economic man, profit maximizing firms and mechanistic model of markets etc. Alternative ideas are to be corporated to encourage alternate models. "Over the past few months, polls show that fewer Americans say they believe humans are making the planet dangerously warmer, and that is despite a raft of scientific reports that say otherwise. And that   puzzles   many climatescientists,butnotSocialscientists."(Joyce,online,www.npr.org/templates/story/story .php?storyId=124008307)

Science ,Technology and Society

        A special and critical case of science adopted as ideology is, that of ecology, which studies the relationships between living things on Earth. Perceptual psychologist J. J. Gibson believed that human perception of ecological relationships was the basis of self-awareness and cognition itself. Linguist George Lakoff has proposed a cognitive science of mathematics wherein even the most fundamental ideas of arithmetic would be seen as consequences or products of human perception - which is itself necessarily evolved within an ecology. Deep ecology and the modern ecology movement and, to a lesser degree, Green parties appear to have adopted ecological sciences as a positive ideology.(online http://en.wikipedia.org/wiki/Ideology,accesed April 10,2010)

Science and technologyy are advancing so fast that society has difficulties in keeping pace with the complexities that new developments bring. Human reproductive techniques have progressed rapidly in the past three decades, and other new techniques such as cloning have been introduced (Kirkman, 2001; Roberts, 1998; Williamson, 1999b). Ideology is clearly influencing the direction of research and legislation on human cloning, which may present one of the greatest existential challenges to the meaning of creation. Human cloning represents asexual reproduction, and the critics of human cloning often assume that the result of cloning is not a unique individual. This has led to condemnations of human cloning from the politicians' side and to fear, ignorance, and "clonophobia" from the public's side (Pence, 1998b).

Science ,Technology and Society

Emotional responses have dominated the debate on human cloning, and although emotions can sometimes be justified, many times they can be caused by prejudice. Gregory E. Pence (1998b) maintains that physicians, bioethics, and scientists have done poorly in helping to reduce the public's fears and misconceptions. For several years, research on cloning has been placed at the center of interest and debate among scientists of different disciplines. Albee (2002), for example, argues that there is increasing political pressure on science and scientists in respect of issues such as cloning and genetic engineering, whose implications are important and gradually affect major national and political decisions. In view of the possibility that human cloning and other emerging technologies could enhance physical and cognitive abilities, there is a need for a different way of thinking about life, new technologies and creation.

Science ,Technology and Society

Ethical, legal and cognitive challenges

Technological advances are also affecting human attitudes to the notions of time, space, life span, longevity, spirituality, the meaning of life, suffering, and the concept of death, and the notion of creation. It is precisely when we are confronted with an overwhelming range of new technologies, and with so many possibilities to use them, that different feelings, many new thoughts, different attitudes, and anxiety can all develop. These have deeper implications to our society that need to be addressed taking legal and moral guidance.

For example, the ethical and legal challenges are to be addressed in almost all spheres of incorporating new technology for the betterment of human life. The critics of human cloning, for example, argue that there are many unaddressed problems, among them the implications of the harm issue (Kassirer and Rosenthal, 1998). Other important concerns are related to family, such as family interactions (in the case of a cloned family member), adults' rights to procreative liberty, children's rights to privacy and equality, and commercial surrogacy. These are only a few of the areas of concern that can be related to human cloning. Some reports have also indicated that it is important to study the possible psychological and emotional state of individuals produced by cloning, the social aspects of their families, and the possible effects on society (President's Council, 2002).

Science ,Technology and Society

Although technology has so far eased our life, but now on the verge of easing it out of all labour that is bare minimum necessity for us to survive. " Contemporary life is a ''technologically mediated life.'' We rely on what we make in order to survive, to thrive and to live together in societies. Sometimes the things we make improve our lives, and sometimes they make our lives worse. Technological devices shape our culture and the environment, alter patterns of human activity, and influence who we are and how we live. " (Kaplan 2009, 2008, 2007''). Philosophers of technology tend not to celebrate technological achievements, because they get celebrated all the time'', says Albert Bergmann by emphasizing the problem of how to tame the technological development. Borgmann further elaborates, ''Philosophers point out the liabilities, what happens when technology moves beyond lifting genuine burdens and starts freeing us from burdens that we should not want to be rid of.''. (Tripathi (ed). 2010).

Science ,Technology and Society

Challenges come from the field of cognitive science and information technology. In the early days of AI , Weizenbaum warned us against giving machines the responsibility of choices. If at all we should be concerned with the so called technological inevitability of mechanization ,we need to be alert to the implications of the convergence of two powerful forces ,the market and mechanization, leading to the dominance of the culture of reduction and   commodification. Now everything can be commodified, measured and calculated and can be put in the competitive market for sale, detached from its roots and purposes ,resulting in a management of culture of the 'tick-box'. Development, devoid of human commitment and passion tends to ignore seeing the personal and the profession, man and environment, create naïve instrumental view of life that leads to alienation. (Yongxiang ,2005).

Science ,Technology and Society

Technology will bring about revolutionary changes to the future production mode, life style, social structure, etc. meanwhile inevitably giving rise to more legal and moral issues.

Ethical and legal problems such as individual life code disclosure, difficulty in definition of individual's social attribution, etc will also rise. Other problems include factitious impact on ecological balance and safety, new threat to human genetic and development health, etc. Once nanotechnology is extensively applied in various fields, numerous challenges in aspects such as human health, social ethics, ecological environment, etc may appear. Research already show, that some nano powder have special toxicity , nano particles and nano carbon tube may trigger cancer and could penetrate animal's blood-brain barrier, and the waste disposal of nano materials may bring us to face new

problems. If one day nanotechnology is used to make danger weapons, man has yet to find ways and means to protect ourselves (Yongxiang ,2005).

Science ,Technology and Society

One thing is certain : the more we advance in science and technology, society should keep room for accommodating fairness, justice and human sensitivity into its mechanized life world. We should clear realize that science and technology is also a double-edged sword, once misused, it may endanger natural ecosystem, human rights, life in the earth, and harmonious and sustainable evolution between human society and nature, thus causing further unfair, insecurity, disharmony, no sustainability, and even man-made disasters.

It is inevitable that the more science and technology advances ,the more it will face new kinds of challenges ,especially from the domain of morality and law. Richard C.Leone comments :" Both scientists and attorneys begin with hypotheses. But interactions between the worlds of law and science in the court rooms makes clear that they represent two very different traditions. Clashes are already common between the truth-seeking world of science and the justice serving institutions of the law ; they are likely to intensify in the future. Each field perhaps sees the other as easy prey for the ancient intellectual trap once expressed as "an error is the more dangerous the more truth it contains(Leone,1995)."