

## Chapter- 5

### **Conclusion**

#### **5.1. Concluding remarks**

The ethical issues related to experimentations on sentient beings have been discussed at length in the organized chapters of this dissertation in an analytical way from various perspectives. Our purpose was to evolve a reasonable stance in the matter of ethical justifiability of the involvement of human and non- human beings in biomedical research. The work started with certain basic objectives that have been systematically addressed and responded to in all the preceding chapters. In order to examine critically whether the objectives of the study proposed are actually fulfilled or not, it would be desired on our part to sum up the entire discussions so that the various perspectives used in the work become clear and distinct. It would be required to maintain clarity regarding the adopted ethical stance as well in respect of the critical examinations undertaken. What is further more intended is to explicate some of the limitations of the research work too so that the issues discussed here can open up future research possibilities.

#### **5.2 Highlights of the work**

The biomedical history provides us with a good number of evidences, which prove that the advancement of biomedical science could have faced a deadlock had human and non-human being's involvement not been encouraged in experimentations. Experimentation is a scientific procedure that needs to involve sentient being in order to bring progress in

any particular branch of life-sciences. Basic biological researches, the study of human diseases, research in pharmaceutical industry, toxicity study, are some of the basic areas of life-sciences. Apart from these basic areas, there are many other areas of biomedical sciences too, which need not be discussed here in detail because of their lesser relevance for the present work. What has remained relevant in the field of investigations, in general, is that in order to get certain knowledge in all the divergent areas of biomedical sciences, experimentation on sentient being is very much a necessity. However, the matter of giving priorities to the public or societal interest as against that of the individual needs and interest has entertained least doubt.

The demand for more involvement of human and nonhuman beings in biomedical research has increased tremendously over the last few decades. Now a day, there is virtually no human disease either physical or mental that has not been experimented on nonhuman being. The scientific research communities have also recognized that most of the latest developments in medical sciences would have not been possible without experimentations on human and nonhuman being. However, this increasing demand has turned the attention of the moral community more to the ethical implications of experimentations. Consequently the debate on human and nonhuman being's involvement in experimentations has reached to the apex level. The moral communities have been arguing that there are some sensitive moral issues, which if duly addressed, may pose obstructions on the way of experimentations on human and nonhuman being in any biomedical sciences. Therefore, from the ethical point of view it has been claimed that in order to justify the experimentations on human and nonhuman beings in biomedical research, the ethical concerns must take precedence over the scientific

necessities. The ethicists have claimed that the due considerations of the ethical concerns would protect the dignity and sanctity of the subjects involved in experimentations. They have also claimed that the invasive research on human and nonhuman beings without due considerations of the ethical concerns would be equivalent to the shocking behaviors of Nazi forces during the World War-II.

It should be noted here that though the moral concerns of human and nonhuman beings have some common elements, yet the depth and intricacies of these issues are believed to be quite different. These differences have great significances in biomedical ethics. That is why moral issues concerning human and nonhuman animals have been discussed separately in two different chapters of the dissertation. What are the legitimate grounds for the differences that permit us to use nonhuman beings in certain experimentations, where as in the same situation use of human beings will not be permitted even at the initial stage, continues to be a prime question. This question often is answered in terms of the fact that human beings have the capacity for normative self-determination which is, however, lacking in animals. Animals do not have this core element and hence are not accountable as moral creatures like human.<sup>1</sup> According to the *Indian Council of Medical Research Report*, (2000) no new drug could be introduced in day-to-day clinical practice or even for the matters of therapeutic research unless it goes by the succession of toxicity tests on non-human animals. Similarly, the first principle of *the Declaration of Helsinki*, has clearly pointed out that biomedical research involving human subjects must confirm that it is based on the adequately performed laboratory and animal experimentations. Thus, it has clearly raised the questions on the status issue of human and non-human animals. Some prominent philosophers have claimed that there is

a hierarchy of moral status of sentient beings in which the human beings are at the top followed by the nonhuman beings. However, scientific communities have been practicing this hierarchy in the biomedical experimentations. It is a commonsense belief that human beings have greater moral status than nonhuman animals. But, how far this belief is legitimate is a matter of critical scrutiny. Marry Warren has tried to develop legitimate grounds in favor of this commonsense belief in her famous book *Moral Status*, which is discussed in detail in the fourth chapter. In a review on *Moral Status*, Richard Brook has commented that the aim of Warren was to establish that there are at least some legitimate grounds behind our commonsense belief.<sup>2</sup> In this way, Warren has tried ‘to move some moral theories’ about moral status to ‘moral common sense’.

The Nazi experimentations during the World War-II, is one of the historically contentious examples where the investigators manipulated the human bodies unnaturally in the name of advancement of public health care systems. During that time, perhaps there were no strong humanitarian agencies at the national and the international level to come out and protect the victims from the imposing horrors of the Nazi forces. However, the immoral experimentations of the Nazi forces on human beings was a milestone in the history of biomedical research since it was able to create an attention at the national and the international level. Consequently, from the very beginning of the post-World War-II, various ethical codes, declarations and ethical guidelines have been formulated at the national and international levels to regulate the biomedical researches on human beings. Since that time, considerations of the ethical concerns become an essential component in the matter of justifying any experimentation on human beings for the cause of scientific necessity. The denial of autonomy, sanctity of life, instrumentalization and

objectifications are some of the moral concerns that have been seriously posed while experimenting on human beings are undertaken.

Respect for the autonomy of the human subjects in any biomedical research is a basic requirement for doing research on human beings. However, research involving human beings may be either therapeutic or non-therapeutic. In both the types of research, the voluntary informed consent of the subject's involvement is necessary.<sup>3</sup> It has well been recognized that voluntary informed consent is the best way to respect the autonomy of the subject who is involved in experimentations. However, taking the voluntary informed consent is not a simple procedure. It has lots of obstacles and barriers, which are being posed as serious moral concerns. Some human beings are potentially incapable to give informed consent, as in the case of human infants, the mentally disabled, human embryos etc. However, their incapability does not exempt the investigators from the basic requirement of biomedical ethics. Nevertheless, there are some recognized ways towards these vulnerable human beings, so that they can also exercise their voluntary informed consent. Surrogate decision makers who may be the parents or doctors, are allowed to exercise the informed consent on behalf of the vulnerable human beings, while they take part in the biomedical experimentations. But how far, in surrogate decision maker's decisions, the autonomy of the vulnerable people has been respected and protected is matter of debate till today.

Objectifications and instrumentalizations are also two important moral concerns that have been seriously posed in human beings' experimentations. While the public interest takes precedence over the individual interest in the biomedical research, the involved subjects become the means to the end. That end may have great societal significance.

However, ethics demands that the subject involved in experimentation should not be treated as an object. The possibilities of objectifying the human subjects have been posed as a great challenge for human communities now a day in any biomedical research. Since it can dehumanize the subject involved in research like the Nazi experimentations. In non-therapeutic research, the issue of objectification has been often posed as a serious matter. That is why the ethical justifications of non-therapeutic research emphasize the well-being of the subjects rather than the interest of the science and society. However, the issue of instrumentalizations is, slightly different from objectifications, which can be raised particularly in the case of stem cell research. It is also known as commodifications, which can be raised in the case of properties. In human eggs stem cell research, the human embryos are treated as a form of property that has market value. In order to extract stem cells the human embryos are being destroyed. However, human embryos are not only biological entities or clusters of cells. They are also the tiniest of human beings. Therefore, it is not morally permissible to harm or kill them in the name of biomedical research. Thus in both the cases of moral concerns, the doctors/scientists have great responsibilities to shoulder. Only they are the competent persons, and it is assumed that their responsibilities and duties can protect the human subjects in non-therapeutic research and stem cell research from harms or even from unnecessary death.

Another issue of moral concerns is the sanctity of life. It is the most serious moral concern that has been raised in any biomedical research involving human and non-human beings. It has claimed that being alive is enough for moral considerations. It demands that life is precious irrespective of species, race and gender, so it is intrinsically wrong to harm or kill humans or nonhuman beings in the name of biomedical research

unnecessarily. It is the moral responsibility of everybody, which ethicists have been demanding to respect the sanctity of human and nonhuman beings' life. They believe that it will protect the human and non-human beings from unnecessary harm in experimentations. However, respecting the sanctity of the human and nonhuman being's life may be the right way to develop an attitude for humane treatment of all the subjects involved in biomedical research.

Apart from the sanctity of life, inflicting unnecessary pain & harm, denial of subjectivity, and ownership are some of the serious moral concerns that have been raised in the context of experimentation involving non-human beings. According to Peter Singer, pain and suffering are themselves bad. (*Animal Liberation*, p-17). Therefore, it is meaningless to say that human being's pain is more important than nonhuman being's. Since Pain is pain, so it is the responsibilities of the investigators to prevent or minimize it irrespective of race, sex or species in biomedical research. As a moral issue, it has been seriously raised in the case of nonhuman beings, because they have been treated in experimentations as an insensitive automaton as Rene Descartes has declared. Some ethicist have claimed that a huge numbers of animals have been used in biomedical research investigations every year. But not all of these investigations have made a positive use of the sentient beings and resulted equally in the biomedical progress. Many a time the acts of experimentations caused unnecessary imposition of harm or pain to the subjects involved. Ethicists have also claimed that avoidance of imposition of such kind of unnecessary harm or pain has been posed as a challenge worldwide in contemporary biomedical research involving nonhuman beings. However, some anthropocentric attitudes have still survived in human communities because of which nonhuman beings

have continuously been deprived of the moral protection from unnecessary abuse in the name of experimentations. According to the advocates of animal rights, animals also have subjective experiences like human beings. The nonhuman beings are not simply sentient beings having the capacity to feel pleasure and pain. They also possess the subject hood, interest and autonomy. Due considerations of their subjective experiences, interest and autonomy is a symbol of respect towards the dignity and sanctity of nonhuman being's life. Denial of all these is a serious moral issue according to the advocates of animal's rights movement. Thus, the denial of subject- hood, and their interest are also crucial moral burden in contemporary biomedical ethics. Similarly, the ownership is another issue, which can be raised in the case domestic and firm animals, or the animals who have a close relationship with the human communities in many ways. Ownership does not imply that owners can do as he wishes towards the animals owned by him. Ethics claims that owners of animal's firm have some moral obligations towards the welfare of the animals when they are being involved in experimentations.

Thus, it becomes clear that the concerns expressed by the contemporary moral communities do not contradict the scientific necessities of the sentient beings' involvement in biomedical research in absolute sense. However, the moral communities have given more emphasis on both human and non-human beings' welfare when they are involved in experimentations. Many safeguards have been formulated at national and international level to protect the welfare of the human and nonhuman beings in biomedical research. The target is to keep the investigators away from the unnecessary use of human and nonhuman beings in biomedical research.



There is a common belief that human beings have greater moral status than nonhuman beings. But how far this common belief is legitimate is a matter of debate. To determine how far ethically the human and nonhuman being's involvement in biomedical experimentations is justifiable, a special focus has been given on the moral status of both human and nonhuman beings. Philosophers have debated on the exact criterion of moral status of sentient beings throughout history. Some philosophers have claimed that intrinsic properties of a being determine its moral status. On the other hand, some other holds the view that extrinsic properties are sufficient for having moral status. For, both the groups, single- either intrinsic or extrinsic property is sufficient for full having moral status. However, their views have been criticized on various grounds. Mary Warren, in her book *Moral Status* has developed a reasonable stance by criticizing the former uni-criterial approaches to the determination of moral status. Criticizing the uni-criterial approaches, Warren proposes another new approach called the multi-criterial approach which rests upon the theoretical contention of moral pluralism. According to the moral pluralism (multi-criterial approach), there is no single criterion of moral status, fulfillment of which would be sufficient for having full moral status, though it may be a necessary criterion. Thus, the sentience, subject-of-a-life, and personhood are individually necessary but not sufficient for having full moral status. The very idea of moral pluralism of moral status can be best understood with help of an analogy. For example, to make a cup of tea in the true sense of the term, simply water, tea, sugar, milk and heat are not sufficient in isolation though they are necessary. Likewise the very concept of moral status has more than one single criterion, and all these are necessary as well as sufficient for having full and strong moral status of a being. This view of moral

status is also true from the commonsense point of view and easily understandable. It is thus legitimate to assign strong and full moral status to human beings as compared to nonhuman human beings since they fulfill added conditions. In morally pluralistic universe, every element of it, both biotic and a-biotic have been given some value depending on the criterion of moral status they possess. Thus, moral pluralism has recognized the human superiority in moral community, since they are considered to have fulfilled all the criterion of moral status for the strong and full moral status. However, moral pluralism also anchors some undeniable obligations towards their fellow beings. It also implies one very pragmatic and noteworthy point that if the human beings fail to perform their moral obligations towards their fellow beings, then ultimately they would fall short of their full and strong moral status. In most of the biomedical experimentations, the investigators have been using the sentient beings (both human and non-human animals) completely ignoring their minimum morals. As a result, the involving subjects are being abused. Fortunately, laws have been enacted in most of the countries, to compel the investigators for exercising the minimum morals so that the involved subjects are being protected from unnecessary harm or death in any biomedical research.

### **5.3.The ethical stance**

Keeping in mind the main objectives, we have tried to establish that both human and non-human animals, though they are sentient beings, different from each other in degrees of moral status, can justifiably be used in biomedical research. From the overall discussion in the above chapters, it has come out that the scientific necessities of the involvement of human and non-human beings in any biomedical research remain unquestionable till

today. The principles of consequentialism are operating behind the scientific necessities of experimentation on sentient beings. The improvements of the public health care systems, better understanding of the effectiveness of various pharmaceutical products and the day to day use of products having chemical ingredients, discovering the various surgical techniques, better understanding the human and animal's behavioral psychology are some of the areas, which justify the use of human and nonhuman beings in experimentations as necessary. Maximum benefit for the maximum numbers is the fundamental motto here. However, cost-benefit analysis is also very significant while justifying the experimentations on sentient beings, particularly in non-therapeutic research. It is one side of the justifications of involvement of sentient being. However, the consequences cannot provide the full and strong justification to biomedical research. It is just one moral theory among others. The practical moral problems are so complex that a single and a simple theory, like consequentialism cannot give a satisfactory analysis. That is why, the problem of the justification of sentient beings' involvement in biomedical research have been analyzed with the help of other theories also to uncover all the possible issues.

The ethicists have claimed that the due considerations of the ethical concerns, as discussed above, would protect the dignity and sanctity of the subject's involved in experimentations. Those ethical concerns have brought out clearly some directives that need to be followed in all experimentations conducted on human and nonhuman beings. In all the directives, the moral obligations have been given special priorities in order to protect the dignity and sanctity of human and nonhuman beings' life. Here, the deontological principles are operating. It is the duty of the investigators to protect the

involvement of subject from unnecessary harm or killing. However, there may be some occasions where conflict crops up in between the purposes for and the obligations towards the sentient beings. Reaching a balanced state between the necessity of the biomedical research and the obligations to protect the subject's involved in the research seems to be an ideal goal in absolute sense. Because there is no such uniform standard yet evolved to measure how much necessities would justify an act of experimentation and fulfillment of what sort and extent of obligations would suffice to reach at the level of balance between them. Most of the time, the practical moral problems are tried to be analyzed on the basis of the circumstantial evidences only. The theories and principles come to acquire meaning at a much later state. Technically it is known as the bottom-up approach,<sup>4</sup> where the new theories are developed in the light of the circumstantial requirements. Thus, when two principles come into a conflict in a particular situation of biomedical research involving human and nonhuman animals, the investigators have to prioritize depending on the situations that he is in. Here, again the question of moral status of the human moral agents gains prominence. Human being as moral agent has the full moral status, which, therefore, implies the corresponding set of obligations of him towards the fellow beings, which should be observed to the highest extent possible if other circumstances are all right from all the sides.

The entire discussion makes it clear that the problems of biomedical research are more concerned with the treatment of the subjects involved in research rather than with that of the matter of societal interest or needs. Thus, how the investigators have been performing their duties and fulfilling their obligations towards the subject involved in research is the most essential matter to ensure the humane treatment of the involving

subjects, either human or nonhuman beings. Biomedical enhancement is a necessity so far as public health is concerned. All human beings have the right to take the benefits from the biomedical sciences as far as possible. But rights imply some duties and obligations also. Thus if biomedical enhancement is a necessity then it is the duty of the investigators also to protect the subjects involved in the biomedical research. Rights and duties always go on parallel, since they are complementary but not contradictory.

#### **5.4. Shortcomings**

The ethical issues involved with the experimentations on sentient beings are serious practical moral problems in the contemporary scenario of biomedical ethics. The ethical issues that have been raised here are concerned with human and nonhuman beings only. The study has been done purely on the basis of some secondary data and existing literature of biomedical ethics. Undoubtedly, close examination of some primary data, collected from the different medical research institutes could have added more to the weight and strength of the whole work. But this is something that a discipline like philosophy does not much encourage.

Another very important matter remains unresolved in the dissertation. What has followed from the discussions is that only morally sound and strong reasons can justify the human beings' involvement in biomedical research, since human beings have greater moral status than the other non humans. But how are we to decide which reasons are sound and strong? The question remains an open one since there is no scale of measure with uniform applicability scope evolved yet in biomedical ethics. In most of the cases, the nature of the situations leads to a definite course of action. Thus, soundness and

strength of reasons are likely to vary depending on varied situations in biomedical experimentations. Admittedly, to find a readymade solution in this regard is really a tough task.

Another practical difficulty that this work seems to have suffered from is accessibility to the latest resources in this area. Although I have procured and consulted good number of latest resources and made use of them in this study, they do not look adequate. But given a chance in future I firmly believe that I shall be able to improve upon this work by making use of some of the most recent arguments which are based on the latest findings of experimentations. Already in many developed countries, the use of sentient beings in research has drastically come down in last couple of decades. But there are still pressing concerns that bother both the ethicist and the scientist. In my future endeavors, I hope to improve upon this work based on some of these pressing concerns.

### **5.5.Way forward**

In this work, I have mainly tried to address three major objectives, which had been articulated in the first part of this dissertation. Now that we have come to an end of this endeavor, it is worthwhile to recall these objectives and take a note of my success and failure with regard to them. The objectives are- first, philosophically analyzing and responding to some of the basic ethical questions that have been raised by contemporary ethicists and philosophers in case of experimentation with sentient beings. Second, exploring how far the experiments with humans and non-humans are ethically justified given the fact that we all need to ensure scientific research and progress. And third,

offering a mid path between the urgency of experimentations and the requirements of adhering to the ethical norms and principles.

As far as addressing and responding to these objectives are concerned, I think I have been able to do a fair job in this attempt. The work has reasonably engaged in some of the latest literature in articulating a viable ethical position. Having said this, I must not hesitate to mention that there are many important issues and concerns, which usually emerge from arguments and counter-arguments, that remained unaddressed or untouched, both because of time and space constraints. Although the work of this nature deserves more in-depth investigation than what I have been able to give, given the resources and the timeframe I do believe I have been able to provide a reasonable and defensible conclusion about the balance between the ethical concerns on the one hand and the necessity of experiments with sentient beings on the other. The work has fairly showed how experimentation on sentient beings could be carried forward in the presence of some well laid-down ethical norms and principles. The present study shows that from the absolute point of view, it seems to be an ideal thing to arrive at a balancing position between the necessity of the biomedical research and requirements of adhering to the ethical principles for the protection and preservation of sentient beings. But as such there is no concrete standard that could be vividly presented in order to make it a water tight case. In order to make things better and effective, we need to look forward and engage in more intense research work on this topic. Given this present exposure to this field and the experience in handling some of the toughest arguments on this topic, I am confident that I shall be able to carry forward a much more fruitful and sophisticated work in future in this field with different aims and objectives. I hope to do this by making use of some of

the most recent and celebrated resources produced in this area in last ten-fifteen years or so.



## Notes & References

---

<sup>1</sup> Stein, T. (2015). Human Rights and Animal Rights: Differences Matter. *Historical Social Research*. Vol-40(4). 57-58.

<sup>2</sup> Brook R. (2002). Moral status: to persons and other living things by Mary Anne Warren. Review in *Ethics*, 112(3). p- 644.

<sup>3</sup> Note: It is the first ethical principle of the Nuremberg Code to respect the autonomy of the human subject involved in biomedical research. (Beauchamp, T. L., & Walters, L. (1989). *Contemporary issues in bioethics*. California: Wardsworth publishing. p-420.

<sup>4</sup> Frey, F. R., & Wellman, C. H. (2003). *A Companion to Applied Ethics*. USA: Blackwell Publishing. p-8.