UNIT 4 NATURE OF NATURE: PHILOSOPHICAL IMPLILCATIONS

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4.0 OBJECTIVES

- To appreciate the evolving nature of humans.
- To realize that our nature is engineered or our nature has become part of our culture.
- To appreciate the radical changes taking place in our self-understanding ("singularity").

4.1 INTRODUCTION

What is unique about contemporary nature? How does culture and nature differ today? Has technology transformed our culture and our nature beyond recognition? Are we at the cross roads in the evolution of culture? In this unit our aim is to show how culture has evolved so awesomely that it has conquered every possible space, including our own human body, our very nature. In other words, given the technological prowess available to humans today, cultural has really radically altered nature and even merged with nature. In such a scenario, we need to evolve new ways of living, relating and experiencing the presence of each other.

In other words, ours have become an "engineered nature." By "engineered nature," I mean a nature that been so artificially and technologically created that it almost eats itself, like the uroboros snake (Fox 1982) Such a substantially different culture, that also encompasses nature, I want to argue, gives rise to different understanding of body, relationship and presence.

So in the first part of this article, we want to focus on the blurred relationship between the real, imaginary and the hyperreal. The hyperreal or vitual, we say, is ambiguous term that connects the real and its opposite and in the process makes reality far more profound than we imagine. In the next section we want to

extend this complex relationship to the triads of nature, nurture and culture. Here our specific aim is to show that today culture has to be understood as a larger and complex phenomenon, that includes also its antonym, namely, nature. Because of the technology available to contemporary humans, we have developed our culture so much that it radically alters our nature.

This takes us to the uniqueness that contemporary human experience: the singularity. Here we takes us different kinds of singularities and focuses mainly on the technological singularity, that changes our body profoundly. Such a technologisation of our body has to be placed in the philosophical context of physical body, namely "lived body", which we undertake in the next section. Then in the final section we take up some related cultural issues like cultural singularity and its implications for body, presence and relationship. Thus our main argument in this article is to show that the very notion of culture has undergone dramatic changes and today we stand at the cross-roads of our culture possessing us almost totally.

4.2 THE REAL, IMAGINARY AND HYPERREAL

In common parlance, 'real' can be an antonym for 'imaginary.' The dictionary definition of 'real' (as an adjective) has following two meanings: (1) NOT ARTIFICIAL, something that is real is actually what it seems to be and not false, artificial or pretended and (2) NOT IMAGINARY, actually existing and not just imagined. In the first case, antonyms of 'real' are 'fake', 'artificial', and so forth. In the second case, I think 'imaginary' can be an antonym of 'real'.

Today many philosophers do not share this view. when photographers say 'photo real' or 'super real', with the word 'real', they mean their images that are actually just in their minds. In this case, 'real' does not actually means 'fact' but more 'real' feeling than 'fact' which they feel about photos. That's why." That is why some of the contemporary thinkers use the term hyperreal, to go beyond the duality between real and imaginary (or artificial).

Hyperreality is used in semiotics and postmodern philosophy to describe a hypothetical inability of consciousness to distinguish reality from fantasy, especially in technologically advanced cultures like ours. Hyperreality is a means to characterize the way consciousness defines what is actually "real" in a world where a multitude of media can radically shape and filter an original event or experience. Some famous theorists of hyperreality include Jean Baudrillard, Albert Borgmann, Daniel Boorstin, and Umberto Eco (Hyperreality 2010).

Most aspects of hyperreality can be thought of as "reality by proxy" (Smiles and Moser 2005). Baudrillard in particular suggests that the world we live in has been replaced by a copy world, where we seek simulated stimuli and nothing more. Baudrillard uses the example of a society whose cartographers create a map so detailed that it covers the very things it was designed to represent (Lane 2009). When the empire declines, the map fades into the landscape and there is neither the representation nor the real remaining – just the hyperreal. Baudrillard's idea of hyperreality was heavily influenced by phenomenology and semiotics.

Thus contemporary society blurs the distinction between real, imaginary and hyperreal. Though for practical purposes such words are still useful, in fact, the

blurring of the boundaries between them is a characteristic feature of contemporary society.

4.3 NATURE, NURTURE, CULTURE

The nature versus nurture debate is one of the oldest issues in psychology and in philosophy. The debate centers on the relative contributions of genetic inheritance and environmental factors to human development. Some philosophers such as Plato and Descartes suggested that certain things are inborn, or that they simply occur naturally regardless of environmental influences. Other well-known thinkers such as John Locke believed in what is known as *tabula rasa*, which suggests that the mind begins as a blank slate. According to this notion, everything that we are and all of our knowledge is determined by our experience.

For example, when a person achieves tremendous academic success, did they do so because they are genetically predisposed to be successful or is it a result of an enriched environment? Today, the majority of experts believe that behavior and development are influenced by both nature and nurture. However, the issue still rages on in many areas such as in the debate on the origins of homosexuality and influences on intelligence.

Nature and culture are classical opposites, or complements. It is usually claimed that by nature we are "born that way"; by nurture we learn to become civilized (Nature vs Nature 2011).

In one sense, "nature" refers to everything generated or produced. Etymologically, the Latin *natura* is the source from which all springs forth. For metaphysical naturalists, perhaps also for methodological scientists, nature is all that there is, without contrast class. Nothing non-natural or supernatural exists. Humans evolved within nature and break no natural laws. Another view holds that a straightforward contrast class for nature is culture, which nurtures humans into an inherited linguistic and symbolic system, a worldview, by which they communicate, perpetuate, and develop knowledge. This cultural genius makes possible the deliberate and cumulative, and therefore the extensive, rebuilding of nature. Humans reshape their environments, rather than being themselves morphologically and genetically reshaped to fit their changing environments. Humans come into the world by nature unfinished and become what they become by nurture.

Cultural Transmission

Etymologically, "culture" is related to "cultivate," while "nurture" is related to "nurse" and "nourish," with overtones of rearing and training. Religious persons find their traditions vital in such nurture, and absent from nature.

In contemporary biological and human sciences (anthropology, psychology, sociology), as well as in philosophy, there is much effort to naturalize culture, with equal amounts of resistance to such reduction (if that is what it is). Sociobiologists hold that genetic constraints are the principal determinants of culture; only those people and cultures survive that can place genes in the next generation. Evolutionary psychologists discover that humans have an "adapted mind," a modular mind with multiple survival subroutines more or less instinctive—in contrast to the highly rational *tabula rasa* (empty, pliable mind)

once favored by humanist philosophers. Philosophical pragmatists may agree that the mind is mostly a survival tool, even in its cultural education (Barkow et al 1992; Bock 1980; Cavalli-Sforza & Feldman 1981).

Culture remains a major determinant, nevertheless. Information in nature travels intergenerationally on genes; information in culture travels neurally as persons are educated into transmissible cultures. The determinants of animal and plant behavior are never anthropological, political, economic, technological, scientific, philosophical, ethical, or religious. Animal imprinting and limited transmitting of acquired information notwithstanding, humans gain a deliberated modification of nature that separates humans in their cultures from nature, increasingly so in high-technology cultures. Since decoding the human genome, completed in 2001, people stand at the threshold of rebuilding even their own genetic nature (Nature vs Nature 2010).

Beyond Nature-Culture Dualism

Humans have a dual inheritance system, nature and nurture. The intellectual and social heritage of past generations, lived out in the present, reformed and transmitted to the next generation, is regularly decisive. Cultures, especially modern ones, change rapidly in a few decades; the human genome hardly changes in thousands of years. Slow-paced genes are difficult to couple with fast-paced cultures (Plumwood 2002).

A relatively pliable, educable mind is as great an adaptive advantage as is a mind with instinctive routines. The mind is so complex that the number of neurons and their possible connections (with resulting myriads of cultural options) far exceeds the number of genes coding the neural system; so it is impossible for the genes to specify all these connections. Human genes have generated an organism whose behavior results from an education beyond direct genetic control. As more knowledge is loaded into the tradition (fire building, agriculture, writing, weaponry, industrial processes, ethical codes, electronic technology, legal history) the genome selected will be one maximally instructible by the increasingly knowledgeable tradition. This will require a flexible intellect, able to accommodate continual learning speedily, adopting behaviors that are functional in whatever cultures humans find themselves. This is consistent with the unusually long period of child rearing in nuclear families with unusually large-brained babies, found in human evolutionary history and uncharacteristic of any other species (Durham 1991).

Critics complain that nature-culture dualism is an undesirable Cartesian legacy (perhaps also a Christian or Greek one). The “versus” in the title of this entry frames the connections wrongly. Nature is the milieu of culture, and supposing our cultures to be in exodus from nature is at the root of our environmental crisis. Culture remains tethered to the biosystem, and the options within built environments, however expanded, provide no release from nature. In fact, ecology always lies in the background of culture; no nurture is adequate that forgets these connections (Rolston 1999).

Perhaps cultural nurturing reinforces natural genetic dispositions for some practices (such as incest avoidance), but not for others (learning nuclear physics). Whether adults have enzymes for digesting fresh milk will determine their pastoral practices. But the differences between the Druids of ancient Britain and the

Dravidians in India are nongenetic and to be sought in the radically differentiating historical courses peculiar to these cultures—even though Druids and Indians have a biological nature largely held in common and despite differences in skin color or in blood groups.

Humans are only part of the world in biological, evolutionary, and ecological senses—their nature; but *Homo sapiens* is the only part of the world free to orient itself with a view of the whole, to seek wisdom about who they are and where they are, and to develop their lives on Earth by means of culture. Such cumulative, ongoing nurture determines outcomes in the uniquely historical behavior of humans, making the critical difference, while human universals, biological, psychological, or social, which are a legacy of nature, have limited explanatory power (Nature vs Nature 2010).

Check Your Progress I

Note: Use the space provided for your answers.s.

1) How is culture and nature related?

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2) What is hyper-real and give its relevance?

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4.4 SINGULARITY IN THE WORLD

In general singularity may be defined as "the quality or condition of being unique". It implies someone or something having a trait or quality "marking one as distinct from others". It is a peculiarity that is unique and essential. In this first part, we want to familiarise ourselves with the general notion of singularity so that we can apply it to technological or engineered singularity.

A General Understanding of Singularity

Seen from this perspective, Big Bang is a singularity. The origin of the universe is a uniquely singular moment, which cannot be compared with any other events. Though scientists are in the dark as to the exact nature of the origin of the universe, they seem to have a very good idea of what took place later on.

Similarly the origin of life may be considered as another singular event. All of us experience life and we know quite a lot of it. Though every experimenters gave

a lot of information on the conditions that gave rise to life, the exact origin of life still remain an enigma. With the arrival of genetic engineering and synthetic biology (including the creation of artificial life), it may change. Today we can safely claim that the origin of life, just like the origin of life is a singularity. Abiogenesis or biopoesis is the study of how life arises from inorganic matter through natural processes, and the method by which life on Earth arose. In modern, still somewhat limited understanding, the first living things on Earth are thought to be single cell prokaryotes (lacking a cell nucleus), perhaps evolved from protobionts (organic molecules surrounded by a membrane-like structure). The oldest ancient fossil microbe-like objects are dated to be 3.5 billion years old), approximately one billion years after the formation of the Earth itself roughly 4.7 billion years ago.

When we speak of the third example for singularity, it is still more complex: the origin of human beings? As such here we are on familiar field. Biologists and anthropologists have made significant contributions to the study of human evolution. Though theories vary, we may trace human beings even up to 400,000 years. As to the exact origin of Homo sapiens There are two theories about the origin of modern humans: 1) modern arose in Africa and spread to different continents from there and 2) pre-modern humans migrated from Africa to become modern humans in other parts of the world. Most evidence points to the first theory because of fossils of modern-like humans are found in Africa. Further stone tools, other artifacts and DNA studies support African origin theory.

In short, genetic and fossil evidence suggests that our own species, *Homo sapiens*, first appeared between 150 and 200 thousand years ago in Africa and 40 thousand years ago in Europe (Walkins 2011). By that time human populations exhibit the entire suite of physical characteristics that define anatomically modern humans: a large, rounded brain case; a vertical forehead; a small and flat, or orthognathic, face; reduced brow ridges and a chin.

Understanding Technological Singularity

In mathematics, a singularity is in general a point at which a given mathematical object is not defined, or a point of an exceptional set where it fails to be well-behaved or orderly. For example, the function $f(x) = 1/x$ on the real line has a singularity at $x = 0$, where it explodes to $\pm \infty$ and isn't defined. So disorder, unpredictability and exceptional quality characterizes mathematical singularity.Taking one more step "a technological singularity" may be viewed as "a predicted point in the development of a civilization at which technological progress accelerates beyond the ability of present-day humans to fully comprehend or predict. The Singularity can more specifically refer to the advent of smarter-than-human intelligence, and the cascading technological progress assumed to follow. Whether a singularity will actually occur is a matter of debate.

The concept of a technological singularity as it is known today is credited to mathematician Vernor Vinge. His 1993 "Technological Singularity" (Vinge 1993) contains the oft-quoted statement that "Within thirty years, we will have the technological means to create superhuman intelligence. Shortly thereafter, the human era will be ended." In fact singularity is commonly misunderstood to mean technological progress will rise to infinity, as happens in a mathematical singularity. Actually, the term was chosen as a metaphor from physics rather than mathematics: as one approaches the Singularity, models of the future become less reliable.

The Singularity is often seen as the end of human civilization and the birth of a new one. In his essay, Vinge asks why the human era should end, and argues that humans will be transformed during the Singularity to a higher form of intelligence. After the creation of a superhuman intelligence, according to Vinge, present human be regarded as a lower lifeform in comparison to them. Such a singularity is enabled by the exponential technological progress that we witness today. Though all the technologies may not lead to such a singularity, the claim is the convergence of such technology will yield unforeseen developments and consequences. Some of such technologies that facilitate the dawn of technological singularity are:

Artificial intelligence

An artificil intelligence capable of recursively improving itself beyond human intelligence, will invariably cause a technological singularity. Only one such AI, many believe, would be needed to bring about the Singularity. Most Singularitarians believe the creation of such AI is the most likely means by which humanity will reach the Singularity. One of the most anticipated of these technologies for some is the possibility of human intelligence enhancement, including brain-computer interfacting. Direct brain-computer interfaces may potentially improve an individual's memory, computational capacity, communication abilities, and knowledge base. A more traditional human-computer interfaces may also be seen as intelligence augmenting improvements: traditional expert systems, computer systems recognizing and predicting human patterns of behavior, speech and handwriting recognition software, etc.

Nanotechnology

The potential dangers of molecular nanotechnology are widely known even outside of futurologist and transhumanist communities, and many Singularitarians consider human-controlled nanotechnology to be one of the most significant existential risks facing humanity. Therefore they wish that nanotechnology will be used primarily by transhumanists communities. Other technologies like globally-connected high-bandwidth wireless communication fabric, etc., while not likely to cause the Singularity themselves, are regarded as signs of levels of technological advancement assumed to precipitate the Singularity.

Check Your Progress II

Note: Use the space provided for your answers.s.

1) What is the significance of singularity?

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2) What is technological singularity?

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4.5 TECHNOLOGIZATION OF HUMAN NATURE

The drive for technologisation of human nature through Enhance Human Biology has been a characteristic feature of contemporary human beings. Since ancient times we have been involved in it, but in rudimentary ways. Examples of such enhancements are physical and mental training and use of stimulant and mind altering substance. But modern technology with its growing mastery over the human physiology, biochemistry and cognition is in position to transform the human condition, particularly our human body and its relation to the larger world. This takes us to the vital issue of Integration of Technology and Human body. The advance of technology into the human body has two important domains today: 1) therapeutic purpose or 2) performance enhancement To the extent we use the human enhancement technology to further our body, it functions and nature, we can speak of an engineered singularity in the body. The emergence of such a singularity can be traced through three key notions: prosthesis, bionics and fyborgs.

Beginning with Prosthesis

Human Body is on the threshold of undergoing the same fate of Nature in the precious centuries. Technological innovations may soon replace the naturalness of body. In fact in many cases the replacement or substitutes appears better than the original. This is true especially in the case of prosthesis, which may be considered as the first stage in the human intervention in the body. Simple traditional prosthetic devices like crutches, spectacles of the past are simple external extensions of the human body. Today we have evolved and a contemporary prosthesis is an artificial device used to replace a missing body part, such as a limb, tooth, eye, or heart valve. Prostheses are typically used to replace parts lost by injury (traumatic) or missing from birth (congenital) or to supplement defective body parts. Inside the body, artificial heart valves are in common use with artificial hearts and lungs seeing less common use but under active technology development. Other medical devices and aids that can be considered prosthetics include artificial eyes, palatal obdurate, gastric bands, and dentures. Cardiac pacemakers, dental prostheses, implantable pumps to assist the lungs, bionic limbs, steel implants on bones are already embedded in our physical bodies.

Bionics and More

In general bionics (which may also be known as biomimicry) is the application of biological methods and systems found in nature to the study and design of engineering systems and modern technology. It implies utilizing electronic devices and mechanical parts to assist humans in performing difficult, dangerous, or intricate tasks, as by supplementing or duplicating parts of the body.The word bionic coined by Jack E. Steele in 1958, possibly originating from the Greek word âßïí (*bíon*), meaning ‘unit of life’ and the suffix -ic, meaning ‘like’ or ‘in the manner of’, hence ‘like life’. Some dictionaries, however, explain the word as being formed as a portmanteau from biology + electronics.

The transfer of technology between lifeforms and manufactures is, according to proponents of bionic technology, highly desirable because evolutionary pressure typically forces living organisms, including fauna and flora, to become highly optimized and efficient. A classical example is the development of dirt- and

water-repellent paint (coating) from the observation that the surface of the lotus flower plant is practically unsticky ("Lotus effect").

Fyborg and the Future

The "natural artificialization of body," traced to the very ancients is the clothing and ornamentation covering human's 'state of nature'. From the fine cloths we wear, we are moving towards wearable computers and communicative machines Similarly from the healing of the sick bodies we speak of intervention in the healthy bodies to prevent sickness. This takes us to the world of cyborgs and fyborgs.

The word *cyborg* (1960) is short form for *cybernetic organism* and it refers to an organism that is part-human, part-robot. Technology does not just approach the body but enters the space of our body and then we become cyborgs. Transhumanists claim that since we make use of technology in our everyday life, we are at least fyborgs or functioning cyborgs. For instance, Gregory Stock, the director of the Program on Medicine, Technology, and Society at *University of California, Los Angeles*, approaches humans from two starting points (Stock 2003): one is mechanical and the other biological. On the mechanical side, he is clearly convinced that cyborgs are not the way humans are going to extend and enhance their range of abilities. He argues instead that we are more likely to become "fyborgs" by developing extracorporeal electromechanical devices to improve and widen the scope of existing sense and effector organs (Spier 2002).

It was Alexander Chislenko who coined the term "fyborg**"** to differentiate between the man-machine creations of science fiction and the everyday ways we extend ourselves using technologies such as eyeglasses, hearing aids, and cell phones. In fact, to varying degrees, many enhancement enthusiasts believe that we have become biological organism functionally supplemented with technological extensions and so are fyborgs or organism that has become a kind of cyborg by extending its senses and abilities using technology .

But it is interesting to read the Fyborg Self-Test

Are you dependent on technology to the extent that you could not survive without it?

Would you reject a lifestyle free of any technology even if you could endure it?

Would you feel embarrassed and "dehumanized" if somebody removed your artificial covers (clothing) and exposed your natural biological body in public?

Do you consider your bank deposits a more important personal resource storage system than your fat deposits?

Do you identify yourself and judge other people more by possessions, ability to manipulate tools and positions in the technological and social systems than primary biological features?

Do you spend more time thinking about — and discussing — your external "possessions" and "accessories" than your internal "parts"?

If you answered "yes" to most of these questions, please accept my congratulations (and/or condolences): you are already a cyborg! (Chislenko 1995)

Further, futurists with their techno-exuberance promises a golden future. Some instances are illustrative. The famous author Ray Kurzweil holds (Kurzweil 1999): 'We will enhance our brain gradually through direct connections with machines and intelligence until the essence of our thinking has fully migrated to the far more capable and reliable new machinery.'

Kevin Warwick, made a great leap in 1998 with his first glass-encased chip implant just beneath the skin of his upper arm. It enabled the computer to monitor his presence by radio signal as he moved about his department. In fact, his experience led him to emotionally identify with his implant as he felt that he and the computer were working in complete harmony.

Similarly, Thad Starner of Massachusetts Institute of Technology, dresses in a wearable computer and lives connected to the Internet using a miniature computer terminal at all times. His device is the first stage of what he calls "the BodyNet, a computer network wired through human bodies"(Maguire and McGee 1999).

Steve Mann, a professor of electrical and computer engineering at the University of Toronto, has developed an Internet-connected computer that he has dubbed "WearCam." By combining wireless communication with information systems, WearCam allows one to augment and enhance experiences and, through networking, share them with others.

Again, some computer visionaries speak of implantable computer chips acting as actuators that will enhance 'our memory, ability to acquire a language without learning, recognize people that we have not met. They promise that computer implants on brain can restore memory losses and give sight to the blind, hearing to the deaf. So G. Q. Maguire Jr and Ellen M. McGee promises: "These bioelectronic developments, combined with progress in facilitating interfaces between neural tissues and substrate micro probes, are setting the stage for implantable brain chips. The first steps have already been taken in research on the cochlear implant and on retinal vision. Cochlear implants enable totally deaf people to hear sound by directly stimulating the auditory nerve. In a similar way, retinal implantable chips for prosthetic vision may restore vision to the blind" (Dobelle, Mladejovsky and Girvin 2011).

These developments may leads to an almost total technologisation of the human body. All thinkers are not enamored by such a scenario. However, Pat Roy Mooney, executive director of ETC, a technology watchdog group, he Right and winner of Livelihood Award (the "*Alternative Nobel Prize*") blows the whistle and sings a cautionary **Note:** "Particles of that size can go anywhere they please. They pass the entire immune system, they can pass the blood-brain barrier, and they can go into the spinal cord" (Robbins 2004).

Therefore we have reasons to be cautious. Some critiques speak of an impending "hive mind" for the future humanity, that is, a group mind with almost complete loss of individual self and identity. Without seeming to be antediluvian, we still need to raise certain issues: In the process of its technologisation, is the human body reduced to an appendix. Is science fiction becoming a reality? Are we really aware of the some of the serious consequences of intervening in our own body?

4.6 NATURE OF NATURE

Confronted with today's technology and artifacts, something extraordinary is happening. Human culture, or more precisely technology, is intervening in the human nature (body) causing changes that were unimaginable even twenty years ago. Today we are at stand at the threshold of re-creating our own bodies and thus re-making our own nature. So the cultural singularity will soon arrive and we are at the moment witnessing the pangs of the new child-birth: the merging of nature and nurture. Such a merger, resulting from cultural singularity, hopefully will impact our lives – in fact our enhanced lives or existence – tremendously. Technological innovations are not merely healing our bodily functions, but enhancing them dramatically. Some of such enhancements will make the distinction between nature and nurture, almost redundant. This implies that our culture is capable of radically altering our nurture and making it truly part of an inter-twined and mutually enriching reality.

Further, as technology advances further, our cultural pre-conditions will change. We can imagine feed-back mechanisms between advanced technologically driven culture and our pre-given nature, which together constitute a highly complex and undifferentiated reality, where the body is directly linked to technology and vice-versa. In such a context, the meaning and significance of the body – and of our nature - will be quite different. The body that transmits presence and relationship between persons will be vastly enhanced technologically, and so it is conceivable that the very understanding we have of presence and relationship will be changed. As such we this will have consequences on the way humans relate to each other, after the cultural singularity. We may really have to talk of a culture that is invaded and enhanced by technology!

This will radically change the way we understand our human body. Long ago, we ceased to understand human body merely as a material object of scientific study. Phenomenology has made us aware of the uniqueness of the body. But the technological and cultural singularity urges us to understand our bodily differently and in the process the culture form part of our (bodily) existence is also very much reshaped and re-moulded. One special question that we need to raise is: Will such engineered singularity and culture enable us to broaden our consciousness? Only if we can wider our perception of reality and broaden our consciousness can we claim that we are truly progressing, at least at the non-technological (or spiritual) realm. Thus the uniqueness of our contemporary society is that we are at the threshold of, let us say, "overcoming ourselves," whereby our culture almost behaves like the uroborous snake, that is eating itself. In this very process, an all-encompassing culture may emerge that affects our very existence, understanding and even search meaning and significance.

Check Your Progress III

Note: Use the space provided for your answers.s.

1) "Today nature is indistinguishable from culture." Do you agree?

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2) What is the importance of cyborgs and fyborgs?

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4.7 LET US SUM UP

In this unit we saw how human nature is radically changing and is becoming part of our culture. Today our technology has made it possible that we mould our own nature.

4.8 KEYWORDS

Bionics: Having anatomical structures or physiological processes that are replaced or enhanced by electronic or mechanical components

Cyborg: A cyborg is a cybernetic organism (i.e. an organism that has both artificial and natural systems). The term was coined in 1960 when Manfred Clynes and Nathan Kline used it in an article about the advantages of self-regulating human-machine systems in outer space.

Fyborg: A human who has certain physiological processes aided or controlled by mechanical or electronic devices

Prosthesis: An artificial body part, such as a leg, a heart, or a breast implant.

Singularity: The quality or condition of being singular or unique, where the normal laws do not apply.

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