

ARTIFICIAL EMOTIONS: A PHILOSOPHICAL ENQUIRY

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Abstract :

The biggest revolution in human evolution was when humans freed their hands and transitioned to bipedalism. Humans are again crossing the limits of their knowledge by freeing their cognition and intelligence as extensions. This extension of cognition and intelligence, in the form of artificial intelligence (AI), reduces human effort and time. Artificial intelligence can handle & analyse big data and perform repetitive & high-volume tasks without fatigue. Humans can work on more complex questions with this freedom. This opens new opportunities across fields such as science & technology, healthcare & life sciences, manufacturing & operations management, infrastructure, education, art, media, agriculture, environment, etc. Humans, a biological machine is using artificial machines as a tool. A matter of concern is when artificial humans: androids & gynoids, become a companion. This is where artificial emotions play their role. Emotions enable humans to choose the best choice among the available choices. This paper enquires about emotions as a defensive mechanism for the survival of human beings and how artificial emotions play a similar role in artificial humans: androids & gynoids, for their acceptance as social beings.

Keywords : artificial emotions, emotions, artificial intelligence, artificial humans, evolution, survival.

Introduction :

We can definitely say that the 21st century marks tremendous development in the field of artificial intelligence—the journey that began with the invention of the wheel to the fifth industrial revolution. Industrial Revolution 5.0 - is the phase where humans and recent technologies like robotics, AI, work together, focusing on human-centric goals like creativity, personalisation, sustainability, and resilience (Breque et al. 5). The journey was gradual, as there is no sudden like thing. There are higher chances that any creation, for example, the wheel, cannot happen suddenly. We find the gradual progress from rollers of a big tree trunk, a potter wheel, to a proper solid wheel (“Wheel”). But the invention of the wheel drastically revolutionised the total mechanism for construction, transportation, agriculture, etc. This journey continues and again taken a drastic turn from the industrial revolution to the development of artificial intelligence (AI).



Artificial intelligence is not just about copying the data pattern, making paintings, making music, etc., it is much more than that (Kahate 116). The basic building block of artificial intelligence is learning exactly as human does (Kahate 88). There is a structured form of humans as a biological machine that tries to perform its day-to-day tasks. It is from the point of birth that human learning begins. The brain is composed of a neural network through which this process of learning is executed. Artificial intelligence focused on learning through the same mechanism of an artificial neural network (Tiwari et al. 82). There will not be any gap as far as intelligence is concerned, whether natural or artificial. Only the gap will remain as to whether the machine is biological or artificial. The next step in this evolution is artificial emotions.

Emotion & Intelligence :

The human brain is more complex because it performs different activities very efficiently (from our perspective). The bigger question is whether machines can be equipped with artificial emotions? Artificial emotions cannot be equated with emotional intelligence because emotions and intelligence are two different aspects, though they are deeply connected. Emotion is misunderstood to be a type of intelligence. Because managing emotion is considered a form of intelligence itself (Salovey and Mayer 189). But again, it is the management of something. If something is managed and if it is called intelligence, then something should be distinct from the intelligence. We can say that the whole processing of emotions is happening in the brain itself, but that does not mean emotion is intelligence. For example, a flood is different, and the management of a flood after it occurs is different. There is a basic difference between intelligence as computing actively and emotions as the reactions of the body to stimuli for its survival. Both intelligence and emotions exist separately. There are chances that,

1. A person may be highly intelligent but cannot control their emotions,
2. A person who is not intelligent but may be very good at managing emotions,
3. A person may not be very intelligent and cannot control emotions,
4. A person who is highly intelligent and may be very good at managing emotions.

If we look at the functioning of the brain, these two systems of intelligence and emotions are processed by two different compartments of the brain (NCERT, *Biology* 236):

1. The limbic system - amygdala processes emotions.
2. The prefrontal cortex of the brain processes intelligence.

Both parts of the brain are connected by a major white matter bundle, the uncinate fasciculus and are not totally separated. So, the word emotional intelligence, does not give proper expression for emotions to be managed.

Survival is the key :

Survival is the key factor for which the brain & body work. Human actions can be bifurcated into voluntary actions like movement of hands & legs, talking, etc., and



involuntary actions like heart beating, breathing, digestion, etc. These are the involuntary actions for which the brain needs to process compulsively, while we can have a break for voluntary actions. Our body and brain perform different functions. We have seven sense organs. Five are external sense organs, and two are deep senses. Eyes sense the data of vision, ears of hearing, nose of smell, and tongue of taste, skin senses the data of touch, warmth, cold, and pain. The two deep senses, the kinesthetics and vestibular systems, sense the data about our body position and the movement of body parts related to each other (NCERT, *Psychology* 62). We have cognitive function, we think, we reason, and we have emotions. These capacities, which are processed through the brain, are basically for our survival as living organisms. The brain is working in multiple domains and within its capacity. Also, humans need to sleep; we cannot remain awake continuously. So, the brain, till today, has evolved in such a way that it functions for the basic natural survival of humans. But natural calamities like floods, extreme cold season, extreme hot season, pandemic, droughts, floods, heavy rains, earthquakes, etc., and living organism interaction - sometimes conflict, made humans discover the domain of specialisation in each trade, for example, science & technology, agriculture, construction, clothes, medicine, trade & commerce, etc. The biggest revolution in human evolution was when humans transitioned to bipedalism. Humans always want to go beyond. This evolved brain, along with two freed hands, delves into curiosity about almost everything, which tends to make humans use instruments and tools, because this bodily structure is limited. For example, weapons for hunting and war, vehicles for transportation, constructing houses to save residents, agriculture for food, science & technology for efficient problem solving, comfort & to reduce human effort.

Role of emotions :

The question is, why do humans have emotions? Can humans survive without emotions with the presence of intelligence only? The answer is no! Humans have emotions as a reactive loop in the form of interaction with their surroundings. Two fundamental things are necessary for the survival of human beings as living organisms:

1. Food and Nutrition,
2. Reproduction.

Fundamentally, the brain & the body as a whole function for these two activities. First, for energy and second, for continuation as a living organism. Emotions are the defensive mechanisms in the body for survival. It acts as an alert- fight or flight mode (Cannon 211) during unfavourable surrounding conditions and as a nurturing mode during favourable surrounding conditions. There are many complex modes between these two extreme positions. Emotions guide us for choices to be made in these different complex situations. Emotions are physiological changes that occur in the body in response to the surrounding situations, so the brain can act upon it for suitable decisions to be made amongst the choices available to maintain a favourable state for survival. The whole body acts as a biological machine to convert unfavourable surroundings into favourable surroundings for survival and nurturing. Emotion causes voluntary and involuntary actions in the body as a reaction to the surrounding changes. Humans never want to die. But death is the ultimate



truth. What humans can maximum do is reproduce to form a replica so that information can be transferred further and the chain continues.

Consider the situation where you are roaming in a forest and having a weapon (a pistol with 9 bullets) with you. Suddenly, you hear the roar of a tiger. What you find in the next instance is a tiger furiously approaching you. This becomes an alert situation. You know you have a weapon with you. Your brain chooses the option of fight. Suddenly, you pointed your weapon and fired all the bullets at the tiger in continuous shots. Unfortunately, not a single bullet hit the tiger. You come to realise that the tiger becomes more furious and is about to attack you. Not a single second will require you to realise that you have nothing left to do but to run away from there. Here, your brain chooses flight. Now, if we analyse the situation, the emotion of fear is playing a role here. You heard a roar and saw a tiger with your sensory organs, like ear and eyes. With the type of roar and gestures of the tiger, your brain analysed the situation and made you alert, as these changes act as a language communicating the brain that the situation is not favourable. The brain starts working and creates a physiological change in the body. This physiological change in this situation, we call it fear. This emotion of fear triggers involuntary responses such as increased heart rate, sweating, etc. These changes are nothing but the brain is preparing the body for flight or fight mode. So, the body can perform actions as per the situation. You are going into action where rigorous body movement is needed. This requires more energy and oxygen. So, the pumping of the heart increases. Sweating starts as cooling system to keep your body in proper temperature because physical activity will cause your body temperature to increase. Voluntary actions involve your bodily movement to coordinate for either fight mode- shooting from a pistol or flight mode- running away from the site and convert this unfavourable condition to a favourable condition. What if the brain, in coordination with sensory organs, had not sensed the situation and accordingly would have not made physiological changes (we call and name it as emotion of fear in this situation) to alert the body, we must have completely ignored the furious tiger, and ultimately, whatever was done would have been done by the tiger only. We would not have been in a situation to make any choice of flight or fight.

Let us understand emotion with another situation. There are two people, Mr X and Miss Y. Both are above the age of 21(as the legal age for marriage is 21 for boys and 18 for girls in the current scenario in India). There is a stable political system, so everyone is living in social harmony. Both are getting proper food and a safe residence to live in. The families of both persons are broad-minded. At a party for their mutual friend's birthday, both Mr X and Miss Y met first time. They both found each other to be attractive. After the birthday party, they keep meeting regularly on weekends. They both fall in love with each other. They decided to marry and inform their families about the marriage. Both families resisted a little bit, but both succeeded in convincing their families and got married (Marriage is considered here because society accepts marriage as a proper societal structure for a male and female to live together and have children). Now this married couple have two children and is living happily. If we analyse this situation for Mr X and Miss Y, a physiological change that occurs in both is called the emotion of love. When humans live in a favourable situation, the brain



senses the surrounding that there is no alert mode. Also, the body gets nutrition regularly. Now this becomes the perfect situation for nurturing. Reproduction in humans falls under the category of sexual reproduction, as both male and female have their roles in it. During this process, sperm from the male and an egg from the female are fused in the female body. There is a mechanism in the body that always forms a sense of bodily incompleteness when a human is in a favourable condition. The physiological change in the body that takes place in this situation creates the sense of attraction towards the opposite gender in the form of emotion called love. Here involves involuntary changes like redness on the cheeks, called blush, a smile on the face, etc., while voluntary changes involve caressing each other like a hug, holding hands in hand, kissing, etc. This is the form of communication that signals the feeling of acceptance and trust from both. When Mr X and Miss Y met first time, their eyes sensed each other and communicated with their brains. This triggers the physiological change in the body of both, which tends them to meet regularly and create a situation or environment where they can reproduce and form their replica. This physiological change occurs in both, which is what we call the emotion of love. The primary emotion involved here is lust. This lust creates voluntary and involuntary changes in the body, which are necessary for reproduction. Involuntary changes involved an increase in heart rate, erection of genital organs, increased body temperature, etc. Voluntary actions involve bodily movements necessary to eject the sperm into female body so that it gets fused with the egg to form a new life. If there were no emotions of lust and love, reproduction would not have taken place, leading to extinction. Reproduction is a necessary process for the survival of humans as a living organism.

The two extreme conditions we have seen for emotions. But there are more complex situations in between these, which give rise to more complex physiological changes, which we call it as emotions. Emotions act as a defensive mechanism for the survival of humans as living organisms. Emotions act as a form of communication. You get to react to the surroundings by emotion. Facial expressions, gestures, and body postures of other human beings help in understanding the emotional state of other human beings, whether one is angry, in joy, in sorrow, etc. This helps us to form society. We choose to live with those who are in our comfort zone of trust and stay away from those with whom we do not find compatibility. This creates a social bias that is healthy for society and for creating social groups and families, and ultimately results in the nurturing of society. We live with our family because we have trust and a feeling of safety with them, which is not the same for others. If this emotional bias were not there, this could have resulted into chaotic situation. Emotions help us to react to our surroundings. Which gives us the ability to choose the best option available for our well-being. Emotions act as a physiological change in reaction to the sensory data, which works as a mechanism. Any change in the surroundings can be considered as a problem, which is either conducive or not conducive to the humans involved with the surroundings. There can be multiple solutions or choices available as far as the changes to be made that may result in changes in surrounding also, but not necessarily. Surrounding is independent factor as far as emotion is considered. As emotions arise in a human being and not in surrounding, they can make choices to react to the change in surrounding to maintain their homestate. This surrounding can be its own mental state,



another person, society, group, nation, any object, environment, etc.

Artificial Emotions :

Artificial emotions are the generation of emotions in non-biological machines and artificial humans like humanoids, androids and gynoids, etc. Compared to artificial intelligence, artificial emotions are more complex mechanisms, but not impossible to generate in machines. If regulated properly, it can be in a more stable and structured form than biological machines (i.e. human beings). Humans have produced cognitive extension in the form of artificial intelligence. AI can handle large and repetitive tasks with accuracy & precision and with incredible speed. But still, there are improvisation needed in the form of a mechanism to read the gestures of humans to understand the internal mental and emotional state. There is danger in sending a robot to war because a robot cannot differentiate between an enemy and a friend. Also, situations in ethical dilemmas, which require intelligence as well as emotional backing, the decisions where the benefit of a large population is involved. Emotions play a vital role in our value systems, like ethics, integrity, equality, justice, solidarity, etc. Artificial emotions will become a new extension that will open the door for decision-making capabilities in machines.

Understanding the change in their surroundings will help artificial intelligence systems make better choices. For example, during counselling, to diagnose the mental health of a patient, it is necessary to be more empathetic to understand the problem. While communicating, there are expressions of words whose literal meaning can be different, but the sound explains the mood of the speaker. For example, if a user says to the chatbot in anger, 'go to hell', it means, I do not want to talk to you but if the chatbot takes it literally, it will create irritation to user. But this is all about understanding the emotions of humans and reacting it artificially for a problem solving. And there is no need of infusing emotion in machines. But with the advent of artificial humans like androids and gynoids, which are made to live and communicate with humans, artificial emotions play an important role. Artificial humans like androids are now working in factories as labourers. They soon be at our houses, maybe for household work like cooking, washing, cleaning, etc., for monitoring children & old ones and to look after them, in hospitals, as nurses, on reception desk at various companies, or maybe as a companion & for sexual desires to complete, they need to have emotions, otherwise they will not be accepted in society as a social being. They need to understand, adapt and react as per surrounding to make choices in the same way as human does.

Conclusion :

Giving freedom of choice by infusing emotion may create a conflict between humans and artificial humans, in the form of demanding their rights, just like human rights or in a worst case - a war. Till the emotions and intelligence in the machines are manageable, it will not result in any conflict. Nevertheless, if situations go out of the control of humans, artificial humans will develop moral values as humans have developed them gradually. Human ethical evolution enables them to live in social harmony with each other. The basic principle behind



forming a society is to live in peace & favourable conditions. Conflict is not the solution. Ultimately, it results in chaos and unfavourable conditions. Humans' emotional and intellectual sense guides them to harmony with surrounding to attain favourable conditions. Artificial humans with emotions will necessarily develop a sense of harmony. Artificial humans will choose a symbiotic relation with biological humans and their surroundings because emotion gives the ability to make the best choice out of the choices available, and a symbiotic relation is the best choice available.

Works Cited :

- Breque, Marc, et al. *Industry 5.0: Towards a Sustainable, Human-Centric and Resilient European Industry*. European Commission, 2021, data.europa.eu/doi/10.2777/308407.
- Cannon, Walter B. *Bodily Changes in Pain, Hunger, Fear and Rage*. Appleton-Century-Crofts, 1915.
- Kahate, Atul. *'AI' che Godfather: Geoffrey Hinton*. Manovikas Prakashan, 2025.
- *National Council of Educational Research and Training. Biology: Textbook for Class XI*. Revised ed., NCERT, 2023.
- ---. *Psychology: Textbook for Class XI*. Revised ed., NCERT, 2023.
- Salovey, Peter, and John D. Mayer. "Emotional Intelligence." *Imagination, Cognition and Personality*, vol. 9, no. 3, 1990, pp. 185-211.
- Tiwari, Niraj, et al. *Artificial Intelligence for Engineers*. Khanna Publishers, 2022.
- "Wheel." *Britannica Kids*, Encyclopaedia Britannica, 2024, kids.britannica.com/students/article/wheel/277721?hl=en-GB. Accessed 27 Jan. 2025.

