Moving Lives from Biology to Machine, an Ontological Investigation

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ABSTRACT

A concept "Fuzzy Characteristics" is introduced firstly, with a problem of vegetarian in applied ethics proposed, and its solution is given later in this paper. Secondly I provide some assumptions for creating a perfect life and a perfect world, which requires the full understanding of human brain functions. Lastly, in the third part, I give the motives of moving lives from biology to machine, then I test and discuss 3 algorithms of the move, which in turn meets the problem of Fuzzy Characteristics

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1. FUZZY CHARACTERISTICS

A fuzzy characteristic is a phenomenon that, a concept has two states (A and B) which clearly belong to two different categories, and a small transition of states cannot change the category of these states. However, the accumulation of large number of small transitions will move from the state A to state B. And it is hard to say which category the middle states belong to.

Some examples are as follows:

1.1.1 Object Identity

If each day we replace a small part of a car with a new part, then after a long time, the car will become a totally new car in which all parts are new.

1.1.2 Color

Let's have two states of color: red and blue. Then it is hard for me to say whether "purple" belongs to "red category' or "blue category".

1.1.3 Living Form of a Person

Initially there are only a few cells contributed from the parents, although they potentially can make a living form, but they are not living. But by the growth with time, they will become state B, a mature person who is living.

1.1.4 Living Form of Objects

Some small materials are not living forms, but with the increase of the complexity and the functions of their structures, they are more like a living form.

simple materials => plants and germs =>

….=> human beings

1.1.5 Smile

There is a continuous deformation from a smile face expression to a non-smile face expression.

1.1.6 Baldness of a Person

Let state A be totally bald, i.e. no hairs on head.

We will still say he is bald if a bald person has one hair more. But with the accumulations of hairs one by one, he will become the normal state B.

1.1.7 Young and Old[1]

If 15 years old person is young and 70 years old person is old, then it is hard to say 50 years old person is young or old.

The significance of the fuzzy characteristics is that, it makes some laws unable to be applied for some cases, i.e. the middle cases. In these situations, no additional criteria can be used to give a cut for categorizing the continuous spectrum of patterns. Two examples in applied ethics are in the following:

1.2.1 Vegetarians want to eat objects that are not of living forms. But according to the example 1.1.4 above, there are many cases difficult to be judged as living forms or not.

1.2.2 Some people forbid the abortion because they forbid killing living form of persons. But according to example1.1.3 above, it is hard to decide for the middle cases.

I have a solution for the first problem which will be shown in the third part of this paper. But I am still working on the second problem for now.

2. ASSUMPTIONS FOR CREATING A PERFECT LIFE AND A PERFECT WOLRD

Assume after the success of cognitive science, human brains functions are fully understood, transparent, and

re-writable. When the sensors of our brains are connected to the virtual reality, the "worlds" of our minds also become transparent and re-writable.

The first goal after such a success is to defeat our mental enemies: evil, hate, kill, mistake, crime, revenge and so on. Because the brains (minds) are transparent and re-writable, it becomes very easy to achieve our first goal. We can simply write as first laws to our minds: good, love, happiness, compassion and so on. There are no more crimes, hates and penalties again.

So it is a good chance for us to create a perfect life and a perfect world. Then it depends on how we define the perfect life and perfect world. I propose a perfect life and a perfect world with a set whose contents contain only positive terms, and no negative terms. For example, "good" v.s. "bad", "love" v.s. "hate", "happiness" v.s. "suffering", and so on. The question is that is it possible for us to build a perfect life and perfect world by definition? This is under my current research.

Since living in a perfect life and perfect world is enjoyable (positive term), more joys(positive term) are there if life is longer. This gives a question of long life: is it possible we can live longer or even be immortal (positive term) in a perfect world? This is just to be discussed in the next part.

3. MOVING LIVES FROM BIOLOGY TO MACHINE

3.1 Advantages of Moving Lives from Biology to Machine

3.1.1 Avoid Biological Diseases.

3.1.1.1 Unlike the biology, which is based on protein and chemistry, the machine functions are based on programming. This can avoid the current famous biological disease COVID-19 which stems on protein and chemistry mechanisms.

3.1.1.2 For computer viruses, they are man-made computer programs, not grown naturally. Since we assume the world and human beings are now perfect, no one will write computer viruses that will cause damages(negative term) in computers.

3.1.1.3 However, computer programs could have bugs, and this will lead to damages in computers. There is no general solution for it [2]. The debugging processes of computer programs will be the new medical system for human beings.

3.1.2ForContinuation and Immortality of Lives

3.1.2.1 Assume the life of human being in biology ontology is finite, not immortal. Before a person's death, his brain in biology ontology can be moved to machines for the continuation of his life.

3.1.2.2 Assume the machine life is finite, not immortal. Before the malfunction of the machine, the machine brain can be again moved to a new machine. So by consecutive transferring life between old and new machines, we can get immortal lives.

3.1.3 Vegetarian Problem is solved

3.1.3.1 The machines "eat" electricity, no meat or vegetables will be eaten again. So the vegetarian problem in fuzzy characteristics is solved.

3.1.3.2 We can simulate the eating meat and vegetables between virtual reality and the tastes in machine brains. So that we can keep the habit of eating delicious (positive term) foods.

3.1.4 Differences between Biology Life and Machine Life

3.1.4.1 In 3 Dimension movements, the biology whole body moves. But for machine life, only visual areas

change data filled from virtual reality, machine body does not move.

3.1.4.2 By virtual reality, the objects in the vision by virtual reality can be recognizable by telling from the virtual reality, so no need of recognition procedures of visual objects. For example, the list {a car, a driver} is told by the virtual reality to the machine brain in the vision picture of a driver sitting on the car.

3.2 Algorithms for Moving Lives from Biology to Machine

Recall the assumption for creating a perfect life and a perfect world, human brain functions are fully understood, and brains are transparent and re-writable. And let's assume that machine is represented by Turing machine [3] or modern(2021) VLSI machine[4].

Let the general ontology consists of 3 kinds of element: Structures, Values and Functions. And assume the biology brain and the machine brain can be represented by the general ontology.

And let the biology brain be represented by a list of

general ontology elements:

a particular human brain = a list of {Structures, Values and Functions}

HB = {G1, G2, G3, ...,Gn}

Algorithm 1 : Copy All

We firstly try to copy biology brain to machine brain.

1. before copying

HB={G1, G2, G3, ..., Gn} // on biology frame

2. after copying

HB={G1, G2, G3, ..., Gn} // on biology frame

MB={G1, G2, G3, ..., Gn} // on machine frame

This is obviously illegal, because it creates a new life so that there are two lives now.

Algorithm 2: Copy All and then Delete All

Since our goal is to result in only one life on the machine frame. How about deleting human life after copying to machine life?

1. before copying human brain

HB={G1, G2, G3, ..., Gn} // on biology frame

2. after copying human brain

HB={G1, G2, G3, ..., Gn} // on biology frame

MB={G1, G2, G3, ..., Gn} // on machine frame

3. after deleting human brain

MB={G1, G2, G3, ..., Gn} // on machine frame

This time there is only one life left, but it is still illegal. Because one life on biology frame is deleted, i.e. we kill a life! So this is illegal.

Algorithm 3 :Copy and Delete One by One E Element.

In this way we firstly copy G1 from HB to MB, and then delete G1 from HB.

1. before copying human brain G1

HB={G1, G2, G3, ..., Gn} // on biology frame

2. after copying human brain G1

HB={G1, G2, G3, ..., Gn} // on biology frame

MB={G1} // on machine frame

3. after deleting human brain G1

HB={ G2, G3, ..., Gn} // on biology frame

MB={G1} // on machine frame

Similarly we then do this on human brain element G2.

1. before copying human brain G2

    HB={G2, G3, ..., Gn} // on biology frame

    MB={G1}   // on machine frame

2. after copying human brain G2

    HB={   G2, G3, ..., Gn} // on biology frame

    MB={G1, G2}   // on machine frame

3. after deleting human brain G2

    HB={G3, ..., Gn} // on biology frame

    MB={G1, G2}   // on machine frame

Then we proceed one by one till copying Gn in human brain and then deleting Gn in human brain. Note that this time it is legal because no twins are made and no one-life is deleted. At each step (HB union MB) is the set {G1,G2,...,Gn}.

Fuzzy characteristics!

This is quite like the Baldness example in the fuzzy characteristics introduced in part I. A brain can be in parts from different frames, and integrated as one brain. The biology brain changes little by little and then becomes none. The machine brain changes little by little and then becomes one. It is totally bald if it is a biology brain, it is totally not bald if it is a machine brain.

However, from another point of view, every procedure has its intermediate steps. We can interpret these intermediate states as "busy" "working" "not finished yet". Since we don't do abortion on the intermediate states, these middle states of fuzzy characteristics are legal to exist. So algorithm 3 is legal!

4.   CONCLUSION

I have shown you the concept of fuzzy characteristics and the related problems in applied ethics. And I make an assumption of the full understanding of human brains to create a perfect life and perfect world. Then I list the advantages of moving brains in biology to machine. And lastly I try 3 different algorithms for the move. Two questions are still unanswered and under current research. One is the abortion problem in fuzzy characteristics. The other question is that can we create a perfect life and a perfect world?

5. REFERENCES

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