

Essence of Mind

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1.1

Where is your mind?

If it does exist, there must be the place for it. Is it within your body or in the outside of it?

It must not be in the outside. It will be within your body and moves it if you judge by common sense.

Let us think about an activity of one neuron. When the neuron is active in your body, you may be able to say it possesses mind. However, if it is dead and not active, you can no longer say so.

Therefore to possess mind is to be alive. Mind is an activity of neuron.

1.2

It is important to distinguish the following things. You know components of neuron and how they can move. You know that neuron is composed of fats, proteins, nucleic acids and metal ions, and how each part can move. Nevertheless, how it can move and how it actually moves are completely different matters.

In other words, there is a total difference between the description of possibility how it can move and the fact that it actually moves. When you describe possibility, you talk about properties of matter. However, when you describe activity, you do not talk about matter.

You can not directly describe motion itself. You have to describe it by describing the beginning and the end of it.

1.3

Mind is not a neuron as a possibility of motion. That is, mind is not matter but an actual activity of neuron.

Mind is, in one sense, just a name given to motion of body. It is not different from body. You call it body when you consider it matter and call it mind when you consider it motion. They are two different names of the same thing.

1.4

The beginning of neural activity is a state of cell just before the activity and stimuli from cells around. The end is a survival of individual organism including the cell.

When you describe motion, you always have to designate the end of it. You can clarify details of motion by that. Nevertheless, you can not understand why it goes toward that end or principle behind motion. The role of science is description of phenomenon and is not assumption of reason.

Although Newton did not try to understand the principle behind the law of gravitation, his theory was perfect. We should be satisfied with description of life phenomenon following him and should not try to figure out principle of life.

1.5

You can draw the following important postulate from the argument above: every mental phenomenon corresponds to some neural activities and every neural activity corresponds to some mental phenomena.

This statement is not meaningless. You have to effectively apply this correspondence to the investigation of connection between brain and mental phenomena.

There is no neural activity which is not related to any mental phenomenon and is no mental phenomenon which is not related to any neural activity. You have to cut open brain functions from both sides, the inside and outside.

To search for relations among several mental processes will be especially useful for the better understanding of brain. You can clarify many things by reflection and inference such as relations between certain feelings and senses or memories and wills. Neural activities do not occur randomly. They must occur so as to represent some mental phenomena. You can build the working hypothesis of neural activity from this point of view.

At the beginning of our investigation, we have to think about work of language. You can not avoid considering it when you try to study human mind.

2

2.1

The essence of language is in its power to let us move. What kind of faculty should we suppose within our brain in order to understand this fact?

Our brain possesses an ability to understand words. This ability has two aspects: to understand facts which words express and to behave in the way which words instruct. You can consider that these two processes are interpretation of words as propositions on the one hand and decision of behavior by inference based on the propositions on the other hand.

Let us assume that there is one neuron corresponding to one idea in your brain, for instance, and it corresponds to one word. We shall term this meaning neuron.

When you hear the word cheese, you can imagine its appearance and smell. It is because a neuron of cheese excites sensory areas of cerebral cortex and reproduces sensory stimuli of cheese. This neural circuit must function bidirectionally. When you see an appearance of cheese, you can remember the word cheese and its smell. Therefore meaning neuron has two-way connection to several sensory areas and to neurons which represent word.

In addition, this is the exact process Charles S. Pierce called abduction, which is supposed to form ideas from some clues.

2.2

However, you sometimes don't recall senses from words, such as when they appear in sentence. You can consider that words activate neurons which correspond to ideas and at the same time suppress their outputs to sensory areas. A kind of inference will proceed within your brain at this time.

You understand what to do by hearing words or by reading sentences. At the same time, words activate neurons which correspond to respective ideas. Then inference proceeds to decide the final output. That may be your behavior or a change of connection between neurons.

The above argument leads us to the supposition that among meaning neurons are those connected to motor areas. They will be related to verbs.

2.3

To take an concrete example, let us consider the situation that you are told to go to shed and to take a hammer.

You need to go to shed, first. If you know the way to the shed, you will understand how to move in order to go there. The words let you start action.

What happens in your brain? In the first place, the words activate meaning neurons corresponding to the idea of shed and the idea of going. Then, they reproduce neural activities which represent the sensory stimuli of shed in sensory areas and the behavior of going in motor areas. These activities are linked together as a result and then you take action to go to shed.

Of course, what I described here is just a speculation. However, if such activities don't happen there, what actually happens in your brain when you understand words? Please think about it.

2.4

Operation of behavior by words will only succeed as a result. It is reasonable that there is no distinct mechanism of language within brain. Otherwise language will be an innate ability, but actually we have to learn it.

In either case, linguistic ability must depend only on innate mechanisms. It is probable that all animals capable of acting based on their memories possess meaning neurons and inference faculties. What humanity developed will be only a mechanism to connect a certain neuron to certain continuity of sound.

The hypothesis of meaning neuron shall be formulated in section 7. We shall argue the general properties in the following sections.

3

Now, we shall consider formation and development of idea, that is, what happens within our brain when we acquire a new idea.

Since hippocampus receives projections from all sensory areas of brain, it can connect activities of different areas together. Let us assume that when a brain receives stimuli spreading over several sensory areas, active neurons begin to connect with each other through hippocampal neurons. It is that an idea of one thing begins to form at this time.

Hippocampus makes a chance to form cell assembly. According to the theory of Donald O. Hebb, when the brain receives the same stimuli again and again with the cell assembly also activated each time, direct facilitation will grow between sensory areas corresponding to respective stimuli (shape, motion, sound or smell of one thing). After the cell assembly has developed enough, it will maintain itself even if hippocampal neurons are excluded. An idea of one thing forms in this way.

The working of hippocampus resembles that of catalyzer in this theory.

4

For simplicity of consideration, we shall argue a case of dog in this section whose brain we think is simpler than human being.

4.1

Why can dog learn to wait?

How does he learn to wait in front of food?

He obviously associates his owner's signal of wait with his action of wait. However, he should start eating when he receives sensory stimuli of food. What happens within him?

First, he has to choose his action. He can not take both actions of eating and waiting at the same time because he has only one body. Therefore he must choose which action to take when he receives stimuli of food and signal of wait at once.

Let us suppose that, for schematic illustration, there are three neurons corresponding to stimuli and action, that is, food, eating and wait. Food and wait

neurons are activated by the outside stimuli, and eating is activated by the input from other neurons. There will be an excitatory input from food neuron to eating neuron at first. This connection will be by nature.

He has to learn to recognize signal of wait, next. Then, he has to associate the signal with his action of wait. This association can be represented by inhibitory input from wait neuron to eating neuron.

4.2

We can not avoid supposing that there was a neuron corresponding to the signal of wait within dog in advance. That must have worked for another purpose in the wild state and then was diverted through life with mankind.

This supposition is necessary because it would be difficult otherwise to understand why such connection is possible. You can not consider that every neuron within brain can connect with all the other neurons. If that is the case, your brain can not function normally.

It is determined in advance for one neuron with which of other neurons to connect. Learning will be done within this limitation.

Therefore the range of things which dog can recognize is determined in advance. He can understand the sign of wait because there is a meaning neuron corresponding to wait within him.

Then, what is the difference between ideas able to learn and not able to? This problem comes up as an unavoidable riddle when we examine human intellect. We human beings will have limitation of cognition like dogs.

4.3

We shall consider the case that a dog is fed poisonous food, next. Assume that the food has some characteristics easy to distinguish (blue, for example) and the dog gets paralyzed in a short time after eating. He will learn blue food is poison if he eats it only once.

When he sees the blue food again, he will judge like this;

“Blue food is poison. Nevertheless, this food is blue. Therefore I should not eat this.”

Then, he will avoid the food. This consideration leads us to the conclusion that syllogism has a neural basis.

Dog’s nerve system inductively inferred that blue food is poison when he ate blue poisonous food. Then, he learned this proposition. At the next time he saw blue food, he deductively inferred that he should not eat it.

We can say in summary that deduction concerns behavior, abduction concerns cognition and induction concerns learning. Yet these three elements are always tangled in actual cases and difficult to separate.

It is not obvious how such inference and learning proceed within nerve system, but it is possible to think out some mechanism for them if meaning neurons do exist.

We shall term set of propositions acquired by inductive inference belief or knowledge. In round terms, I regard that beliefs are propositions directly related to behavior and knowledges are those not directly. Some of beliefs will be by nature.

5

5.1

We shall consider dream here. Can we understand it by our hypothesis? What is dream in the first place?

We can consider like this. We check our belief systems during sleep in order to see whether they have contradictions or not and adjust them if they do. Memories will be fixed and beliefs necessary will be added through this process.

However, something seems to be wrong if you consider that a dream during sleep results from modification of memories. You can certainly remember contents of your dreams, but how are modifications of memories fixed in your memory? Is there any neural circuit which records changes of another neural circuit which corresponds to a certain memory?

That sounds impossible. Why can we remember dreams?

A Japanese philosopher Omori Shozo once answered that dream is made up when you recall it. I agree with him.

I think like this. Your belief system is modified while you are sleeping. Then, you feel uncomfortable when you notice that a part of your beliefs are modified after wake up and experience this uncomfortableness as a dream. You will not directly remember the process of memory modification. Modified belief system looks rather distant to you, and you will express this feeling as a dream.

Of course, there is still the problem why we can notice modifications. The perceptive may notice and the imperceptive may not. It may be because of this that some people remember dreams well and others do not at all.

Also, modified memories are somewhat different from contents of dreams according to this illustration. Their relation resembles that of key and keyhole. Therefore you need a special skill to tell what happens to your memories during sleep from stories of dreams. This will be the reason why you need the interpretation of dream, yet whether it is worthwhile or not is just another problem.

5.2

The reason is obvious why you have to check your belief system while sleeping.

For example, if you try to judge the result of belief that you can eat yellow food when you are awake, you will actually take an eating action. It is hoped that your body is held without movement in order to adjust your belief system safely. If there are several contradictory beliefs, such as “you must not eat blue

food” and “you can eat food of any color”, you will judge the results of them and modify if necessary. How can you do that?

First, sensory stimuli are reproduced as if blue food is in front of you. After you act with the old belief that you can eat food of any color, a tragic occurrence results from the new belief that you must not eat blue food. Then, the old belief will be modified to avoid a bad result. The learning will be possible even without actual stimuli if you suppose that the new belief is connected with negative emotion. Emotion may be for learning.

This theory can also explain a nightmare, but will not be the answer because we do not solve the problem how modification of memory is memorized.

6

6.1

Our argument has focused on the resemblance between man and dog. Yet there is obviously a big difference between them. What separates man from dog?

It is intellect, which is expected to lie in workings of language. I think the most important difference is that man can question whether an idea he has is true or false. That is to say, we can express a false proposition, which is the most essential character of language.

In the case where an idea can be false and you can not tell whether it is false or not in advance, you have to confirm it. If you lack information, you need more experience or inference in order to judge the truth of the idea. This very process is called intellect. Therefore intellect results from understanding the idea that an idea can be false.

Is there any organic basis for this mechanism? Maybe not because you do not consider that every idea can be false. Beliefs are propositions which can not be false and whose orders you actually obey. If intellect possesses some organic basis, a belief can not exist because you will have no choice but to doubt all ideas.

That is not the case. There are always beliefs which you can not doubt, and consequently intellect can not be an organic ability. That is, intellect possesses independent existence.

6.2

Then, what should we do when some idea may be false?

The freedom of choice results from the absence of ideas that can determine our behavior. Freedom is ignorance of what to do.

Yet I wonder if someone knows what it is like to understand a false proposition as falsehood. What happens in our brain then?

7

In this and the next section, we shall formulate meaning neuron. The hypothesis shall be embodied through several examples in the form easy to verify.

7.1

Let us suppose that you are going to investigate neural activities related to cognition of things. To begin with, you have to decide what kind of cognition to research.

You chose visual cognition, for instance. You have to study up how human beings or monkeys distinguish snake from frog visually and such things by various methods. You will take brain waves or magnetic resonance images of your test subjects while showing pictures of snakes.

You have now finished a variety of experiments and try to organize them into a paper. Then, you happen to have a thought.

You use words like snake or frog in your paper now, but why can you use these words? You further notice that you showed pictures of snakes or frogs to your subjects in experiments. However, why could you recognize them?

It is nothing more than because there are neural circuits to recognize them within your brain, which is the very object of your study. Then, who defined snake or frog in the beginning?

Here certainly lies the problem. That is what kind of relation words possess to their meanings and also what kind of relation meanings and brain possess. We have to approach this problem by our method.

7.2

First, we have to confirm the following fact. It is that words certainly have meanings, because some people insist that language is no more than a social agreement for communication and there is no correspondence between words and things. However, it is obvious that communication is impossible unless words have meanings. It is because the same word means the same thing that you can understand your companion, isn't it?

Second, we should confirm that we can clearly distinguish meaning of each word. It is possible for us, for instance, to mistake about an individual thing whether it is blue or black from various reasons. Nevertheless, it is impossible for us to confuse what blue is with what black is. We can always distinguish each idea from the others.

7.3

We should recall now the following principle: every mental phenomenon corresponds to some neural activities.

If cognitions of different ideas are distinguishable mutually, then neural activities which correspond to the respective cognitions must be distinguishable mutually.

Therefore you can claim that a section at any time point of a neural activity which corresponds to a cognition of certain idea must be different from sections at every time point of neural activities which correspond to cognitions of all the other ideas.

Otherwise two neural activities will be entirely identical according to the law of cause and effect, and consequently two cognitions will be identical. Then, you can not distinguish two ideas.

Therefore neural activities which correspond to cognitions of distinguishable ideas must be totally different from each other.

This conclusion means that there is a mapping relation between an idea and a neural activity corresponding to cognition of the idea. You can describe this situation as that your brain copies outward things.

Neural activity which corresponds to each idea will be distinguished from the others by an activity of one neuron at a certain time in the ideal case. Let us term this meaning neuron. Of course, it is not necessarily distinguished by a single neuron, but I propose so because of easiness and simpleness of the theory. Also, the entire neural activity corresponding to each idea shall be termed meaning unit.

If you recall Liouville's theorem, you can easily understand the point.

7.4

We can say that cognition is a function which abstracts ideas from individual things. Yet you can not say that cognition creates ideas, because people can not understand each other unless they have the same catalogue of ideas beforehand.

Therefore we have to say that your cognition copies characteristics of individual things and represents them as ideas. Each idea, that is, each characteristic of individual things exists in the things itself.

We can say that you have only limited number of ideas because you have limited number of things to know, or you know only limited number of things because a number of ideas is limited. You can take either interpretation. Words are beings by themselves.

7.5

We should now grapple with the following issue. Our argument will be appropriate concerning cognitions of concrete things, yet it is not certain whether the theory can be applied to abstract ideas or to those which represent mental states, such as fear or anger.

Nevertheless, it is obvious that the same argument can be applied to emotions as we have done above. Although we do not confuse what anger is and what fear is, but it is possible that we can not clearly tell with a certain emotion whether it is anger or fear. This fact leads us to the conclusion that emotion

really exists as long as you postulate that we have an ability to recognize our emotion. Since emotion exists as an object of our cognition, it is possible for us to mistake our emotion.

We can say from the above argument, for the present, that an abstract idea also exists as long as it can be clearly distinguished from the others.

7.6

We should also pay attention to the following matter that we can possess ideas corresponding to things nonexistent. We have an idea of unicorn, for instance, as a distinguishable idea from the others. There may be even a cell assembly corresponding to a cognition of unicorn, but that doesn't mean the real existence of it. Frog and unicorn may not be essentially different as representations within brain. However, we know there is a distance as far as heaven and earth. Therefore you should not try to define an abstract idea or a mental object as neural activity.

I mean consciousness. Even if there exists a neural activity corresponding to the idea of consciousness, that doesn't mean the existence of the object which the neural activity denotes. No matter how hard you study brain, you can not know even that frog exists or unicorn doesn't. It is meaningless to search brain for consciousness. The main problem is that we do not understand what consciousness is.

If you still insist on consciousness, I say I can not perceive consciousness by myself. If it can be perceived only subjectively, you have no means to refute my assertion. Consciousness is denied in this way.

7.7

We may be to discuss in relation to this problem whether ideas of good and evil exist or not, that is, whether they are objective properties of things.

Good and evil deeds do exist and also their consequences do. I think I believe so, but the meaning of the fact is not obvious enough. We need further consideration on this problem. We shall close our argument about abstract ideas here.

8

8.1

Generally speaking, it is always important to draw an exact line between simple activity of neuron and its learning process. What we have considered so far is a nerve system of mature one individual. We have not dealt with the problem of learning.

The whole neural activity corresponding to cognition of each idea has been termed meaning unit. However, this is only supposed within brain of one indi-

vidual. We should consider the universal meaning unit including meaning units of all individuals.

This consideration is aimed at explaining that every one knows the common meanings of words and each word corresponds to outward thing.

At the beginning of consideration, we have to confirm our basic premise that we suppose only natural relation of cause and effect, and do not suppose any supernatural relation between words and things.

8.2

We shall now think about how meaning unit actually works. We have already argued how each unit can be identified through the law of cause and effect. Let us trace this causal relation to the backward, first.

Suppose that you are about to catch a chicken, for example. When you look at the chicken, meaning unit of chicken is activated within your brain, which causes cognition of chicken.

You can see him because light enters your eyes, which was reflected by his body surface and originally came from the sun. As he moves, your eyes catch a stream of light. His throat muscles start moving and then the air starts to vibrate, which reaches your ears, so that you hear his crow.

All these movements result from food he has taken so far and from impulses within him aroused by his circumstances.

You can trace further causes of all these phenomena and also those of light and air which enable the conveyance of chicken's movements.

Next, let us trace causal relation to the forward.

You have recognized the chicken. You start movement of catching him, which is based on your belief and caused by your cognition of chicken. After you caught him, you send word to your company. Then, you will eat him. These actions will result in other various phenomena.

If there were no light, you could not see him. Therefore light is the cause of your seeing.

If you did not see him, you could not recognize. Therefore seeing is the cause of cognition.

If you did not recognize him, you could not catch. Therefore cognition is the cause of catching.

If you did not catch, you could not eat, and so on.

We can grasp the flow of cause and effect here. Causes produce effects, then the effects become new causes and produce next effects.

8.3

When two men A and B have the same meaning units which correspond to the same idea I, unit of each man works within each flow of cause and effect. A's unit is accompanied by the flow of cause and effect A, and B's by the flow B. A and B represent the same meaning, but they are not identical.

Assume that both A and B are parts of the bigger causal flow M. Also, M includes meaning units of all human beings which correspond to the same idea I, and includes all causal flows accompanying them.

The following condition is important. Let us assume that M and M' are causal flows corresponding to different ideas I and I'. Then, M must not have any causal relation to M'.

Otherwise M and M' will be mixed together after the time when they start to form relation, and consequently you can not clearly separate idea I from I'. However, it contradicts the assumption that we can always clearly distinguish them.

Therefore M and M' should have no causal relation to each other. Elements of M must be thoroughly separated from those of M'.

8.4

Nevertheless, the following case is complicated. There are ideas that one includes the other, such as frog and tree frog. In case of such ideas, causal flow of one will wrap the other.

Then, let us suppose that we can redefine two ideas so that new ideas are mutually exclusive. If we can, flows which accompany two redefined ideas will have no relation to each other.

Set of redefined ideas shall be named I_S and set of causal flows accompanying them M_S . If I_S contains all ideas we can recognize, then M_S is the whole universe, because the universe is the set of everything we can recognize.

If so, what we can not recognize will not be a part of the universe. Since it has no causal relation to our universe according to our assumption, it will compose another universe. Therefore we can say our cognition covers the whole universe.

Let us term each element of M_S universal meaning unit.

8.5

It is interesting that one neuron within one person is enough to identify universal meaning unit, which determines the structure of universe.

It is possible that units increase or decrease in number, yet we may not notice even if they do.

Learning process is certainly included in each universal meaning unit, but you can not derive further conclusion from this hypothesis. You need more concrete theory to investigate in detail.

8.6

Someone may doubt whether the hypothesis doesn't contradict with the second law of thermodynamics or what kind of relation does it have to the ergodic hypothesis.

You should pay attention to the fact that any scientific theory must be described by words. If each word doesn't have meaning, all scientific theories will be meaningless. Therefore the hypothesis of meaning unit precedes all of them.

You have to abandon all theories not consistent with this hypothesis in extreme terms, and it is a good thing that the ergodic seems consistent.

8.7

The real problem is that our cognition certainly contains all of the existence and actually more. That is to say, we have so many ideas corresponding to things nonexistent. Our problem is not a lack of knowledge but too much knowledge.

However, it sounds ridiculous that you can know the meaning of the word know. Why can you use the word know without knowing the meaning of knowing?

This is just a hypothesis in the end. We should study the question what is intellect in the true meaning.

8.8

Before moving on the next topic, I have to comment somewhat on argument above. Since this is mainly about physics, you may skip and read section 9 if not interested.

The first is about the question whether the quantum mechanics satisfies the law of cause and effect. If the law is violated, our argument from the last section will become inappropriate.

However, I think it does from the following reason. The laws of conservation of energy and momentum hold strictly even in the quantum mechanics, which means Newton's third law, the law of action and reaction, holds.

The law of action and reaction means that no force operates with no cause, that is, every force has its cause. Therefore causal law obviously holds even in the quantum mechanics.

That a system of mechanics satisfies causal law does not mean the system is deterministic. We can say the quantum mechanics satisfies causal law but is not deterministic.

I think determinism results from the assumption of absolute intellect, and that is not reasonable. Our intellect itself results from the law of cause and effect in the first place. Therefore causality always precedes intellect. Nevertheless, determinists put intellect higher than causality. That is absurd.

8.9

The second is about contingency and necessity. Does contingency really exist? If it does, does that agree with the law of cause and effect?

To take an example, let us suppose that you noticed this morning that a tire of your car went flat with a nail sticking to it, and so you have arrived late at

the office. You should pay attention to the fact that you can use the accident of flat tire as an excuse for being late.

However, it is necessary for tire itself to go flat when it gets a nail. On the other hand, the flat tire is an accident from the viewpoint of your nature, that is, your purpose to go to the office. In other words, flat tire is a necessity for the nature of tire itself but is an accident for the purpose of the owner you.

The difference between contingency and necessity is only of viewpoint. It is possible that the same occurrence is a necessity from the nature of one thing and is an accident from that of another. If you take an appropriate viewpoint, any occurrence can be regarded as necessity.

It is when you notice fluctuation in natural phenomena that you come to believe in contingency. When you find out random movement of particles floating in solution, which is called Brownian movement, you will start to believe contingency of nature.

However, it was for exclusion of contingency that Einstein described the movement by supposition of atom. Because of exceedingly large number of atoms, individual atoms can move randomly even when the whole system is homogeneous. Each atom strictly obeys the law of motion, and precisely for that reason, the system of atoms comes to possess minute randomness.

Explain contingency from necessity. That is the essence of atomism. Of course, there is a room for improvement in the concept of atom even now. Yet it is difficult to deny atom as a cause of fluctuation from the viewpoint of causality in nature.

9

We shall consider human intellect in this section. We have already defined it in brief in section 6 and here we shall examine it from another point of view. We can not avoid thinking about morality in this examination because human intellect can not be divided from morality.

9.1

What is intellect?

According to a Stoic philosopher Epictetus, intellect judges good and evil. Also, since intellect itself is a good one, it must be able to judge itself (*Discourses*, i. 20). That is to say, intellect must be self-sufficient and self-consistent. We shall advance our consideration with this characteristic as a clue.

9.2

Now, I try to answer the question whether the theory of evolution can explain human intellect.

Alfred R. Wallace once claimed that the theory of evolution can not describe human intellect. I agree with him about this matter, because it seems that the theory can not describe self-consistency of intellect. I can not directly demonstrate that, but I can show some supporting evidence. That is to present the question which is expected to be solved by the theory but actually can not.

The question is why we could invent the theory of evolution. Although human intellect has invented the theory of evolution, it has to insist that intellect itself was created by evolution.

However, have we evolved so as that we can invent the theory of evolution because it is suitable for survival to invent the theory? What kind of selective pressure did operate during evolution of abilities necessary to invent the theory? The theory of evolution means nothing in the first place without ability to recognize species. Then, how did the ability evolve?

I think the theory can not give any reasonable answer to these questions, because it presupposes its conclusion, an ability to be explained by itself. This is the indirect reason that the theory can not describe intellect. Therefore we have to take a completely different way to understand human intellect.

9.3

What is definition of intellect in the first place?

I propose the definition that intellect is an ability to act based on the truth. You can understand this definition when you think about what kind of person is called intellectual. The intellectual is one who can behave with reason.

However, this is only the same thing in different words. What on earth is truth or reason?

I believe that truth is morality. Nevertheless, I also can not show direct evidence. I have to prove it by showing indirect grounds. All arguments below will be thoroughly done for this purpose.

9.4

Let us consider now the widespread argument whether morality results from our biological characteristics. I think we can not understand biological origin of morality because human beings are not moral beings. People in search for such origin try to find out evidence of something nonexistent.

Of course, we have to admit that the beginning of morality is by nature. Even little child has likes and dislikes against moral matters, which are not learned from others as is well known. However, this fact doesn't mean that human being is born with morality. We only notice morality through such feelings and are urged to achieve it.

No matter how good a man may be, for instance, he will hope for death of the leader of his enemy among countries hostile to each other. Also, there would be no war if morality were by nature.

We can make decisions with no doubt about very simple matters, such as whether it is right or wrong to kill others for our own sakes. However, as situation gets complicated like the trolley problem, it becomes difficult to judge which choice is right. Such lack of decision would never appear if we had the perfect knowledge of morality. We would not be bothered by however hostile differences and could judge with no doubt. It is because we do not have enough knowledge of morality that we hesitate to make moral judgments in complicated situations. That would not be the case if our moral behaviors were by nature.

This argument clarifies that moral behaviors and judgments are not by nature. We ourselves do not have morals and do not know moral laws enough. Therefore we can not find out the origin of morality. We have to understand what morality is before trying to know its origin.

9.5

We learn morality through ancient words. A man would never notice it if he lived alone.

You should consider the origin of good deeds of yourself. That never comes out of you but of words of others. Good senses grow up within you through listening to words of morality. Then, you know the value of it by weighing matters with reason and become able to practice it.

Morality is a good deed in the original meaning, and a cause of good deed is not within you.

9.6

Morality is demonstrated by behavior of a person and that is decided by his beliefs. Then, how does he fix his beliefs?

It is basically by his own experience. He learns from the past experiences and builds up his personality and behavior. Yet that is not all. He can also learn by words. Nevertheless, there is a distance between knowledges acquired by words and his beliefs. We can say beliefs are knowledges directly linked with behavior and knowledges are beliefs not directly linked with it. When do knowledges change into beliefs?

It will be when you recognize that a knowledge is worth practice. When you understand the knowledge benefits yourself, it changes into belief. It will change gradually through many experiences.

Now, you should pay attention to the following matter. It is only knowledge that you can convey by words and its value can not be conveyed completely. The ancients surely realized that a moral belief was most valuable and yielded the largest profit to those who practice it. Yet they could not let us know the very value. We have no choice but to judge through our experiences values of beliefs conveyed by others.

Precisely for this reason, we have to believe ancient words in order to make our lives valuable. It is easy to doubt others' words, but why do words exist if we do not believe any word? If once we decide to believe by our own judgment, we have to keep believing to the end. A man who can not do that can not be considered reasonable.

9.7

Intellect is truth and truth is morality.

When one's belief system agrees with the truth and he can behave in accordance with it, he is called intellectual. Then, what should we do in order to let our belief systems based on morality?

That can be done only by concentration and training. Our beliefs determine our behaviors in a situation, and at the same time, we can learn new beliefs. Therefore we have to train ourselves to let moral laws be our beliefs. We have to make efforts to associate every matter with moral laws and to make ourselves able to judge naturally whether our actions are contrary to morality or not no matter what we do.

The important point is at any time. We have to let ourselves learn so as that every judgment contains morality. We will be able to practice moral laws in this way, which is possible only when you believe in the true value of morality.

Then, what is the value of morality? Where does it lie? We have to make that clear.

9.8

Morality is the denial of violence. Therefore it is not allowed to use violence in order to protect morality. That is because morality will be destroyed by the very deed you employ if you try to protect it by violence. This is the reason why morality is separated from any other principle.

If you let satisfaction of wants be your principle, violence will not be denied. However, if violence is not denied, it may bring ruin upon yourself in the end. If it does, your wants can not be satisfied. The principle of satisfaction of wants contains the possibility to destroy itself from the beginning. This is also the case when you let love or ties be your principle.

On the other hand, if you let morality be your principle, possibility of violence is excluded from the beginning. Violence never appears among people who value morality.

Morality doesn't deny itself, which is the distinctive character of it.

9.9

Kant argued the following problem in his essay "On a supposed right to lie from benevolent motives." Let us suppose that a murderer chases your friend and you are sheltering him. Then, the murderer asks you the place of him. If you told a lie that he was not there, you could help him. Is it right to tell a lie to help your friend?

The point of this problem is the seriousness of the guilt to lie. Kant answered that we should not lie in any situation, even for helping others. Of course, he talked about principle and might not mean no exception is allowed. Still, I can not avoid wondering whether the question here concerns only guilts of lie and of exposing others to danger. That becomes clear when you think about the following matter.

How will the murderer treat you if he finds out your lie? Is the person you shelter really worth helping even with a risk of your life? Whoever could blame you even if you told the truth?

Here are weighed virtues to protect yourself and to protect others. Everyone has a virtue to protect himself, but it is far difficult to practice a virtue to protect others. This is the real problem.

9.10

In the Analects of Confucius is the following story (Book 13). A district director says there is an honest person in his country. When the father misappropriated sheep, the son reported it to the official. Confucius replies that honest people in his country are different from the director's. Sons cover fathers and fathers cover sons. Honesty grows among them.

The virtue in question here is of protecting others. Also, this is a political issue for Confucius. The purpose of his politics is to make people virtuous. When each person achieves enough virtue, a social order will be established for the first time, and consequently happiness of each one will be achieved.

His politics was to cultivate people and to teach them not only virtues to guard themselves but also to guard others. Laws can bind one's behavior and can not cultivate him. Social order is impossible unless each person builds up his own virtue. In addition, one can not be said to obey laws in the true meaning if he can not judge by himself whether he should obey or not.

9.11

There are activities which seem peculiar in modern eyes and appear to be reasonable after serious thought. It is especially difficult to tell the essence of virtue.

Everyone will accept that charity is a good deed. You can build your virtue through charity, which is like a training to practice virtue. It is just a formality at first, but you will be able to do it naturally after doing again and again, then you gradually understand the meaning of it. You cultivate your virtue like this.

Now, we focus on Buddhist monks who practice begging, which is an activity to ask charity of people and widely seen in Buddhist countries. What is it worth for?

Remember that you can acquire virtue through training. You need a chance to practice in order to acquire a virtue of giving charity. The purpose of begging monk is to cultivate his own virtue and at the same time to give others opportunities to cultivate virtue. This is the reason why he is sometimes called a field of virtue. His work is to cultivate people's minds and to promote their virtues. Begging itself is a kind of charity, charity of virtue.

Also, one has to be worth giving so as that he can receive, and precisely for that reason, he can give more virtue to a giver.

You can not say the activity is ridiculous if you believe the existence of virtue. Virtue is the value of man. Yet the essence of virtue lies in the capability of giving virtue to others. Therefore you should not spare your virtue. It is a shame to monopolize it.

Let us return to the question of Kant. If you want to protect both the truth and your friend together, you should say like this; "Here is the person you chase. However, I cannot let you catch him." Is this the right answer?

9.12

Indiscriminate terrorisms frequently occur all over the world nowadays. Why can't we eliminate them?

Most terrorists should have messages they want to deliver to people. They will employ terror to let people know the real problem in politics. However, there is a big difference between the present and the past terrorisms. That is a distance between regions where terrorists take actions and where people live who they want to send messages. They try to send messages to Japanese by terrorism in Iraq and to British by in Egypt. Nevertheless, for us Japanese, that is just a problem overseas. Their messages have no receiver.

What we need now is to provide the receiver of their messages. We need world government now. Economics is already globalized, but politics is not yet. We need globalization of politics in order to straighten up the world's distortion.

There is no order in the international community today. We need laws so as to bring order there. That is the universal laws which all individuals and

governments of international community have to obey without exception. Each one has to consider methods to achieve his own happiness according to reason and then has to obey the laws voluntarily. You have to be persuaded that the social order will not be realized unless you obey the laws and if not, you can never achieve your own happiness.

We must find out such laws and establish political order in international community. This is not a fantastic story but an actual need at present.

10

10.1

Some say that utilitarianism can provide a reasonable principle of morality. We shall think about this opinion.

Utilitarians claim that the principle of the greatest happiness of the greatest number determines social norms which we should obey. They focus on the problem to harmonize happiness of an individual with moral obligations. However, I think they make a mistake. They mistake actuality for ideal. We can use the principle of the greatest happiness as a purpose but can not as a means.

Let us consider the following situation. Suppose that questionnaires are delivered to all members of a nation. They fill in how happy they are by number 0 to 10 before the end of the day. The next day the government collects the forms and calculates the total amount of happiness, which we shall call f . They repeat this calculation every day.

Assume that f takes the maximum value f_{\max} on a day X. Then, the value of f will begin to decrease after the day X and will never exceed f_{\max} again. It is because f_{\max} would not be the maximum if f exceeded f_{\max} . Therefore the total amount of happiness f will eternally remain under the fixed value f_{\max} .

This is what the society is like after the greatest happiness of the greatest number has been achieved. Do we really hope for such a society?

Also, we can imagine the following case. If f is the simple amount of happiness of all individuals, the range of the value of f increases as the population of the society increases. Therefore, you can not tell whether f has the maximum value or not generally. Since we can not determine the upper limit of the population of our society in fact, it is not obvious whether f has the maximum value or not in the first place.

The issues of utilitarianism are the followings in conclusion.

The first is how you can define the state of the greatest happiness and whether you can really define it.

The second is, if you can define, how you can judge that a state is of the greatest happiness.

The third is whether it is right or not to pursue the state in the first place.

I do not agree with utilitarianism until these problems are solved. Nevertheless, whoever can imagine Socrates who is not satisfied with his life?

10.2

Happiness itself is distinctly different from pleasure. According to the terminology of Charles Sanders Peirce, we can say pleasure is Firstness and happiness is Thirdness. Happiness is a tendency to search for the cause of pleasure, what pleasure represents.

Here, I want to introduce the American semiotician in brief.

He said that human beings were signs. Therefore, when you look at him, you have to look not at himself but at what he represented as a sign. If you look at my finger when I point at the moon, for example, you do not understand my intention at all. You should look at what I am pointing.

Peirce lived as a sign, which was the greatest life, so if you want to know him, you must look beyond him.

10.3

If there is a power which can change actuality within itself, it will be moved by the power and will not be the actuality any longer.

On the other hand, if some power must operate from the outside of actuality in order to change it, only ideals have the power to change it.

10.4

Should we believe in God? What is he like if he is worth believing?

What we can believe will be only a moral god. He has to be moral one in order that we can keep believing.

If even god has to obey moral laws, it is obvious that moral laws are more estimable than god. Furthermore, although god may be unknowable, we can know moral laws. God doesn't say anything, but moral laws always lead us rightly.

Is there any difference between believing in god and in moral laws? The love of god is morality, isn't it?

10.5

God assured that good deeds result in good fruits and bad deeds result in bad fruits. What is that but causal law?

If it were not for causal law, why would you need the Prophet? Why would god have revealed him? If not for causal law, what kind of relation would your knowledge of god possess to words of the Prophet?

By his words, the knowledge of god was caused in your mind, wasn't it? If it were not for causal law, you would not need the Prophet in order to know god.

If you try to deny causal law, you will face all kinds of troubles. If you accept, you will have no problem.

10.6

But for causal law, why would you have meals? If there were no causal relation between meals each day and your health, you would not need to have a meal and keep alive forever without it.

Then, you may say like this. God gives due vitality to those who have meals and saps those who do not.

That may be so. Then, why don't you eat stones? Why not iron? Why doesn't god give vitality to those who eat stones? You will have to make a different rule for each case.

Of course, such a system of rules can be consistent and rational, yet at the same time, it will be too minute and not realistic.

What let you know such rules in the first place? Is it before or after you doubted causal law that you thought of the rules? Why didn't you think of the idea before you doubted?

In fact, your doubt and inference caused such an answer. Even a thought of denial of causal law must have its cause.

You can keep your health if you have meals each day. However, you will be unhealthy if you do not have meals. It is obvious that meals cause your health. Relation of cause and effect means nothing other than this fact. If you doubt causal law, you should not have a meal. In several days, you will have a real feeling of that law.

If A is, B is.

If A is not, B is not.

If A occurs, B occurs.

If A does not, B does not.

This is causality.

10.7

Causal law certainly doesn't appear necessary. It will be possible to give rational explanations to various matters without causal law. However, actual facts around us make overwhelming claims for that law. Without accepting causal law, you could not pass even your everyday life.

It is because we do not want to deny freedom of mind that we hesitate to accept the law. Nevertheless, what moves this pen and my fingers now? What is it but contraction of muscles? Why do you drink when you are thirsty? What is it for but for maintenance of physical condition?

If you do not accept causal law, every action you take will be meaningless and unexplainable. Denial of causal law is the most irrational thought we have ever had, and actually, there is no necessity to deny it.

10.8

How is five plus six?

When you are asked like this, a number eleven will come up in your mind. The number eleven was not within your mind before you were asked. Therefore you can say the eleven was caused by the question five plus six.

Causal law must hold strictly even on mental phenomena. Otherwise, there will be no order in your mind.

Freud's theory was to understand this fact, in one sense. However, in his theory is an exception. We have to eliminate consciousness from the theory. Psychology must be entirely of unconsciousness.

10.9

The supposition that self exists obviously checks the development of science. That is indemonstrable and arbitrary, and makes a scientific approach to human mind almost impossible.

Nevertheless, it is obvious that there will be no trouble in scientific research even if you accept the supposition that self doesn't exist. If there are ones who reject the supposition, it will be because they believe the existence of the soul. The denial of self is certainly identical with the denial of immortality and salvation of the soul. However, there is no other disadvantage.

Perhaps the real problem is that the corruption of soul will also be denied if you do. It seems that some kind of people feel happy to pollute their souls.

10.10

We learn something is bad because of the pain it brings. We also learn goodness by pleasure.

Pleasure is not goodness itself, but we couldn't know goodness without pleasure. That something brings pleasure lets us know that it may be a good thing. If there is the perfect goodness, it will be nothing other than pleasure, which doesn't mean every pleasure is good.

Nirvana is the good, the truth, the absolute pleasure and the absence of all the pain.

Buddhist faith solely lies in believing nirvana. That is to believe it actually exists and is a state or an activity of human being.

We have to practice because Gautama explained the path to nirvana.

10.11

What is meditation?

When I cross my legs and close my eyes, there is a torrent. Our minds are constantly dragged around in all directions.

Perhaps you think your mind becomes empty when you close your eyes.

No way! All objects of the past, present and future are passing in front of you. Good memories, bad memories, pleasures, disappointments, regrets, interests at the present, things to do now, physical needs, a pain in the leg,

itchiness of the cheek, plans for tomorrow, the view of the future, expectations, anxieties, all possible things drag your mind and never give a rest.

If you think you have the power to control your mind at will, you should sit down at a quiet place, close your eyes and try to delete these objects.

That will be impossible. You have no control of your mind at any time. The master of your mind is these mental objects of the past, present and future. Not you.

Then, your body follows your mind as a shadow follows a shape. If it does, why can you escape making mistakes? Why can you escape meeting with accidents? You do not hold the reins of your mind. That is the cause of all the pain.

If so, how can you release your mind from these fetters?

It is by understanding that effects follow causes. Buddha taught us four truths. First, you should recognize your own pain without deception. Second, know that every pain has its cause. Then, understand that the pain itself disappears when you remove the cause. Lastly, believe firmly that there is the way to eliminate the pain. These are the four truths.

You have to watch these truths carefully on each event of your own life. Then, you should try to decrease causes which bring pain and increase which bring good results. You have to keep watching like this and get across the great river promptly. You mustn't turn round or stand still, otherwise you will be carried away by the rushing current in a moment. Never neglect your watch over four truths. This is the teaching.

If you want to doubt, you may doubt. However, it is useless to criticize Buddhism.

Just as one touching raging flames hideously burns his hand, one attacking Buddha will watch his body burned up by the flame of wisdom. He burns himself by own deed.

10.12

It is a dark age now concerning thought over the world. Some believe atom completely and others have no doubt on reason or free will. They stick to their metaphysical prejudices obstinately and do not notice that their thoughts and behaviors are distorted by that. People come to listen to words of others less and less. Probably we can not save this situation. Then, does some catastrophe occur again?

I don't think so because it has already occurred.

People destroyed others' bodies by weapons in the past wars, and they destroy others' minds by money in the modern war. The war already spreads all over the world with no one aware of it.

Human mind is said to have inestimable value. Where on earth is it from? What brings such value?

We have to study it because the value of mind lies in studying.

I do not believe in God, atom and free will.
I accept the law of cause and effect with no restriction.
I respectfully bow before Buddha who excellently explained the truth of
cause and effect as the best of all preachers.