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478 **Pathologies of Epistemology**

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478 First, I would like you to join me in a little experiment. Let me ask for a show of hands. How many of you will agree that *you see me*? I see a number of hands - so I guess insanity loves company. Of course, *you* don't "really" see *me*. **What you "see" is a bunch of pieces of information about me, which you synthesise into a picture image of me. You make that image.** It's that simple.

The proposition "I see you" or "You see me" is a proposition which contains within it what I'm calling "**epistemology**". It contains within it **assumptions about how we get information, what sort of stuff information is**, and so forth. When you say you "see" me and put up your hand in an innocent way, you are, in fact, **agreeing to certain propositions about the nature of knowing and the nature of the universe in which we live and how we know about it.**

I shall argue that **many of these propositions happen to be false**, even though we all share them. In the case of such epistemological propositions, error is not easily detected and is not very quickly punished. You and I are able to get along in the world and fly to Hawaii and read papers on psychiatry and find our places around these tables and in general function reasonably like human beings in spite of very deep error. The **erroneous premises, in fact, work.**

479 On the other hand, the premises work only up to a certain limit, and, at some stage or under certain circumstances, if you are carrying serious epistemological errors, you will find that they do not work any more. At this point **you discover to your horror that it is exceedingly difficult to get rid of the error, that it is sticky. It is as if you had touched honey. As with honey, the falsification gets around; and each thing you try to wipe it off on get sticky, and your hand still remain sticky.**

Long ago I knew intellectually, and you, no doubt, all know intellectually, that you do not see me; but I did not really encounter this truth until I went through the Adalbert Ames experiments and encountered circumstances under which my epistemological error led to errors of action.

Let me describe a typical Ames experiment with a pack of Lucky strike cigarettes and a book of matches. The Lucky Strikes are placed about three feet from the subject of experiment supported on a spike above the table and the matches are on a similar spike six feet from the subject. Ames had the subject look at the table and say how big the objects are and where they are. The subject will agree that they are where they are, and that they are as big as they are, and there is no apparent epistemological error.

Ames then says, "I want you to lean down and look through this plank here". The plank stands vertically at the end of the table, it is just a piece of wood with a round hole in it, and you look through the hole. Now, of course, you have lost use of one eye, and you have been brought down so that you no longer have a crow's-eye view. But you still see the Lucky strikes where they are and of the size which they are.

Ames then said, "Why don't you get a parallax effect by sliding the plank?" You slide the plank sideways and suddenly your image changes. You see a little tiny book of matches about half the size of the original and placed three feet from you; while the pack of Lucky strikes appears to be twice its original size, and is now six feet away. This effect is accomplished very simply. When you slip the plank, you in fact operated a lever under the table which you have not seen. The lever reversed the parallax effect; that is, the lever caused a thing which was closer to you to travel with you, and that which was far from you to get left behind.

Boe: subliminal, subconscious "mental" processes; to mind = to brain ?

Your mind has been trained (or genotypically determined - and there is much evidence in favour of training) - to do the mathematics necessary to use parallax to create an image in depth. It performs this feat without volition and without your consciousness. You cannot control it.

I want to use this example as a paradigm of the sort of error that I intend to talk about. The case is simple; it has experimental backing; it illustrates **the intangible nature of epistemological error and the difficulty of changing epistemological habit.**

In my everyday thinking, I see you, even though I know intellectually that I don't. Since about 1943 when I saw the experiment, I have worked to practice living in the world of truth instead of the world of epistemological fantasy; but I don't think I've succeeded.

Insanity, after all, takes psychotherapy to change it, or some very great new experience. Just one experience which ends in the laboratory really is insufficient.

Boe: Are there true ideologies? What is the nature of the mind? the world of facts, forces and impacts - the world of differences.

This morning, when we were discussing Dr. Jung's paper, I raised the question which nobody was willing to treat seriously, perhaps because my tone of voice encouraged them to smile. **The question was whether there are true ideologies.** We find that different peoples of the world have different ideologies, different epistemologies, different ideas about the nature of man himself, the nature of his knowledge, his feelings, and his will. But if there were a truth about these matters, then only those social groups which thought according to that truth could reasonably be stable. And if no culture in the world thinks according to that truth, then there would be no stable culture.

Notice again that we face the question of how long it takes to come up against trouble. **Epistemological error is often reinforced and therefore self-validating. You can get along alright in spite of the fact that you entertain at rather deep levels of the mind premises which are simply false.**

I think the most interesting - though still incomplete - scientific discovery of the twentieth century is the **discovery of the nature of mind.** Let me outline some of the ideas which have contributed to this discovery.

481 Immanuel Kant, in the *Critique of Judgement*, states that **the primary act of aesthetic judgement is "selection of a fact".**

There are, in a sense, no facts in nature; or if you like, there are an infinite number of potential facts in nature, out of which the judgement selects a few which become truly facts by the act of selection.

Now, put beside the **idea of content** Jung's insight in *Seven Sermons to the Dead*, a strange document in which **he points out that there are two worlds of explanation or worlds of understanding, the *pleroma* and the *creatura*.**

In the **pleroma** there are only **forces and impacts**.

In the **creatura**, there is **difference**. In other words, **the pleroma is the world of the hard sciences**, while **the creatura is the world of communication and organisation**.

The difference cannot be localised. There is a difference between the colour of this stick and the colour of this pad. But that difference is not in the pad, it is not in the desk, and I cannot pinch it between them. The difference is not in the space between them. In a word, **a difference is in idea**.

The **world of creatura** is that **world of explanation** in which **effects brought about by ideas, essentially by differences**.

If now we put Kant's insight together with that of Jung, **we create a philosophy which asserts that there is an infinite number of differences in this piece of chalk but that only few of these differences make a difference**. This is the **epistemological base for information theory**. The **unit of information is difference**. In fact, the **unit of psychological input is difference**.

The whole energy structure of the pleroma - the forces and impacts of the hard sciences - have flown out of the window, so far as explanation within creatura is concerned. After all, zero differs from one, and zero therefore can be a cause, which is not admissible in hard science. The letter which you did not write can precipitate an angry reply, because **zero can be one-half of the necessary bit of information**. Even sameness can be a cause, because sameness differs from difference. These strange relations obtain because we or organisms (and many of the machines that we make) happened to be able to store energy. We happen to have the necessary circuit structure so that our energy expenditure can be an inverse function of energy input.

Boe: characteristics of mind

If you kick a stone, it moves with energy which it got from your kick. If you kick a dog, it moves with the energy which it got from its metabolism. An amoeba will, for a considerable period of time, move more when it is hungry. Its energy expenditure is an inverse function of energy input. These strange creatural effects (which do not occur in the pleroma) depend also upon **circuit structure**, and **the circuit is a closed pathway** (or network of pathways) along with **differences** (or transforms of differences) are transmitted.

Suddenly, in the last twenty years, these notions have come together to give us a broad conception of the world in which we live - a new way of thinking about what a Mind is. Let me list what seems to be those essential minimal characteristics of a system, which I will accept as characteristics of mind:

- 1) The system shall operate with and upon differences.**
- 2) The system shall consist of closed loops or networks of pathways along which differences and transforms of differences shall be transmitted.** (What is transmitted on a neurone is not an impulse, it is news of a difference.)

3) Many events within the system shall be energised by the respondent part rather than by impact from the triggering part.

4) **The system shall show self-correctiveness in the direction of homeostasis and/or in the direction of runaway.** Self-correctiveness implies trial and error.

Now, **these minimal characteristics of mind are generated whenever and wherever the appropriate circuit structure of causal loops exists. Mind is a necessary, an inevitable function of the appropriate complexity, wherever that complexity occurs.**

But that complexity occurs in a great many other places besides the inside of my head and yours. We shall come later to the question of whether a man or a computer has a mind. For the moment, let me say that the redwood forest or a coral reef with its aggregate of organisms interlocking in their relationships has the necessary general structure. The energy for the responses of every organism is supplied from its metabolism, and the total system acts self-correctively in various ways. The human society is like this with closed loops of causation. **Every human organisation shows both the self-corrective characteristics and has the potentiality for runaway.**

Boe: Does a computer think?

- **self-correctiveness as the criterion of thought or mental process**
- **epistemological fallacies of Occidental civilisation**
- **Ecology**

483 Now, let us consider for a moment the question of whether a computer thinks. I would state that it does not. **What “thinks” and engages in “trial and error” is the man plus the computer plus the environment.** And the lines between man, computer, and environment are purely artificial, fictitious lines. They are lines across the pathways along which information or difference is transmitted. They are not boundaries of the thinking system. **What thinks is the total system which engages in trial and error, which is man plus environment.** But if you accept **self-correctiveness as the criterion of thought or mental process**, then obviously there is “thought” going on inside the man at the autonomic level to maintain various internal variables. And similarly, the computer, if it controls its internal temperature, is doing some simple thinking within itself.

Now we begin to see some of the epistemological fallacies of Occidental civilisation.

In accordance with the general climate of thinking in mid-nineteenth century England, Darwin proposed a theory of natural selection and evolution in which the unit of survival was either the family line or the species or subspecies or something of the sort. But today it is quite obvious that this is not the unit of survival in the real biological world. **The unit of survival is organism plus environment. We are learning by bitter experience that the organism which destroys its environment destroys itself.**

If, now, we correct the Darwinian unit of survival to include the environment and the interaction between organism and environment, a very strange and surprisingly identical identity emerges: **the unit of evolutionary survival turns out to be identical with the unit of mind.**

Formally we thought of a hierarchy of taxa - individual, family line, subspecies, species etc. - as units of survival. We now see a different hierarchy of units – gene-in-organism, organism-in-environment, ecosystem etc.

Ecology, in the widest sense, turns out to be the study of the interaction and survival of ideas and programs (i.e., differences, complexes of differences, etc.) In circuits.

Let us now consider what happens when you make the epistemological error of choosing the wrong unit: you end up with the species versus the other species around it or versus the environment in which it operates. Man against nature. You end up, in fact, with Lake Erie a slimy green mess, and “Let’s build bigger atom bombs to kill off the next-door neighbours”. There is an ecology of bad ideas, just as there is an ecology of weeds, and it is characteristic of the system that basic error propagates itself. It branches out like a rooted parasite through the tissues of life, and everything gets into a rather peculiar mess.

When you narrow down your epistemology and act on the premise “What interests me is me, or my organisation, all my species”, you chop off configuration of other loops of the loop structure. You decide that you want to get rid of the byproducts of human life and Lake Erie will be a good place to put them. You forget that **the eco-mental system** - called Lake Erie is a part of **your wider eco-mental system** - and that if Lake Erie is driven insane, **its insanity is incorporated in the larger system of your thought and experience.**

You and I are so deeply acculturated to the idea of “self” and organisation and species that it is hard to believe that man might view his relation with the environment in any other way than the way in which I have rather unfairly blamed upon the 19th-century evolutionists.

So I must say a few words about **the history of all this.**

Anthropologically, it would seem from what we know of the early material, that man in society took clues from the natural world around him and applied those clues in a sort of metaphoric way to the society in which he lived. That is, he identified with or empathized with the natural world around him and took that empathy as a guide for his own social organisation and his own theories of his own psychology. This was called “**totemism**”. In a way, it was all nonsense, but it made more sense than most of what we do today, because the natural world around us really has this general systemic structure and therefore is an appropriate source of metaphor to enable man to understand himself in his social organisation.

The next step, seemingly, was to reverse the process and to take clues from himself and apply these to the natural world around him. This was “**animism**”, **extending the notion of personality or mind to mountains, rivers, forests, and such things.** This was still not a bad idea in many ways.

495 **But the next step was to separate the notion of mind from the natural world, and then you get the notion of gods.**

But when you separate mind from the structure in which it is immanent, such as human relationship, the human society, or the ecosystem, you thereby embark, I believe, on fundamental error, which in the end will surely hurt you.

Struggle may be good for your soul up to the moment when you win the battle is easy. We have an effective enough technology so that you can really act upon your epistemological errors and can create havoc in the world in which you live, **then the error is lethal.**

Boe: immanent mind

Epistemological error is all right, it's fine, up to the point at which you create around yourself a universe in which that error becomes immanent in monstrous changes of the universe that you have created and now try to live in.

You see, we are not talking about the dear old Supreme Mind of Aristotle, St Thomas Aquinas, and so down through the ages – the Supreme Mind which was incapable of error and incapable of insanity. **We are talking about immanent minds, which is only too capable of insanity, as you all professionally known. This is precisely why you are here. These circuits and balances of nature can only too easily get out of kilter, and they inevitably get out of kilter when certain basic errors of our thought become reinforced by thousands of cultural details.**

I don't know how many people today really believe that there is an overall mind separate from the body, separate from the society, and separate from nature. But for those of you who would say that that is all "superstition", I'm prepared to wager that I can demonstrate with them in a few minutes that **the habits and ways of thinking that went with those superstitions are still in the heads and still determine a large part of their thoughts.**

The idea that you can see me still governs your thoughts and action in spite of the fact that you may know intellectually that it is not so. In the same way we are most of us governed by epistemologies that we know to be wrong.

Let us consider some of the implications of what I've been saying. Let us look at how the basic notions are reinforced and expressed in all sorts of details of how we behave. The very fact, that I am monologuing to you - this is a norm of our academic subculture, but the idea that I can teach you, unilaterally, is derivative from the premise that the mind controls the body. And whenever a psychotherapist lapses into a unilateral therapy, he is obeying the same premise.

I, in fact, standing up in front of you, am performing a subversive act by reinforcing in your minds a piece of thinking which is really nonsense. We all do it all the time because it's built into the detail of our behaviour. Notice how I stand while you sit.

The same thinking leads, of course, to theories of control and your theories of power. In that universe, if you do not get what you want, you will blame somebody and establish either a jail or a mental hospital, according to taste, and you will pop them in it if you can identify them. If you cannot identify them, you will say, "It's the system". This is roughly where our kids are nowadays, blaming the establishment, but you know the establishments are not to blame. They are part of the same error, too.

Boe: the idea of control - the idea of power - the idea of power over

Then, of course, there is the question of weapons. If you believe in that unilateral world and you think that the other people believe in that world (and you're probably right; they do), then, of course, the thing is to get weapons, hit them hard, and "control" them.

They say that power corrupts; but this, I suspect, is nonsense. What is true is that the *idea of power* corrupts. Power corrupts most rapidly those who believe in it, and it is they who will want it most. Obviously our democratic system tends to give power to those who hunger for it and gives every opportunity to those who don't want power to avoid getting it. Not a very satisfactory arrangement if power corrupts those who believe in it and want it. **Perhaps there is no such thing as unilateral power. After all, the man "in power" depends on receiving information all the time from outside. He responds to that information just as much as he "causes" things to happen.** It is not possible for Goebbels to control the public opinion of Germany because in order to do so he must have spies or legmen or public opinion polls to tell him what the Germans are thinking. He must then trim what he says to this information; and then again find out how they are responding. It is an interaction, and not a lineal situation.

But the myth of power is, of course, a very powerful myth and probably most people in this world more or less believe in it. It is a myth which, if everybody believes in it, becomes to that extent self-validating. But it is still epistemological lunacy and leads inevitably to various sorts of disaster.

Last, there is the question of urgency. It is clear now too many people that there are many catastrophic dangers which have grown out of the Occidental errors of epistemology. These range from insecticides to pollution, to atomic fallout, to the possibility of melting the Antarctic ice cap. Above all, our fantastic compulsion to save individual lives has created the possibility of world famine in the immediate future. Perhaps we have an even chance of getting through the next twenty years with no disaster more serious than the mere destruction of a nation or a group of nations. I believe that this massive aggregation of threats to man and his ecological systems arises out of errors in our habits of thought at deep and partly unconscious levels. As therapists, clearly we have a duty.

First, to achieve clarity on ourselves: and then to look for every sign of clarity in others and to implement them and reinforce them in whatever is sane on them. And there are patches of sanity is still surviving in the world. Much of Oriental philosophy is more sane than anything the West has produced, and some of the inarticulate efforts of our own young people are more sane than the conventions of the establishment.

Boe 1984: What is my task? "I" cannot make anything happen, what happens happens. The process of happening. What is that process?

Boe 2014: still trying to "translate" what I learnt from "oriental philosophy" into my Western epistemology:

Boe [Worldview-Revisions](#)
Boe [At Home in the Universe](#)