What is Knowledge?

A Crash-course in Epistemology

Knowledge is always knowledge of truths.

One is *aware* of objects, and one knows truths *about* them; but one does not *know* them, at least not in the sense in which one knows that 1+1=2.

A truth is a true proposition. A falsehood is a false proposition.

When one makes a statement, the thing one is thereby affirming is a proposition. If I say “John smokes,” and I do so knowing what my words mean and with the intention of affirming that meaning, the thing I am affirming is the proposition *that John smokes.*

This proposition is not a linguistic expression; it is what is meant by such an expression.

Therefore, it is not itself a linguistic expression.

And this thing is not a belief; it is the object of a belief, and is therefore not *itself* a belief. Nor, by parity of reasoning, is it identical with any other sort of mental entity.

When it is said of a belief, or a sentence, or a speech act that it is ‘true’, what is meant is that the corresponding proposition is true. This is obviously not what is meant when a proposition is described as ‘true.’ In a moment, it will be said what it *does* mean.

Propositions are not facts. That is to say, they are not spatiotemporal entities; they are not structures that consist of occupants of space-time.

The proposition *John smokes* can be affirmed, denied, believed, doubted, etc. But it cannot be physically altered. In fact, it cannot be altered in any way. This is because it is not itself spatiotemporal.

Also, even if John does not smoke, the proposition *John smokes* exists. No proposition depends for its existence on its being true. Therefore, truths---true propositions, in other words--- are not distributions, or redistributions, of mass-energy.

A proposition is a class of properties---of characteristics, in other words---and for a proposition to be true is for the members of the corresponding property-set to be instantiated.

Let k be the smallest set containing the following three properties.

P1. The property of being identical with John P2. The property of smoking, and

P3. The property of being a thing x such that x is identical with John and such that x smokes.

John smokes if, and only if, these three properties are jointly instantiated. In other words, if they are instantiated, then John smokes; and if John smokes they are instantiated.

Therefore, the proposition *John smokes* is to be identified with k and that proposition’s being

*true* is to be identified with those three properties’ being jointly instantiated.

To be sure, if P3 is instantatiated, then so are P1 and P2; so it might seem that *John smokes* could be identified with P3, and its being true with P3’s being instantiated, it being unnecessary to identify that proposition with k, since k contains P1 and P2.

But there are two conditions that a viable theory of truth must satisfy. First, it must account for any given proposition’s truth-conditions. In other words, for any given proposition T, if T is true under such and such circumstances, then a viable theory of truth must account for that fact; and if T is false under thus and such circumstances, a viable theory of truth must account for that fact as well.

At the same time, a viable theory of truth must *also* do justice to the internal, structural properties of propositions. It must account for their *decompositional* properties, in other words. It is a datum that *John smokes* has a discrete part corresponding to John, a second discrete part corresponding to *smokes*, and a third part, this being an improper part, corresponding to the fusion of the two.

Our theory is consistent with these facts about the decomposition of *John Smokes.* In general, our theory, unlike the other theory considered, is consistent with the decompositional properties of propositions.

It is *truths* that are known. Falsehoods can be *believed*, but they cannot be *known*.

And true beliefs must be *justified* if they are to be knowledge. If I have correct belief, but I have it for the wrong reasons, it is not knowledge. If I believe that all people who wear ear-muffs are geniuses, and I believe on that basis and on that basis alone, that my ear-muff wearing Fred is a genius, I do not know that Fred is a genius---even if, as it happens, he is a genius.

But even though all cases of knowledge are cases of justified true belief, not all cases of justified true belief are cases of knowledge. If I look at a broken clock that happens to be right, and on that basis I believe it to be 2:00 pm, I do not know it to be 2: 00 pm. even if, given the information available to me, I am justified in believing the clock to be reliable and even, consequently, I am justified in believing the time to be 2:00 pm.

In order for my belief to be a case of knowledge, it is necessary that, in addition to being true, it be the end result of processes that are *information-transmissive.*

For a physical process to be information-transmissive is for it to be *structure-preservative*.

When you talk into a phone, the sounds you make are converted into electrical impulses that are structure-identical with those sounds, and the other person’s phone converts those impulses into sounds that are structure-identical with them and therefore with the sounds you originally made.

By thus preserving structure, this process transmits information.

If, on the basis of the read-out of a broken clock, you believe the time to be 2:00 pm, your belief is not the end-result of a structure-preservative process and it therefore does not embody information about the external world, notwithstanding that it is true and justified. Suppose that the clock were functioning properly and were set to the right time. In that case, the read-out on the clock would be hewed to the time. In which case, the read-out on the clock would be genuinely information-transmissive with respect to the time. In which case, your belief that it was 2:00 pm would embody such information and would therefore be knowledge.

There are two kinds of knowledge: empirical and analytic. Analytic knowledge is knowledge of purely conceptual truths, for example:

*Any given circle is a closed, planar figure*. Another example is:

*Nothing can be literate without being animate.*

An empirical truth is an observation-based truth.

No knowledge is *strictly* observation-based. There is *always* a ratiocinative component.

Knowledge is analytic when there is *no* empirical component to it; otherwise empirical.

The fact that no knowledge is strictly observation-based is a consequence of the fact that it is propositions that are known, not objects. One observes objects. One does not observe truths. In other words, one does not observe true propositions. One observes assemblages of spatiotemporal entities in virtue of which truths hold, but one does not observe truths *per se.*

This is a corollary of the fact, cited earlier, that truths are sets of properties: one observes *instances* of properties, not properties *per se*. One observes particular instances of roundness, tallness, redness, etc.; one does not observe the corresponding properties.

Also, given any one empirical proposition, there is no one sort of observation that warrants acceptance of that proposition; and given any observation, or observation-class, there is no one sort of proposition whose acceptance is thereby warranted. Consider the proposition *John smokes.* There is no one sort of observation that warrants acceptance of that proposition. And any observation, or class of observations, that warrant acceptance of that proposition *also* warrant acceptance of many other propositions.

Also, one observes only what *is*, not what *isn’t*; nor *a fortiori* what cannot possibly be. When I look inside a room, I see what *is* in the room, not what isn’t. I don’t see John’s absence. I see various presences and, on that basis, deduce that John is absent. In general, negative truths are

not known strictly on the basis of observation.

The same is true of disjunctive truths---truths of the form *either p or q.* It may be that my visual perception of the new car in John’s driveway warrants acceptance of the proposition:

*Either John bought a new car or that car belongs to a houseguest*.

But if so, that is because my perception directly warrants acceptance of some non-disjunctive proposition---some proposition along the lines of *there is a new car in John’s driveway*---which, in its turn, warrants acceptance of the aforementioned disjunction.

There cannot possibly be any strictly observational basis for acceptance of statements of the form:

*If q follows from p,*

which means:

*p is incompatible with not q*, which in turn means:

*The joint truth of not q and p is an impossibility.*

Since one cannot observe what isn’t, let alone what cannot possibly be, observation cannot, at least not by itself, warrant acceptance of any statement of the form *if p, then q.*

Also, belief, and therefore knowledge, necessarily involve *classification*.

To believe that John smokes is to believe that John belongs to the class of smokers. To believe that Chester is green is to believe that Chester belongs to the class of green things.

But sense-perception cannot itself result from an act of classification, since such an act would presuppose awareness not just of the object being classified, but also of its having such properties as to warrant its being classified in a given way. Therefore, a sense-perception could result from an act of classification only if there were some other, prior state of awareness from which that perception and of whose content its own derived. But in that case, that other awareness would be the sense-perception. A sense-perception is, by definition, an awareness of the external world that is *non-inferential.* Classification is a form of inference, and sense- perception therefore precedes inference.

Thus, it isn’t that *some* truths are known strictly on the basis of observations and others are

not; it is rather that *no* truths are known strictly on the basis of observation. *No* knowledge is strictly empirical. Some knowledge is *partly* empirical.

What we call ‘knowledge’ is *conceptually articulated awareness.* It is one thing for me to be aware of the uncomfortableness tightness of my shoes. It is quite another for me to know *that my shoes are uncomfortably tight.* I cannot know the latter without having various concepts---*shoe*, *tight, uncomfortable, foot,* etc. But I can certainly experience an uncomfortable feeling in my feet without having those concepts---and, indeed, without having *any* concepts. My having knowledge of that truth involves my conceptualizing my feelings of discomfort---it involves my understanding those feelings in terms of the aforementioned concepts.

Raw observation gives me the feeling, but it is up to me to use the concepts that I have to articulate that feeling into something that can be known. This is because to articulate an observation is to classify its contents, and classification observation precedes classification, as we just saw.

Therefore, observation cannot tell me *how* to use the concepts that I have to articulate the deliverances of observation. Observation could tell me this only if observations themselves were already conceptually articulated, which they are not, for the reason just stated.

Therefore, nothing empirical is known *unless* it is known how interpret observations, and observation cannot in all cases tell me how it is to be interpreted. *Given* on ability on my part to interpret my observations, observation can obviously *improve* my ability to interpret observation; but it couldn’t tell me this unless I could already interpret it. Since, consequently, the interpretive principles involved in the interpretation of observation are not always known on the basis of observation, it follows that at least some knowledge is analytic. Indeed, this follows from the very fact that we have observation-based knowledge: *given that we have empirical knowledge, it follows that we have non-empirical knowledge.* This follows because it is by using non-empirical knowledge to interpret sensory observations that we acquire empirical knowledge.

All empirical knowledge is inferential.

I leave it open whether all non-empirical is inferential.

Nonetheless, there is *a* significant sense in which some empirical beliefs are non-inferential. Suppose that I have observations of rain and, on the basis of my duly conceptually articulating those observations, believe it to be raining. In that case, those inferences tell me *what it is that I am observing*.

Now suppose that I have observations of rain and, on the basis of my duly articulating said observations, I believe it to be raining and, on *that* basis, I believe that there will be terrible mosquitos in yard a few hours hence. The second set of inferences *don’t* tell me what I am currently observing. They tell me what *will* be the case, *given* what it is that, according to my observations, currently *is* the case.

Setting aside cases of our speaking falsely, when we say of a given belief that it is ‘non- inferential’, what we mean is that no inferences were involved in the subject’s having it *other* than such as were needed to apprise him of what it was that he observed. And when we say of a belief that it is ‘non-inferential’, what we mean is that a *second* set of inferences was involved.

Our beliefs about the past, future, and merely possible are categorically inferential in this second sense. Our beliefs about the so-called ‘observable’ present are not always inferential in the second sense. As previously stated, all empirical beliefs are inferential in the first sense.

If I know that there currently exists an X and also that X’s always lead to Y’s, then I can deduce, and therefore know, that there will be a Y. If I know that there is a Y, and that Y’s are always preceded by X’s, then I can deduce, and therefore know, that there was a Y. If I know that X’s always bring about Y’s, then I know that, *if* there were an X, then there *would* be a Y.

All theoretical knowledge is inferential, but not all inferential is theoretical. I know that John is sniffing pepper and also that anyone who does so sneezes; and on this basis I know that John is going to sneeze. This knowledge of mine is inferential, but it is not theoretical.

Theoretical knowledge is theory-based knowledge. A theory is an integrated body of propositions that, if correct, describes some otherwise hidden *structural fact* about reality. Theories, when true, tell us how the universe is structured. To be sure, sometimes people use the word ‘theory’ to describe beliefs about specific situations, this being the sense in which there various ‘theories’ concerning JFK’s assassination or concerning the authorship of *Hamlet*. But when people say that Francis Bacon, as opposed to Shakespeare, was the author of Hamlet, or that Lee Harvey Oswald was merely the triggerman, it being Sam Giancana who really killed Kennedy---when people say such things, they are not making a claim whose scope is confined to some one incident. They saying that human affairs are governed by forces very different from those by which we believe them to be governed, the incident in question being proof of this.

In any case, as the word ‘theory’ is used in science and in the philosophy thereof, a theory is an integrated body of propositions that, if correct, tells us about the structure of some comprehensive, or otherwise significant domain. Thus, a theory, if correct, apprises us of dependence-relations. More precisely, theories, when true, apprise us of dependence-relations of the *causal* variety, not of the *logical* variety.

The statement *any given statement is a consequence of the negation of its own negation* describes a logical dependence-relation, meaning that it says how one statement’s truth-value depends on some other statement’s truth-value.

The statement *oxygen deprivation causes death* describes a causal dependence-relation, meaning that it says how one state of affairs (that of being alive) depends on some other state of affairs (that of being adequately oxygenated).

When a theory is correct, it does not merely apprise us of *one* causal mechanism. It apprises us

of systems of such mechanisms. Or, rather, it makes it clear how various causal mechanisms previously known to exist are interrelated. Relativity Theory explains the null outcome of the Michaelson-Morley experiment; it explains the Lorentz-Fitzgerald contraction; it apprises us of the phenomenon of time-dilation and also of the non-additivity of volume and mass; and, most importantly, it explains how all of these things are related.

Suppose I know that p and, on the basis of my knowledge of a single causal mechanisms, I infer, and therefore know, that q. In that case, my knowledge that q is true is inferential but not theoretical.

But suppose I know that p and, on the basis of my knowledge of the way in which a multiplicity of different causal mechanisms are interrelated, I infer, and therefore know, that q. In that case, my knowledge that q is true *is* theoretical.

It’s obvious that things make things happen; that certain events are consequences of others.

The button is pushed; the bell rings. The rock is thrown; the window shatters. And so on.

According to some philosophers, we see events, and sequences thereof, but we don’t see causal connections holding among events, and we therefore don’t have good reason to believe such connections to exist.

This is erroneous. The concept of spatial occupancy is a causal concept: an occupant of a given region *ipso facto* affects the locations and trajectories of other bodies. The concept of persistence is a causal concept: a thing persists if its present condition is the effect of its previous condition.

What we tend to think of as causal sequences are actually cases of *two* causal sequences crossing paths. The rock is a causal sequence, and so is the window; and when the collision of the two shatters the window, that is a *disruption* of a causal sequence, namely, the causal sequence with which the window’s very existence is identical.

So the question ‘how do we become aware of instances of causation?’ is misconceived. We cannot be aware of anything persistent, or therefore of any case of continuous motion, without, for that very reason, being aware of an instance of causation.

By the same token, if we want to know what causes what, we need to know what is continuous with what. And this is how we distinguish actual causal relations from correlations that mimic causation. Suppoe that everybody in Smalltown drives a Mercedes and also smokes 5 packs a day. And that everyone in Smalltown either has lung cancer or will get it by age 40. The skeptic says: ‘We don’t know what is responsible for the high rates of cancer among Smalltown residents. Maybe it’s that they smoke too much. But it’s equally possible that it’s because they drive Mercedes.’

Statistical correlations are not themselves causal connections. They sometimes give us a rough idea of where to look for causal connections. But if we want to know what causes what, there is

one thing, and one thing alone, that we must know: namely, what is *continuous* with what. The residents of Smalltown inhale smoke and, therewith, tar and other noxious chemicals, which take root in their lungs, and various physiological changes ensue.

The smoking is continuous with the subsequent cancer. The Mercedes-ownership is not. And that’s the end of the matter.

*If*, as many a skeptical philosopher has alleged, causal connections are known only by knowing correlations, then there would indeed be no way to distinguish causation from correlation. But that isn’t how causal connections are known—ever. Sometimes knowledge of correlations is a precursor to knowledge to knowledge of causal liaisons. But that’s all it is; nothing more. And the skeptic’s position is, in this context at least, without substance.

And it’s equally without substance in other domains. The skeptic asks: How do we know that we aren’t always hallucinating?

Here’s the answer: If the skeptic is right, our perceptions come out of nowhere. They have no causes. If the non-skeptic is right, they not come out of nowhere. So the skeptic’s way of modeling the data is to say that there is no way to model it. The non-skeptic’s way of modeling the data is to posit continuously existing realities of which the realities of which we have direct awareness are fragments.

‘Yes’, the skeptic relies. ‘But given only that the non-skeptic’s way of modelling the data is a good one, it doesn’t follow that it is correct. And it therefore doesn’t follow that the skeptic’s way of modelling the data is wrong.

Other things being equal, T1 is a better theory than T2 if reality contains fewer causal anomalies if T1 is correct than if T2 is correct.

This we know. This is an analytic truth.

*Given* that, by this yardstick, some theory T1 is better than some other theory T2, does it follow that T1 is correct? No. Does it follow that it is more reasonable to accept T1 than it is to accept T2? Yes.

Also, the skeptic’s position isn’t really a position. His ‘position’, for lack of a better word, is that there is no explanation.

Contrary to what the skeptic believes, his position is not one of cautious conservativism. The non-skeptic only has to be right about one thing; he has to believe that there are external realities of which our internal processes are installments.

The skeptic has to be right about infinitely many things, each of which is independent of all the others. Given any perception, he must be right to say of it that it comes out of nowhere.

Also, given some one perception that persists for some length of time, what is the skeptic to say about it? Is he willing to grant that the perception’s existence at t1 is causally responsible for the its existence at t2? If not, then why does he speak of *a* perception—that is, of *an* enduring

perception? And surely he must grant that mental states endure and, therefore, that a mental state’s existence at one time can be causally dispositive of its own existence at later times. But if he grants this, as he must, then he must grant that there are causal ties. And if he grants *this*, then his position, if he still holds onto it, becomes even more absurd than before.

The skeptic asks how we can know the future? ‘Given only that things have been a certain way thus far,’ says the skeptic, ‘it doesn’t follow that they will continue to be that way. We can’t know that the past is indicative of the future unless we know that the laws of nature do not change, but we can’t know that they won’t change unless we know that the future resembles the past.’

The non-skeptic does not hold that the future will resemble the past. He holds that discontinuity is harder to explain than continuity. That which is comes from nothing is anomalous. That which comes from something is not.

According to the skeptic, that which comes from nothing is no more anomalous than that which comes from something. Which is absurd.

Also, one cannot coherently deny that one’s own mind persists in time. Therefore, one cannot deny that one’s previous mental condition is responsible not only for the existence, but also for the specific character, of one’s current mental condition. And if one holds this, one cannot, without arbitrariness, deny that the existence of one’s current mental state is dispositive of the existence of later mental states, for whose character it will to some extent to be responsible.

And in granting this, one is granting that how things are *does* sometimes influence how they will be. Thus, we know that, at least sometimes, something comes from something.

At the same time, we *don’t* know that something ever comes from nothing. So to the limited extent to which the debate between the skeptic and the non-skeptic can be decided on strictly empirical grounds, the non-skeptic’s position, though weak in absolute terms, is infinitely stronger than the skeptic’s position.

But the really important question is, ‘whose position is more internally coherent?’ The answer to which, as we have seen, in more than one context, is ‘the non-skeptic’s position.’

And once this is granted, as we have also seen, the skeptic cannot hold onto his skepticism without making his position even more incoherent than before.