

MIND AND REALITY - Day 1

Tape 7 of 8 - Panel on Wisdom

TAPE START

CHRIS KELLEY

00:00.05

And I also want to thank you for keeping pace with this schedule. If you've been here since this morning, thank you. This last panel is called wisdom and its focus is ontology.

00:00.25

Today, as you know, is dedicated to theory and our first panel was basically angled toward epistemology, the second one was phenomenology and now, obviously, we're looking at ontology. And I will get out of the way now, but I want to introduce you to Paul Gailey, who is the senior science advisor to the Fetzer institute and he will be the moderator for this final panel. Thank you very much.

PAUL GAILEY

00:00.54 Thanks, Chris. So, we will begin with our target essay by Bob Thurman and Bob tells me that he is the suffering chair of the religion department here at Columbia and I suppose that means he's not yet reached Prajnaparamita.

BOB THURMAN

00:01.13 Thank you. That's enough. Thanks so much. And thank you all. Thank you especially Chris and Annabella for organizing this and the Center for the Study of Science and Religion. Bob Pollack and other people working there. And I'm really delighted, actually, to see such a great crowd on a Saturday in the city to come to Lowe Library and discuss these topics - philosophy of mind and Buddhist thought and neuroscience, whatever.

00:01.43 And I just have to say because it's related to wisdom because this all came about - this event - in this way because of the defiance of authority, which is a very good sign in relation to wisdom as defined by Buddhism. That is to say, Chris

Kelley, who is my graduate student, I strongly urged him not to organize this conference, when I first heard about it. Because he's in his phase in his graduate study, I was afraid it would take up too much time. It would slow him down.

00:02.11

And nowadays, you know, the way education is treated in our country very disrespectfully. Our graduate students are urged to rush through and get it done and get out of there and this kind of thing. Or their money and apartment is cut off, and so on. So I urged him- I thought it would be unwise that he would spend such a lot of time organizing this conference and he defied me and I'm delighted that he did. Because I think it's wonderful that he organized this conference.

00:02.35

And this is a good lead-in to the topic of religion in relation to Buddhism, because I think that wisdom in Buddhism is- and maybe wisdom is not the right word for prajnyaa - the Sanskrit word, prajnyaa. Wisdom in Buddhism is not sort of

the, this sort of resigned, beaten down resignation of the grey beard, you know, who's seen the groundhog come out of the ground so many winters and is kind of accepting the world and all its imperfections and therefore has sort of like, given up whatever it is.

00:03.09

Not at all. The symbol of wisdom in Buddhism is a beautiful female. The Prajnyaapaaramitaa, the mother of all Buddhas. I always think of her as the alma mater who sits out in front of this building. That's an incarnation of her. And Prajnyaapaaramitaa, the mother of Buddhas, like Sophia, the Gnostic goddess of wisdom in the Middle East and Eastern Mediterranean.

00:03.30

And the other symbol is Manjushri, the youth, who is an orange, 16-year-old kid, looking kind of punk because he's orange colored, carrying a sword and a book. Arrrrgggh! Like that. And challenging conventional wisdom, in fact. Very

much so. So, I'm gonna read a bit through the paragraphs of my target essay.

00:03.52

And wisdom all too often connotes either a Gnostic wisdom, type of contemplative mystic experience with the ultimate, transcendent of mundane of mundane details or worldly wisdom, secular resignation to not knowing, but accepting of a troubled world, based on age and experience.

00:04.09

The Greek philo sophia, love of wisdom, is quite like the former, though more positive and perhaps more realistic in its quest of the true, the good and the beautiful. In Indian Buddhism, Sophia emerges as Prajnyaapaaramitaa, the divine knowledge of freedom seen as the supreme feminine, mother of all Buddhas.

00:04.27

In Indic languages, prajna can mean something like a super-knowing of reality, both relative and ultimate. From the earliest times, Buddhist thinkers distinguished between relative,

paratantra, or superficial, samvrti, reality and absolute or ultimate paramaatha, or deep, gambhira, and profound, samvrta, reality.

00:04.49

The former are realities which seem to be there on first glance, but when investigated dissolve under analysis, though they may reappear when one retreats from analytic investigation. The latter are realities which truly exist just as they appear, not dissolving under analysis, being actual. It turns out, of course, that the only reality that qualifies as the latter, that is as ultimate profound and so-forth, is voidness, shunyata, and absolute or exclusion negation, also referred to by all its many synonyms.

00:05.21

One delightful corollary of this two reality theory, often referred to as the two truth theory, is that the two correspond to samsara and nirvana - the worlds of suffering and bliss, respectfully. The former produced by misknowing and so being relatively unreal and the latter

discovered by superknowing, and so at least relatively more real.

00:05.45

This may be why the Buddha had a dazzling smile. The super-knowing of actual reality is the only way to achieve freedom - there was a question about liberation - to achieve freedom from suffering, according to the Buddhists, as its opposite, misknowing, ignorance or delusion is the cause of the endless suffering of the egocentric life cycle.

00:06.06

As the Indian Buddhist Shantideva said, in the ninth chapter of his great masterpiece of the Buddhist teachings - a synthesis of the Buddhist teaching - he said all of the Buddha's teaching is nothing but a preparation for the attainment of super-knowing wisdom. Since it is only super-knowing wisdom that causes freedom from suffering, renunciation, ethics, compassion, meditation - all these are important and necessary to complement the central path.

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But only super-knowing of reality leads to freedom. So this, I think, is really a very important thing and why. Well, ok, I'll just read. The Buddha became so famous and founded such a powerful movement because he discovered, or thought he did - of course, it's very possible he was wrong - that the human mind was capable of super-knowing. I.e., overcoming misknowledge, misperception and unrealistic beliefs and rationally and experientially coming to know accurately the true nature of relative and ultimate realities.

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He saw this movement toward liberation and freedom, from misknowledge to knowledge to super-knowledge, as an educational shiksha process. That which he could open up for other human beings, at least human beings, and eventually all beings, so they also could find out what was real and also, also escape suffering.

00:07.26

The Buddha's four noble truths were a challenge to humans to rise from their confusion and misery, not a religious credo or dogma or anything of the sort, but a diagnosis of the unenlightened human illness and a proscription for help.

00:07.42

A key point I would make there is that in saying, as I do in this essay, one of my main gist points - as I only have an half an hour - one of my main gist points is that Buddhism is more science than religion. I don't mean to say it's not religion, of course you can't say that and it's, you know, we study here it at Columbia in the religion department.

00:08.07

They don't study it in the philosophy department, although they should. But our culture hasn't caught up to that yet. But we study in the religion department because that's how it's classified, but actually it's more science and they naturally don't study it in the natural

science department. Unless they can catch a yogi, and attach some mechanical objects to his brain, or whatever.

00:08.29

I think you're the likely candidate, Timbala (ph). And so, it's, you know, it has to be acknowledged that it has a religious element, of course. But it is more science than religion. The reason being that the Buddha's main teaching is that when you know your reality, and you know, corollary to that is that he judged human beings capable of knowing reality, understanding it fully.

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But only when you fully understand reality will you be free of suffering, which is the goal. In other words, the path to salvation is not belief in something, it's not the activity of a savior, it is your own understanding. That's the only way out of suffering. And if science- I mean, people say many things - it's a community of this and

that there's all kinds of different definitions of that, too. Whatever we mean by it.

00:09.19

But, basically, the idea that by understanding better reality, we can ameliorate life. We can ameliorate human life. I think that's the fundamental drive within science, also. Although I think science has a much less preposterous aim, in that Western science, at least, is based on the idea that we cannot know reality fully.

00:09.41

And, you know, you have the whole idea, like the whole Socratic idea of where he's supposed to be the wisest man in Greece and then he goes around saying he doesn't know anything. You know, and then the more you know, the more you study, the more you know you don't know type of idea. That's the accumulation of knowledge in science. And therefore, it's based- any scientist who said, like the Buddha did - Eureka. I'm translating. Or, wow, you could say.

00:10.06

Buddha said under the tree - I have discovered a reality like an elixir. Profound, calm, untroubled, luminous and uncreated. Whomever I instruct in it, they will not understand. Better to stay alone in the forest without speaking. The last sentence is just being coy. He, of course, did come out. He spoke interminably.

00:10.29

But the first sentence is the key. Upon attainment he said he had discovered a reality like an elixir. The elixir of immortality. And then he gave it all those epithets, you know. So, a scientist who would say, oh, after this experiment I have the grand unified theory. I understand the reality totally. All of you guys would give him a tranquilizer, would be like Prozac, you know, give him a leave. An extra sabbatical. Take a break, write a poem, whatever.

00:10.57

No way would such a person be accepted as sane. So, we have to realize that the Buddha's tradition is founded in this tradition that which

expresses a belief, if you will, or a judgment about the human brain really and the human mind, or whatever it is, mind or brain, that it is capable of understanding its universe. And that only through that understanding is there liberation from suffering.

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And that is why Shantideva says that all of the whole- everything he's written heretofore, everything in the Buddhist teaching about every other subject is all for the purpose of helping people to develop wisdom, which is that which releases them from suffering. So these are the words of a scientist- you know, these would not be the words of a scientist alone in his lab-

00:11.46

-whose insight into reality's deep nature took his breath away and his delight knows no bounds, but his enthusiasm is tempered by an awareness of how difficult it would be to explain to anyone else. And neither are they the words of a prophet

inspired by divine revelation with a holy mission.

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Thus, the Buddhist tradition is - this is my argument - is more science than religion, as usually defined today as an organized form of subjective, non-rational, in principle, faith in various unprovable things. It is more- That's the definition of religion. I think- if science becomes dogmatic, I think it also may be subject to that definition.

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It is more a process of education than an adoption of a credo or the joining of an institution. The teaching in practice- You know there's two types of dharma - one is called agama dharma, textual, and one is called practice dharma, adhigama dharma, or understanding dharma. Consists of the three higher educations, the most important of which is the super-knowing higher education.

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Only that wisdom - I already said- Corrective learning is the primary method. Critical reflection is the indispensable second step to deepen what is learned. And concentrated meditation the essential third step to bring the critical insight to the level of transformative experience. Corrective learning means study of the great treatises of previous, possibly enlightened beings and taking up the challenge of reexamining one's own world view in the light of the critiques put forward in those treatises.

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Critical reflection means engaging in the rational, experiential struggle between one's personal persistent habitual views and those advanced by the Buddha and his successors, often aided by a regime of formal debate, which Sanjisantrup (ph) here, Geshey Dreyfus is an expert at. Although you should have taken off your jacket.

00:13.29

And those advanced by the Buddha and his successors. Often aided- within which we cause- since inferential investigation within one's own mind operates on the same patterns as inferential argument with others and public engagement and exposure of the ego intensifies the level of emotional investment immeasurably and therefore, to develop very powerful internal critical meditation, you know, vipassana - which seeing through type of meditation - which will break you free from all irrational beliefs.

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You need to debate with other people first to sort of warm up and that's why debate is such an important part of the Buddhist educational curriculum. The sound, as my friend Georges wrote in the wonderful book, the sound of two hands clapping. Concentrated meditation naturally follows intense critical reflection since the points of doubt to the web of perplexities become so existentially gripping that sustained single-

pointed focus on those points becomes a natural preoccupation.

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So, the three types of super-knowing wisdom emerge from these three levels of development - learning, critical reflection and meditation. The important point being that the intellectual and experiential are not contradictory, ultimately, but are connected along a range of understandings.

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Then the four noble truths are an experimental program. Here truth- The word truth is more propositional than ontological. Calling them noble was the Buddha's way of acknowledging that they are not true for an ordinary being who doesn't suffer all the time. Who doesn't think there is or needs to be a final freedom from suffering.

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A noble here is not a person of higher social class, but rather, someone of a higher cognitive

class who has transcended egocentrism at most levels and so perceives things from others' points of views as equal to his or her own. The first truth- Well, I want to just say this. Let's unpack a little further the scientific side, the scientific claim.

00:15.23

There's another level at which Buddhism and science if, you know, Bob Van Gulick said, very wonderfully I thought, and rightly that the physicalism tempered by non-reductive in a historical way that he explained very helpfully is a hypothesis. It is not presented as an absolute law, technically.

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Although, I think, actually, many scientists do cling to it as a dogma, like very strongly and many philosophers of science. Like Dennett, for example, who I recently had a little discussion with. He- I think these people feel it's really- it's an absolute necessity. And there, of course, they have a reason and I sympathize with that

reason, absolutely, because, you know, just as you said that non-reductive was to temper the imperialism of the unity of science type of approach, you know, coming from the 19th century...

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So, physicalism is introduced to temper the imperialism of the church in Western history because all of the scientists really do not really feature being burned at the stake. And once you have these invisible properties and things coming in, it's not only dark forces, it's also the force of authority. You know, controlling people's souls, so to speak, and feeling what's good for them, you know- It's for your own good as they burn you at the stake, you know.

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I think- I don't know why, but you know, anticipation of hell maybe gets you to heaven. I don't think so. They don't- They're just introducing you to hell a little earlier, I think. But the point is that has a history, too.

But nowadays maybe it could be released as a dogma. Released, at least, in order to stick true to the idea of science that everything is hypothetical. It should be released and criticized when encountered as a dogma - the dogma of materialism.

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As in a writer such as E.O. Wilson, someone like that. But the point is that Buddhism also is non-dogmatic because of shunyata. It's a strange - there's all these strange paradoxes in Buddha's teaching, as I think, in life. Although the Buddha said, "Eureka, I understand everything and it makes me happy," he also said it won't do you any good to believe that. I'm not asking you to believe that. I do. I want you to criticize and examine and doubt everything and you'll come to your own understanding. That's all.

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And if you begin to use the methods that I suggest to you and you find in those educational methods that you come to an understanding then

you say, well, maybe Buddha did understand something. But just to believe that I understand it is useless. And so it's this ironic thing that the direct experience of reality is what makes one a Buddha, enlightened and free from suffering.

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But that direct experience is the experience of what they call shunyata, which doesn't mean nothingness. But means a contact with reality that is elusive to verbal formulations. That is elusive to encapsulation in dogmas, theories, even hypotheses. And that, however, does not shut off investigation with words and mathematics and whatever tools of mental and physical tools of investigation you might have, but actually opens it up.

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It simply is like the grand disclaimer ahead of time. Anything we elaborate will be a relative, will be useful in a context and we can always improve our elaborations and our theories and our

ways of approaching and our machineries of measuring, but there will never be one, final sentence, verb, mathematical formula, grand unified theory, the one on one, perfect language fitting with the elements of reality that will control it. Intellectually that will never happen type of thing.

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So, in that sense, all descriptions in Buddhist- They have a statement that all descriptions of relative reality, differentiated reality are hypothetical. They are interpretable is the Buddhist hermeneutical expression. Only the statement that reality is void, in the sense of totally relational and devoid of any absolute capture by any intellect or by any theory or by any verbalization - that only, that negational theory, which opens the door to endless exploration of the relative world. And in a way validates the reality and the importance of the relative world.

00:19.28 Voidness, far from making the relative worlds inconsequential, in a way it is a teaching of new escape because you can't get into voidness. Like you can't become nothing. You can only deal with the relative with absolute concern and compassion. That's the dictate. And therefore, compassion dictates that you become a scientist and try to use reality, shift reality for human and benefit and benefit of all life.

00:19.55 Because there's no other place to go. It's like, you know, everyone here would stay awake forever if necessary, if we really believed that we could never leave. There's no going home. No escape. We have to work it out. Our dialogue has to finish in everyone understanding everything or we never leave.

00:20.15 So, then no one would sleep. No one would leave. So, the first truth of the four truths is the diagnostic observation that the ego-centered, ignorance-dominated life is inevitably

frustrating and unsatisfying, hence suffering.
Let us emphasize that this is not all life, but
only that dominated by misknowledge, or
ignorance, or wrong-knowing.

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And how does that come to be the case leads to
the second truth - truth for noble, not for
ordinary person, not for a self-centered person.
Second truth is the etiology, the causal
analysis, how it happens. And how does suffering
cause, how is it caused by ignorance. As the
misperception of reality, delusion, especially
the delusion about the absoluteness of self or
intrinsic essence in persons and things.

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And here, it's very simple. Actually Dharmakirti,
you know, Georges's friend Dharmakirti had a
great statement here he made, which I can't
remember the Tibetan or the Sanskrit, but I only
remember the Shivatski (ph) - all successful
human action is preceded by accurate knowledge.

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We all know that if we know which is east, west, north, south, we can get to wherever we're going. We have to have realistic precise knowledge to do something effective in the world. Practical. And if we don't know where we are, we will not get where we want to be. And therefore, if we don't know where we are cosmically, if we're deluded about what we are and what the world is, we're not gonna have a happy life.

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And what is that delusion? It's really very simple, not mysterious. Everyone here in this room now knows that they are here. And that would be alright, actually, that's not really delusion. You all are here. But everyone thinks that they're the main person here. Secretly.

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You keep it quiet because you know that nobody else agrees with you. And you know on top of that, they have the temerity to think that they're the main one here. And, of course, you know that they're deluded. So there we all are,

each one of us here, and everyone else disagrees and also life and death disagree in the whole universe.

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And therefore, we constantly lose our struggle to sort of prove what we really feel, which is that we're the most important. We're the most real. This is based on the idea that we're the most real. You know, like *de cogito* is a form of that of Descartes. And everyone has this subliminal feeling - one thing I can't deny is that I'm really.

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And that's what ignorance is. Precisely that. And so, Buddhism agrees with science, too, that we are all delusional. You know, what we think we're doing here, what we think we are here is a delusion, right? It's a bunch of molecules and atoms and actually, you guys can get into molecules too much, you biologists. Subatomically, you don't even know what a

molecule is. It's all dissolved under analysis already.

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In Copenhagen, they before a good Tuborg beer that they couldn't say anything about deep nature of reality. It dissolved under analysis in 1926. And so, so, the point is we're all delusional is the point. And science wants to get us out of this delusion by discovering, dealing with the physical things. Because they don't want to get controlled by the church. And I agree with them.

00:23.22

And we see the church is coming back, by the way. And so, we still agree with them strongly. And the Buddhists are trying to use their, to sharpen their equipment of their knowledge and their brain, as encouraged by the Buddha, to develop their wisdom to directly understand, to experiential, finally. First intellectual, rational, discursive and then finally, experiential knowledge of the nature of the world.

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And that will- On the idea, on the hope that that will improve their ability to deal with the world. And they'll be able to deal with it non-egocentrically. They'll realize that they're only a relational being, in relation to all the other beings and not the absolute being. And this will get them out of the problem of always being overwhelmed by the world, which is what otherwise will happen to them.

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The fourth truth is the- therapeutic falls into it. That's that one. Now, because I only have a couple of seconds and I wouldn't want to- so I'll skip a bunch of stuff about praasangikas and many things. The last thing- because I want to challenge the Buddhists and I want to say that in this light - and this relates, actually, to what was happening toward the end of the last session.

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So I want to just say this - that dualism, mind-body dualism, is a sort of sacred thing in the

Buddhist description of the world, more or less on a sort of popular level. Because they don't want to give up the idea of the effects of moral action. The negative effects of bad action and the positive effects of good action.

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And they feel if people get off into the void or something, they're gonna start behaving badly and they behave badly anyway, but give them a bigger excuse and they'll behave much more badly. And so the Buddhists are very strict about it. And sort of they want to say the mind cannot be reduced. They follow along with the Hindus, like my colleague here with his enduring self.

00:25.04

Thank goodness you have one, Stephen. I'm gonna study with you, see if I can find one. I've lost mine. And I'm told, by my family. And colleagues, I think, sometimes. And, but my point is that therefore the fact that mind cannot be reduced to matter is sort of a fairly sacred thing on that level.

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However, remember all statements about relative reality, of which mind and matter and action and good and evil - all of these are relative reality - are interpretable. That is to say valid within a certain context. And there are areas of Buddhist science slash philosophy where matter is reduced to mind.

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I think William's talk touched on that - what he calls the Yogacharya or Vinyanavata (ph) Buddhist idealism, form of Buddhist philosophy slash science. And there are areas, though less well-known in the esoteric teachings of tantra, where matter- mind is reduced to matter. You have like extremely subtle mind, extremely subtle matter and at the level of extremely subtle mind and matter are said to be indivisible and inseparable.

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And even Antuktala (ph) can't deny it. I remember one time we were talking - you were with His

Holiness and I said something like that and you and His Holiness were digging each other in the elbow and His Holiness said you're a naughty nihilist. Don't be a nihilist, don't be materialist in other words, he was saying to me. You, too, were giggling. I remember that.

00:26.28

But the point is that the Buddhists don't have to hang on to this non-material mind. Because all you have, what we have to do to have a really good dialogue with those who are stuck in the physicalism thing or not too dogmatically, but still they feel that they'll be arrested or something if they drop it.

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The point is there's levels of extreme subtlety that are not yet explored and they can be open to that. Even Daniel Dennett the other day, I said to him- Because he was immediately saying about, you know, rebirth and all that crazy stuff, you know. The minute you would say there's a mind, you know.

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I said, well do you admit that there could be a level of physical subtlety that we don't yet have any idea about. And there may be no way of getting at it except by the brain, operated by the person who has the brain. Not even machines, or maybe later machines there will be. And he said, yes, I'll admit to that, you know. He said, I can admit to that, he said.

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And I said, well then you can then say that at that level, there's a Daniel Dennett that did not yet dissolve under analysis and will be, of course, just as half-baked as the Daniel Dennett walking around solidly, but would maybe take rebirth as a turtle if you don't watch out. And he said, no, I can be moral. I'm not gonna reborn and all this.

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I can be moral. He went off into the moral argument about why rebirth was not necessary. But I was very happy because I noticed he's thinking

about that. Because I surrendered the idea that we have to have a non-material transcendental thing that they have to accept, but it doesn't exist in their mind. And so then, we're just like any, like, neo-creationist fundamentalist.

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In a way, they are right to say, oh, we have to have- we dogmatically have to have a mental, non-physical thing. We do not. Ultimately, it's sunyata (ph). All descriptive systems are different ways of operating around relativistically within delusion. We are not dogmatically attached to any description of- whatsoever. And in order- that's the true scientific aspect of Buddhism and I'm sure the time is up. Thank you very much.

APPLAUSE

BOB THURMAN

00:28.29

That's my challenge to you guys.

PAUL GAILEY

00:28.31 That was great. The first response will be from Teed Rockwell, who is Professor of Philosophy at Sonoma State University.

TEED ROCKWELL

00:28.41 I'm gonna use this lectern over here.

PAUL GAILEY

Please do.

TEED ROCKWELL

00:28.46 So, I enjoyed Dr. Thurman's inspired improvisation on his original paper and particularly because he did a lot of variations in the area of his paper which interested me the most, which was the relationship between the Western idea of science and the idea of Buddhism as a science.

00:29.05 Now, as Alan Wallace has pointed out, both the concepts of science and the concept of religion

are Western prototypes. Neither of which fit Buddhism very well. It's kind of suspended between both of those prototypes. I mean there are examples of Western science, which do resemble Buddhist practice in certain ways.

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Descartes's Cartesian meditations look an awful lot like Buddhist practices. They both involved careful, disciplined introspection, which eventually leads to truths which are not immediately obvious to common sense. Now, a lot of people think that Descartes says, oh, you can't be mistaken about what's going on in your mind. But that's actually not what Descartes said.

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He said you can't be mistaken if you have a clear and distinct idea of what's on in your mind and that takes a lot of practice to develop a clear and distinct idea, a clear and distinct awareness of your own mental states. That's why babies can't do calculus. Basically, even if we assume

that the truths of mathematics are directly given to us, it still takes mental discipline to have a clear and distinct awareness of those truths.

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However, that was a couple hundred years ago and modern, post-Newtonian science is highly critical of introspection, partly because of the really spectacular failure of introspection psychology of Wundt and Titchener on the early 20th century. So now, the main difference between Buddhist practice and modern physical science seems to be that the former relies almost exclusively on introspection and the latter forbids it.

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Now, we imagine the empirical science - several people in lab coats are all looking into the test tube and they're all seeing the same thing. But we can't have a bunch of meditators standing around looking at the same mental state. They're all looking at their own individual mental states.

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So, how can we get around this? You know, looks like an irreconcilable difference between this kind of practice and Western science. Well, some people think we ought to construct something that philosopher David Chalmers calls a first person science. And that Buddhist practices, maybe, could be a part of such a science.

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And then the other major contender is one that Dan Dennett calls heterophenomenology, which I think you know, for this purpose is probably just described as a third person science. And that basically means that you teach the reports, the textual reports that somebody makes of their mental states and any other aspect that's third person accessible to people about their mental states.

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It could be brain scans, it could be x-rays. Anything like that and that's gonna be the subject of your science, not the actual introspected states themselves. So that seems to

leave meditation out. Now, even if first person science is a coherent possibility, which I don't necessarily grant, it would not be compatible with Buddhist practice.

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If our mental states are completely undetectable by any sort of third person science, this would mean that they had no impact on our behavior whatsoever. They would be, to use a philosopher's technical term, epiphenomenal. And Chalmers is very upfront about that. He says that what he calls qualia are epiphenomenal.

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As Stephen Phillips pointed out in one of his papers that was on the site for this conference, Buddhists must believe that our mental states have an impact on our behavior. We meditate so that we can become more skillful, more compassionate, have more equanimity. Such qualities might be hard to define in strict scientific or quantitative terms, but they're certainly detectable.

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This is why teachers of meditation can tell whether their students are making progress even though they can't actually experience the students' mental states. Nevertheless, there are also important differences between Buddhist practice and third person science. Something like third person science may be necessary for Buddhist practice, but it's not sufficient.

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This is partly because science itself has different goals from Buddhist practice, even though its methods can be used to help Buddhist practice. What science can do is help generate textual reports about mental states and other kinds of artifacts, like those reports, that help us along the path of enlightenment. But the states of mind themselves, including the enlightened states, are in a certain sense outside of science's domain.

00:33.11

We can acknowledge that the states of mind which are the goal of Buddhist practice are real, while also acknowledging that they are in their very nature not accessible to scientific study. But this does not require us to accept dualism. Really it doesn't. Bear with me here.

00:33.25

Now let's suppose that an eminent surgeon has broken her leg in a skiing accident and she's sitting in a hospital bed, looking at a live x-ray projection of the fracture and she's discussing it with several of her colleagues who are all sitting around the bed. So she's giving verbal reports about where she feels the pain in her leg and she's making speculations about where the fracture might be.

00:33.44

Now some of her colleagues are a little bit more skillful at reading x-rays and they point out to her that she's wrong. The fracture's actually elsewhere. And she's puzzled by this, so she calls in some colleagues from the neuroscience

department who scan her brain with their
cerebroscopes. This is 25th century neuroscience.

00:34.01

And they discover that even within this thorough
knowledge anatomy, even though she had this
really thorough knowledge of anatomy she actually
misinterpreted her own physical experience and
they can say, here, this is why it happened. It's
right here in the brain and that's why she had
the misinterpretation.

00:34.14

So the whole thing, you know, the appearance, the
reality of the experience - it's all available to
third person and, you know, to everybody in the
room. Not just the person with the broken leg.
Now let's go into the realm of a thought
experiment and posit that she's made complete
verbal reports of everything she's experienced.
And her colleagues have heard and understood them
all.

00:34.33

And they've also scanned the x-ray and the cerebroscope and have thus learned everything going on inside her body that was responsible for her mental state that was not available through the verbal reports. Now, are the colleagues having the same experience as the person who actually broke her leg. No, because her leg hurts.

00:34.50

The experience of hearing reports and looking at x-rays and cerebroscope read-outs is not the same as the experience of having your leg hurt. And more importantly, this difference is not being bridged by the addition of more reports and x-rays. The experience of hearing 500 reports about pain does not come one whit closer to being like feeling the pain anymore than only hearing 50 such reports. You're not even traveling in the right direction.

00:35.14

So don't tell me, well in principle, we'll get there. Not if you're going in the wrong direction

you won't. Now, does this mean we have to accept a dualism between the mental and the physical? I don't think so. It just means that there's a difference between having a mental state and acquiring scientific knowledge about that state. And that's just the way it should be.

00:35.31

What would be the point of having all those other doctors writhing around in pain next to the patient? The purpose of Western science is not to create a particular kind of subjective state. It's goal is to create a complex, socially-constructed artifact and that artifact serves a variety of purposes. That's why the archetype of the mad scientist alone in his lab is not an accurate portrayal of the way science actually works.

00:35.54

A scientist whose work was not firmly embedded in a disciplinary matrix of some sort would be mad. Or at least a crackpot. And there are such people and you can find a lot of a lot easier these days

on the Web. But even though some of these crackpots are quite intelligent, the thing that stops them from being genuine scientists is their unwillingness to play a part in the social construction of this artifact we call science.

00:36.17

This artifact is made of many things - laboratories, which in turn make possible scientific papers, which become the basis for abstract concepts, which are communicated by a combination of verbal reports and mathematical equations. The one thing that will not be part of that artifact are the biological states that enable an individual human to make use of that artifact.

00:36.37

A knowledge artifact has to refer to things at a reasonably high level of generality in order to be useful to large numbers of people. There's simply no market for a science of the particular mental states of Ned or Georges. Ned Block once talked, one time in a paper - I don't know if he

ever actually wrote this up - but about Ned Now psychology. You know, so the idea that you could have a psychology of Ned.

00:36.59

Yeah, you could maybe do that, but there wouldn't be much market for that. Maybe Ned would be interested. But there's never gonna be- there may be a market for it, but there's never gonna be a science that completely comprehends exactly what I am feeling right now because that idea doesn't make any sense.

00:37.15

So this may be like a criticism of your idea, Ned, of subjective concepts. I don't think that idea makes any sense. What knowledge artifacts do is relate what we are experiencing now to things that we have experienced or will experience. And in order for that process to take place, there's gotta be two separate elements.

00:37.32

There's the something particular that's going on right now and then there's this abstract concept

that relates it to all the other stuff. And that's why there'd never be a first person science any more than there could be a science of this lectern. That doesn't- That idea just doesn't make any sense. The knowledge artifact thus presupposes that there is a distinction between itself and what is being experienced right now, just as a hammer presupposes the existence of a nail.

00:37.56

Together, they perform this function of making science possible. And this, I believe, is all that there is to the explanatory gap that worries Chalmers so much. It's the old philosophical problem of the relationship between universals and particulars reappearing in the context of philosophy of mind debates.

00:38.13

Knowledge of particulars is only acquired by applying universals to them and our private experience is the most fundamental particular of all. The gap between universal and particular

will never be closed because it's what makes possible- what makes knowledge both possible and needed. Now those who construct the knowledge artifact we call science and pay others to construct it for them get many benefits from them.

00:38.35

We get useful machinery, we get cures for diseases, and we also get a very hard to classify entity called knowledge. But knowledge is not a substance we possess, like gold. It's not an activity, like dancing or eating. Nevertheless, if you spend enough time interacting with some aspect of this artifact we call science, you'll become knowledgeable. But what does that mean, exactly?

00:38.58

Now being knowledgeable, or being wise, possessing wisdom - I want to hook this all up here - unlike science itself is not a public artifact. It's something completely subjective, but in a very unmythical way. It's subjective in

that it's the private property of the person who possesses the skill the way one's hands or brains are private property.

00:39.20

It's as Heidegger says, in each case, mine. It's a character trait, a kind of skill, a knowing how, rather than a knowing that. This character trait can be acquired by studying science, among other ways. That is one of the reasons science is so highly valued. If you study with a physicist and learn how to do physics equations and physics experiments, you'll become knowledgeable about physics.

00:39.41

But your ability to do physics is not physics itself. Some people have thought so. It's often assumed that the public artifact called physics is a set of publicly shared facts and they can be emptied into a student's head one at a time or they're a stamp that can be impressed upon our brains without altering itself. And this assumption makes it possible to ignore the

difference between the public artifact called science and my private knowledge of science.

00:40.05

But possessing skills and abilities is not the same thing as being able to recite facts to a teacher. The facts are public in a very important sense and in that same sense, the abilities and skills are private. The latter are private because they require the ability to recognize certain perceptual mental states and to know how to respond appropriately with those perceptual mental states.

00:40.26

Now philosophers often point out that no one can explain to a blind person exactly what a color looks like. But this is not just a single, annoying counterexample of the idea that all knowledge is public. Every skillful activity requires the ability to make complex, unverbizable sensory distinctions that are unique to that skill and then make the appropriate response. Sometimes, the required

response is a verbal report. As when an interior decorator can identify and sort scarlet and crimson where the rest of us can only see red.

00:40.56

Sometimes, the required response is a complex piece of motor behavior, such as a parry in response to a sword thrust or a melodic solo in response to a chord change. But in each of these cases, there is no way that the public artifact called science can fully capture what needs to be known. The ability to respond to sensory experience is, as Michael Polanyi once said, a form of tacit knowing. Something we know, but cannot tell.

00:41.22

These sensory experiences are thus in many ways like Chalmers's qualia, but I think they're more accurately described by Owen Flanagan's concept of qualia. They're not epiphenomenal and thus we don't need a first person science to study them. They have real impact on the behavior of the

people who possess them and we can see that impact in the third person, objective world.

00:41.41

As St. Paul said, by their fruits you shall know them. But being able to detect that other people have those qualia is not the same thing as possessing those qualia yourself. I can tell from watching Michael Jordan play basketball that he has an extraordinary awareness of visual and kinesthetic qualia, but that does not mean that I am aware of those qualia myself.

00:42.01

That is one reason why he can play basketball and I can't. Being able to do science also requires the ability to make complex qualitative distinctions. Skilled laboratory technicians and scientists can see patterns in oscilloscopes and cloud chambers that the rest of us cannot see. And their ability to have these kind of perceptions provides the foundation for all scientific research in some sense of foundation.

00:42.25

There was one fairly dramatic case recently that showed how deeply the objective patterns of science are dependent on the subjective patterns of scientific practitioners. A court ruled recently that fingerprints were not acceptable scientific evidence because the only criteria that determined whether two fingerprints were identical was the judgment of an expert or experts.

00:42.45

In other words, if enough fingerprint experts said, yep, that's Jones's fingerprint alright, it was declared to be Jones's fingerprint. There was no other test that could check this expert decision. Consequently, the judge said that this criterion was totally subjective and therefore not scientific. Now the judge's ruling shows that our common sense understanding of science often underestimates its dependence on purely subjective experiences.

00:43.09

I think we'd have to say that, you know, even if this is true that this is the only way you could tell two fingerprints apart, this doesn't mean that these guys were just being completely arbitrary. I mean, we know what it's like to have these direct perceptions, just as you and I can tell what red looks like, they could have that expert ability.

00:43.28

And I think probably they do have that expert ability to be able to see that this fingerprint is like that fingerprint, even though the rest of us can't and even if they can't explain to anybody else how they do it. These subjective experiences that support pattern recognition skills can be studied using hard-core scientific methods like brain scans or whatever, but there's still a difference between knowing that the human brain needs to go through certain processes to perform skillfully and knowing how to actually make your brain go through those processes.

00:43.56

That's why there is a difference between learning these facts and developing the necessary skills. In other professions, more conscious attention is paid to developing the states of mind necessary to make these subtle distinctions in perceptual awareness at exactly the right time. Athletic coaches and music teachers, for example, will often speak in language which seems offensively mystical to devout materialists. You know, use the force - this kind of thing.

00:44.24

Thanks to the multicultural communication of the last few years, almost every skilled activity has a coaching book called "The Zen of X" or "The Inner Game of Y." And these books are inspired by the teachings of the great meditation masters of the Asian traditions. I'm hearing from Georges over here - apparently not by the book so much - but I think they were probably inspired by the, you know, the one on one verbal communications that were done to make. It's not surprising these things wouldn't be written down because they

would need to be adjusted to the individual so much more.

00:44.54

Now the goal of all of these kind of reports is fundamentally different from the science tech book. They're not designed to transmit information or facts, but to teach you how to recognize and respond to inner states which could never be fully captured by their texts. This text can only point to private states of consciousness and must rely on metaphorical language to evoke and classify experiences that are strictly speaking, indescribable.

00:45.17

Consequently, even the very best textual guides to cultivating enlightened states of consciousness cannot be evaluated with the standard used to judge physics experiments or even logical debates. A biological knowledge of one's subjective states is not necessary for the development of the skills that rely on those subjective states.

00:45.36

That's why Buddhist monks can reach extraordinary states of consciousness without knowing any neuroscience and why Michael Jordan can develop extraordinary muscular skills without studying anatomy. However, that doesn't mean that scientific knowledge about subjective states couldn't be helpful for skill acquisition, including the skills of cultivating enlightened states of consciousness.

00:45.56

Now, Evan Thompson talked about some of those earlier and talked about, you know, how he's been working with people that combine cognitive science, phenomenological philosophy and contemplative mental training. Joe Lazio (ph) talks about how meditational practice can be related to the Western practices of psychiatry and psychotherapy.

00:46.14

But in order for this interaction to work, it's important to recognize the differences between

changing consciousness and increasing scientific knowledge. Increasing scientific knowledge is definitely a worthwhile activity. Building this artifact is a worthwhile activity. I'm sure it benefits sentient beings. But appropriating and applying that third person knowledge so that it transforms your private experience in the here and now is perhaps that process that transforms knowledge into wisdom. Thank you.

APPLAUSE

PAUL GAILEY

00:46.51

The next presentation will be by Gary Tubb, a professor of religion here at Columbia.

GARY TUBB

00:47.08

Thank you. I'm always happy to have Bob Thurman as a target. But because, as you've heard, he's currently the chair of my department and salary reviews might be coming up, I'd like to add what a great honor it is to have the opportunity to

respond to him because he is so responsible and generous and wise.

00:47.35

Even so, I'd like to disagree with the first thing he said. I'm not sure that the rejection of authority is the highest form of wisdom. Sometimes the reverse is wisdom as well, because before Bob advised Chris not to organize a conference, I had suggested to Chris that he think about putting one together.

00:48.01

I'd like to comment on a couple of topics that came up in Bob's essay and in Teed Rockwell's response to it. From the point of view of how those topics are treated in the Sanskrit texts of the Advaita Vedanta tradition and in the Upanishadic scriptures that they look to.

00:48.22

And I'm simply going to offer, not insight, but questions because I'm not an expert on philosophy or on wisdom. I'm simply a teacher of Sanskrit. And in that status I find myself interested in

the focus in both of these papers on systems of education.

00:48.44

Or of training. And by a convenient coincidence some of the points that come up at the beginning of Bob Thurman's paper are ideas that as far as I know were first recorded in India in the texts that we happen to be reading this semester in my course of intermediate Sanskrit. And that's the Brihadaranyaka Upanishad. So I wanted to say a little about that and about the stories in that that talk about the teaching of the sage Yajnavalkya.

00:49.16

And there are many points of similarity. The importance of super-knowing of ultimate reality, for example. Or the necessity of describing ultimate reality in negative terms, which Yajnavalkya expresses with famous conciseness in his phrase, "neti, neti."

00:49.37 But the thing that I'd really like to focus on is the scheme that Bob outlined of three stages of education, which he listed as first, corrective learning, second, critical reflection, and third, concentrated meditation.

00:49.57 These three stages come up in the Brihadaranyaka Upanishad in the story of Yajnavalkya's discussion with his learned wife, Maitreyi, where in the course of talking about the pure awareness that the Upanishad refers to as the self, he says to his wife that the self is the thing that one must learn to see.

00:50.18 Bhatmava redresh daviha (ph), which later tradition takes to mean that the self is the thing that must be directly experienced. And as Bob said, it's in this third stage of concentrated awareness that- I mean of concentrated meditation that that direct experience takes place.

00:50.41

But Yajnavalkya, immediately after saying this, then lists the three stages that are necessary to lead up to that and they're the same three that Bob talked about. He says the self must be heard about, it must be thought about and it must be meditated on. Srotovyo (ph)... [phrase continues]. And these same three things show up in the scheme that Bob talked about.

00:51.05

The same three are developed in later Duaday-Vedanta (ph) in a formal way and they continue in both the Buddhist and Hindu side, down to the present day as we saw this morning in Owen Flanagan's slide quoting His Holiness, the Dalai Lama, as referring to these same three sources of information in the same order.

00:51.23

That is - scripture, reasoning, and experience. As it happens in the intermediate Sanskrit class, we're also looking from time to time at the commentary on the texts. The oldest surviving commentary, which is by the Advaita Vedanta

writer, Sankara, and in another of his works - actually the only independent work that we have from him, which is entitled, "A Thousand Teachings" - in the prose portion of that work, he uses this three-stage scheme to lay out a model program for the enlightenment of a student.

00:51.59

It consists of three chapters that deal with the same three techniques. The first chapter gives examples of the teacher quoting scripture to the student. The second chapter is a debate or a discussion between the student and the teacher using reasoning to deal with the obstacles to the acceptance of the text and to other sorts of obstacles.

00:52.24

And then in the third chapter, the teacher is no longer there. The student engages in deep meditation on the same, you know, bits of knowledge. And I'd like to say something briefly about these three stages, and particularly the first stage, as they might relate to Bob's

contention that the Buddhist search for enlightenment is basically a scientific enterprise.

00:52.53

I like very much what Teed Rockwell had to say about this and especially the remarks that he made on the difference between knowing how and knowing that. But I think that in both papers there are further problems to be investigated where the first of these stages is involved.

00:53.17

That is the teaching of scripture. Which is a problem even on the Buddhist side. It's not one that Teed Rockwell talked about very much. He did talk about schemes of education and you'll notice he didn't talk about a basketball player who, by himself, learns to play basketball or a musician who by herself learns to play a musical instrument. He talked about an athletic coach and about a music teacher.

00:53.50

And I think what he said about the difference- about how you don't need to know that in order to learn how makes sense, for example, if we're talking about- if we're talking about the search for enlightenment, it may make sense where neuroscience is concerned, but if we judge from the evidence of actual Buddhist practice over the centuries and actual Hindu practice over the centuries, something about the use of scripture seems to be immensely important because they use an immense amount of scripture.

00:54.22

And in fact, the Buddhists despite the various ways in which they seek to devalue the reliance on scripture have transmitted a corpus of scripture which is considerably larger and considerably wordier than the Brahmanical vedic scriptures.

00:54.42

Even so, it's on the Brahmanic vedantic side that the problems in reliance on scripture seem to be most serious because in many ways the practice

that Bob Thurman derides of clinging to slogans is a pretty good description of what Advaita Vedanta, like Sankara, insist on.

00:55.03

Because for him, the most important necessary means to enlightenment is a reliance on what he calls the great statements. The mahavakya of the Upanishads, which for him form part of the Veda. The most important part of the Veda.

00:55.22

But how he conceives of the Veda is a very peculiar thing, which I'll describe only briefly because some of you already know this very well. Whereas for Buddhists, the word of the Buddha is venerable because it is the word of the Buddha, and whereas for the non-Buddhist Naiy_yikas that Steve Phillips was talking about, the Veda is the word of God, for a Vedantan, like Sankara, the Veda is not the word of God or the work of any other author.

00:55.55 It is not a record of the thoughts or the experiences of any person. It is fundamentally impersonal. It consists of statements that have simply always existed. And are therefore, untouchable by any taint of subjectivity.

00:56.11 Which is a very extreme position - not one that is likely to be accepted by people who are not Vedic adherents. Least of all by the Indian Buddhists who lived in danger of attempts to dominate them by the custodians of the Vedic tradition.

00:56.28 But even more peculiar than that is the way in which the Veda was transmitted and used by Sankara and by other Vedantans. And again, this is a story that I don't have time to tell in detail. Many of you know how much intensely focused effort went into the memorization and oral transmission of the Veda on the part of certain group of Brahmins.

00:56.53

And in some ways, it's one of the more remarkable stories of human achievement. But for my purposes, it will suffice to say that the students who came to Sankara, the only sort of students that he was willing to teach were young Brahmins who met a number of other qualifications, but who also came to him with the words of the Veda memorized backwards and forwards.

00:57.16

In a totally secure way. And who came to him having believed and been told all their lives that the possession of the Veda in their memory was their most important treasure. And who had been led to believe that in fact, their very existence on earth was intended to preserve the transmission of the Veda and who, into adulthood, continued to spend a sizable portion of every day maintaining their possession and memory of the Veda, but who almost incredibly very often came to Sankara without ever having had their

attention directed to the content of those Vedas that they had memorized.

00:57.57

They came to him, as I see it, with these nuggets of information from the Upanishads, which they had invested so much time and love and trouble in. They carried them in their brains unused, so far, as a sort of time. And if you look carefully at the way that Sankara used this possession of theirs, this unique, powerful possession of theirs in the first chapter of his book on how to enlighten a student, you can see him very carefully detonating these time bombs in their minds.

00:58.31

And you can try to imagine what that might be like. The revelation, continuous stream of sudden discovery. For me it's almost as hard to imagine as it is to imagine what it would be like to be a bat. But Sankara knew what it was like from his own upbringing in a notoriously zealous caste of Veda-knowing Brahmins.

00:58.52

So for him, however strongly he himself may believe in the sanctity and the validity of the Veda, he also knows very well the value of this Veda - this set of scriptures - as a pedagogical and in fact, a serological tool. And that's the way he uses them.

00:59.14

Now, what does this have to do with science? If we accept Thurman's suggestion that this scheme of education involving as it does such an extensive use of scriptural statements that certainly sound dogmatic, as the first step is basically scientific, we have to suppose that these apparently dogmatic statements are being used as hypotheses to be tested.

00:59.44

Although we have to, in Sankara's case, we have to view them in kind of an odd way. I mean, in a strange way, one could almost say that the Veda as he understands it is the opposite of epiphenomenal qualia. Because rather than

involving subjective experiences that have no causal importance, they are for him fundamentally non-subjective statements that are the sole necessary cause of enlightenment. Which is a strange situation.

01:00.12

But even so, there are indications that his use of scripture does use it in a provisional way. And I'll mention these just very briefly. First of all, this is suggested by the fact that the great bulk of the enterprise of transmitting the Veda pays no attention whatsoever to the content of the Vedic statements.

01:00.34

Although as I've said, Sankara deploys the revelation of their meaning in a very skillful way. If we look very briefly at the role of scripture as it plays out in the two successive stages - first of all the stage of reasoning and third, the stage of direct meditation - we see that in the stage of reasoning, for Sankara as for the Buddhists, the statements of the Veda,

whether we view them as propositions or as dogma, are in fact, subjected to very rigorous logical examination.

01:01.07

And Sankara himself famously said that if the Veda told him that fire was cold, he would not believe the Veda. And when we turn then to the last stage, which is that of deep meditation, we find an even stranger situation. Which is that if that final procedure is successful, it means that the original dogmas are blown to smithereens.

01:01.38

Because the final realization is one that involves the direct realization of the ineffability of ultimate reality. So, if for a proposition to be scientific requires that it be disprovable, then in a way, the dogmas of the Upanishads are super scientific because they are disproven if they don't work and they are disproven if they do work.

01:02.05

But either way, the whole enterprise is one that seems to require a special kind of hypothesis. First, because it's obviously a very difficult enterprise or such a great body of scripture would not be necessary in either tradition. And second because it's such a lengthy undertaking, such a long experiment.

01:02.25

Perhaps not if we're talking simply about individual techniques of meditation, which as Teed Rockwell has said, can and have been-

01:02.30

TAPE END

MIND AND REALITY - Day 1

Tape 8 of 8 - Panel on Wisdom

TAPE START

GARY TUBB

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00:00.08 Because the final realization is one that involves the direct realization of the ineffability of ultimate reality. So, if for a proposition to be scientific requires that it be disprovable, then in a way, the dogmas of the Upanishads are super scientific because they are disproven if they don't work and they are disproven if they do work.

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00:00.54

Perhaps not if we're talking simply about individual techniques of meditation, which as Teed Rockwell has said, can and have been-

***** NEW MATERIAL *****

00:01.02

-taught in extraction from their original Hindu or Buddhist setting. But if we're talking about the larger project of gaining enlightenment, that involves such an expenditure of time and effort. I mean, if it turns out not to pan out in the end then it's a very long trip back to the drawing board and the funding may have been used up. At least for this fiscal cycle.

00:01.25

And so, it may be that if this is some sort of scientific experiment that it's simply a kind of experiment that because of its very unusual

nature requires a hypothesis of a particularly potent form. And I don't know whether that's true or not, but I pose it as a question. Thank you.

APPLAUSE

PAUL GAILEY

00:01.57 Our final response will be from Piet Hut who is Professor of Astrophysics at the Institute for Advanced Study at Princeton.

PEIT HUT

00:02.07 Thank you. It's really wonderful to be here and it's quite a new experience for me as a physicist talking on, at a panel on wisdom. Let alone a panel on super-wisdom, as we now have heard from Bob. I didn't expect anything less from you, Bob.

00:02.27 I also had the wisdom not to tell my colleagues that I was going to talk on a panel of wisdom. Knowing how physicists react. How open-minded they are. But I am a physicist myself, so when I

realized that the real topic of a panel on wisdom was the topic of ontology, of what is real, the structure of reality, what is really real if you want, I thought well-

00:02.57

-maybe a good way to talk about that, especially as the last speaker of the day, maybe a good way is through some sort of little experiment. So, if you want to have a dialogue between different ways of knowing, between science, between contemplative practices, whether it be Buddhist or Taoist or Hinduist or Sufi or medieval mystic Christianity, whatever the particular branch is - how do you start a dialogue between contemplation and science?

00:03.36

Because in both cases they tell you that the world is not what it seems to be. That it is completely different, in fact, from what it seems to be. But, science tells you some things completely differently, completely different than contemplation tells you.

00:03.56 And here we are. We are supposedly living in one world in which both scientists have something useful to say and contemplatives. So what is this stage, what is the starting ground, what is the place from which we can talk about both?

00:04.14 So, let me propose that we spend a few minutes doing a little physics-like experiment and I would like to invite you to spend about a minute to remind yourself about how conventional reality, everyday life looks at things.

00:04.33 About the solidity of the world and it's very easy - we have quite a solid room here. I don't think I've ever talked in so solid a room as this one here. The pillars of academia are left and right, all around us. So I would say, let us spend a minute to really feel how solid the world is. How material.

00:04.57

Everything is really materially given. My body, your body - we feel, we see the matter. We hear sound, we know that there is waves in the air. We see light, we know it is electromagnetic radiation. Let us look at the very objective view at which we encounter everything.

00:05.20

And this is not so difficult because we have been trained our whole life to look that way and basically from when we are born - and in a way, we have been trained for a few billion years if you take into account all the inner properties which evolution has put in is, as you heard today right from the beginning.

00:05.39

So that is the easy part. Now, the second part of the experiment is a little bit more unusual. If you look at anything like a pillar, for example, you can look at the pillar as a material object, but you can also look at the way it is given in your experience.

00:06.00

So if you point at the pillar, you have to specify really, do I talk about the pillar as a piece of stone or marble, or do I look at the pillar as a piece of experience. Because colors are not wavelengths. We don't see wavelengths, we see colors.

00:06.18

So the colors we see are really given in our mind. So, we have the choice, we have the degree of freedom. Just like I can move my arm, I can move my mind, so to speak, I can move my interpretation between experiencing, seeing, viewing everything as solid objects and viewing everything as experience.

00:06.40

And, if you (unintell), however, done this, it will take a little bit of getting used to it, but it's not so hard. If you really look at everything as given in your experience, in your field of experience, you don't have to change

anything about your basic world view - that is no problem.

00:06.58

You can just experience everything, view everything as it is given in experience. And if you see an object across the room, you can experience the distance to the object, but you can also realize that your experience of the distance does not have a distance. It is your experience.

00:07.23

So what seems to be distance is distance in the interpretation of an object. But what is here across the room is you, qua experience. It is really part of your mind. Nothing mystical about it, nothing strange. So you can spend a minute just becoming friends with your experience, which you normally project far away and you can easily become friends with this whole world that you are projecting.

00:07.52

And both are the same, both are true at the same time. The solid picture of the world is a useful picture. The experience picture of the world is a useful picture. And if you do this for a few months or a few years, it will get many, many deeper layers of significance and you will find all kind of other levels in which you can see and feel and experience new aspects of this.

00:08.16

But already, if you do this for a minute seriously, you see that there is something which can move. There is a degree of freedom here. And then there is the third way. Actually, there are many different ways, but let me just limit myself to three ways today.

00:08.34

Then there is a third way. After feeling this solidity of the world and me as a small piece of the solid world, and then seeing the whole world as experience, the third way would be to view everything which presents itself each moment in the way that it's presenting itself.

00:09.01

So, you don't label it as solid. You also don't label it as experience. You try not to label everything. You don't- You try not to label anything or everything. So, this means that each moment you just let happen. What presents itself. You don't have to do any work for it, you just let it happen.

00:09.28

And you try not to view yourself as an individual with a lifetime history, with a past and a future. If you want to, you can tell yourself that all your knowledge about the past is given in present memory. All your anticipation of the future is given in present anticipation.

00:09.49

So, focus on this presence. The sense of presence of your whole story about yourself. The sense of the presence of your sense of individuality. And try to see whether you can just let everything like that happen in a very relaxed, open way without any labeling.

00:10.17

And if you do that for a while, you will see that the third type of experiment again, at least feels different from the second. And the second- just like the second feels different from the third. And I would say the only place where we really can have a dialogue between science and Buddhism or other ways of knowing really is in that third place.

00:10.45

So, only to the extent that we are willing to explore the third place - not as a belief, but as a working hypothesis, that's something you want to taste, to put on the tip of your tongue to really get familiar with - only in that third place do I think that we can really have a fruitful dialogue.

00:11.09

And I see the type of meeting we have today as a first step in that direction. I hope that in future meetings we will have larger and smaller gatherings in which we have not only

presentations, not only talks, but where we have a combination of theory and experiment.

00:11.32

That is what distinguishes science from other types of technology and mathematics and whatever was done before Galileo and Descartes and other people started to introduce the scientific methods, combining experiment and theory.

00:11.53

So, if we ask the question how can we do this dialogue that is, I would say, first of all the notion of experiment. We have to come in an experimental place where we can start talking about it. But then there is also the notion of theory, equally important. And let me now go back to the more conventional way of dealing with the panelist's question about the theory part.

00:12.22

If you talk with a scientist and you say ok, I'm interested in Buddhism, I'm interested in contemplation, they will tell you what does it do. And they mean with that, how does it fit in

into the world view I already have and what can it do in my world view. But they don't say that first part.

00:12.44

They say, what can I do. What can you prove with it? Well, the problem with this world view of how it can fit in is that most scientists don't realize how present-day science is really only a snapshot. In a previous panel, we heard a little bit about that. I think Evan said that science is extremely young.

00:13.12

Science is only 400 years old. Painting goes back to 30,000 years ago. Most major religions go back a few thousand years ago and their roots are much older. Scientists are really the youngest kids on the block. That is maybe why scientists are so arrogant. It sort of fits.

00:13.35

And if we would have had this discussion about science and other ways of knowing a hundred years ago, it would have been a completely different

science. If you were to have this discussion a hundred years later, as was said in a previous panel, it would be different.

00:13.51

But let us go, let us go 30,000 years in the future. After all the first external representations we have in archaeology, cave paintings, were made 30,000 years ago. So let us go another 30,000 years forward and let us wonder what science would tell us. Imagine that we open a science textbook, like physics or whatever it will be called.

00:14.16

And let us say that in the introduction, it will be said, we are going to teach you what science is, what we know about it and science has a rich history. It is 30,000 years old. What do you think it would say about the history of science?

00:14.34

Let me show you two different- let me mention two different possibilities. The first possibility would be that the textbook would say, well,

30,000 years ago, science started around the days of Galileo and Descartes. And there was already mathematics and there were other insights, but that's when it came all together. And then in 500 years - between 1600 and 2100 - in those 500 years, all the basic laws were discovered and all the major insights were found.

00:15.08

And, for the next 30,000, 29,500 years we have been filling in the details. It's possible. It's a logical possibility. But, frankly, I don't think that it's so likely. I cannot prove it. I mean, nobody knows and I certainly don't know what the breakthroughs would be.

00:15.29

But if you look at conceptual breakthroughs like Copernicus, the Copernican revolution, and like Darwinism, like quantum mechanics - each of them could not have been predicted beforehand. And each time it seemed that everything was figured out, everything was filtered. There was no room for something new.

00:15.50

And yet, one breakthrough after another came. We can include Freud, not so much for specific ideas, but the notion that there is an unconscious. As you also heard before. So I would expect that these things continue to occur.

00:16.05

And I think that a future science will have a much wider and a much more intimate view of reality. And I think intimacy is the name of the game of science. It is not often stated that way. But the Copernican revolution, what does it really tell you?

00:16.27

It tells you that the stars and the planets behave according to the same laws of physics as things on earth. So instead of a heavenly realm, which is different from the earthly realm, the Copernican revolution taught us that we share the same laws. That there is much more intimacy between what happens in the stars and on the planets, than what happens to us here.

00:16.52 Darwinism tells us that animals and human beings are not really different. That it is really an unbroken chain of evolution and that there is a type of intimacy between what is true for animals and what is true for us. Quantum mechanics certainly tells us a story of intimacy.

00:17.13 Instead of having an individual particle, an electron, we really have an electron wave function which fills the whole universe and individual electrons are waves excited in that same shared wave function.

00:17.26 And all the electrons in our body are no exception. So, if I want to be completely conservative and only use personal action extrapolated to the future without adding anything new, my conservative extrapolation would be that science can only become more intimate.

00:17.44

That science will have a number of surprising, shocking revolutions. That we will see that our place here in the world is very different from what we thought it was, and the world is very different from what we thought it was. And I think in the process, we will probably be become closer and closer to be able to have a real grown-up dialogue - when science grows up - with other ways of knowing, including contemplative traditions. Thank you.

APPLAUSE

PAUL GAILEY

00:18.27

Bob, would you like to respond?

BOB THURMAN

00:18.29

I have a couple of responses to the responses. Little bit. Not too much. You guys were really nice. But there's a couple of things. One thing a little bit mischievous, which is that one of your points, Teed, was that so-called first person

science would only deal with the subjective and could never- therefore, could never be science. Sort of.

00:19.00

But perhaps you haven't noticed in reading Buddhist texts, which I can't blame you, that a natural byproduct of meditation at a certain point what are called the five abhinyas (ph), or sometimes the six abhinyas (ph), which is a kind also super-knowing or different, you know, like unusual or extraordinary type of knowing,-

00:19.25

-include the knowledge of others' minds. Include a number of things, but particularly knowledge of others' minds. Now, that may be incredible to us, contrary to our conventional ideas, but in a way, otherwise how does one, you know, assess how throughout the thousands of years of the Buddhist tradition teachers have assessed their students' states of achievement, you know, in meditation.

00:19.56

It isn't only by their fruits you shall know them. There is that, of course, their behavior, but also there is the idea that when you achieve a certain kind of clarity and focus, you can then know the minds of others. It'll naturally come.

00:20.09

In fact, it's even taught in Buddhism that in many Buddhist texts - Abhidharma and stuff - that you should avoid that knowledge before you attain a deeper knowledge about the nature of suffering and of release from suffering because it will become a distraction, you know. Now, we know that mammals can empathize with their infants to a very- biologically, just naturally where they more or less know the inner state of the infant in regards to essential things, like hunger and so forth.

00:20.35

And lovers, we hear in poetry that lovers and maybe we've had a momentary experience ourselves of empathy. And so why would it, in principle, not be possible that you could train an observer

through contemplative training to have a different perception.

00:20.53

And this relates again to being more imaginative about the future of science. I think in the line of what you were saying. I mean, a scientist today is- or anyone who comes to this school, it's sort of assumed they come in with an IQ. They have a SAT score then they pump in a bunch of information, they learn some axioms, formulas, they read this and that book and they become capable of gabbing about deconstruction or about reconstruction or whatever.

00:21.19

And then they're supposed to be very highly educated, write some papers. But their basic cognitive structure has not changed. They're still whatever they came in with. They kind of grow up, they get beaten up a little bit, but they're the same. And we don't have any way of training or addressing directly their cognitive state.

00:21.37

We don't train them in yoga, we don't train them in meditation, we don't train them to develop stability of mind. We assume that someone who's learning French or Sanskrit is going to develop concentration to memorize many grammatical paradigms. Professor Tubb would take (unintell) if they did not know bhavaami, bhavasi, bhavati, et cetera. Lots of paradigms.

00:21.56

So, they go through different things, but still- and so in that maybe develop more concentration, but there's no direct change of mind as instructed. Ok. But why wouldn't that be possible in the future? Like you have to train someone to use a microscope, or a telescope, or interpret data from a computer readout of an electron accelerator or whatever. That all takes a lot of training.

00:22.18

Then mathematics is an elaborate- algebra, you know. This kind of thing. Tremendous amount of

training. Why shouldn't there be- I think what Alan and others are talking about in first person science is not just sitting and listening to people babble about what they had for breakfast or how it feels in their stomach. It's developing more highly trained people who can understand their own mental states and who even conceivably could understand the mental states of others, which could be collectively judged.

00:22.45

Not just by the implanting of external machines, but by developing higher degrees of empathy and insight. So that's one point. That's one point. Just to think more broadly about what science could be in regard to how to verify things in another way. Second point you made which also was very good - I'm glad you brought up - is the idea of science as an artifact.

00:23.06

A community, sort of the Kuhnian thing, you know. Community of agreement, different layers of convention, historical in a context and so on.

And, of course, Buddhism tends to be thought of as, you know, a couple of yogis and a few lamas and a rinpoche or two wandering to the West, you know, and like setting up a little meditation center or something and whatever happened in Asia, we don't know.

00:23.27

But actually, thousands of years, big universities, tens of thousands, hundreds of thousands of students, faculties, literatures, self-exploding hypotheses, such as Professor Tubb introduced us to, and all evaluating of different people and all sorts of things. So you have a growing community, which has left a huge literature. Enormous literature. Like ten or a hundred libraries of Alexandria.

00:23.53

So again, first person science means maybe taking into account that whole literature. In the case of people always say this thing about how Wundt or whatever is name was, you know, disgraced introspectionism, something before Freud. But

that's just one German guy, like he's probably cold in Leipzig with no central heating and whatever. People have bad digestion. He ate too much zarkzama (ph), whatever.

00:24.16

The point is there's thousands of years of reports of subjective states in institutions, in communities of convention and why shouldn't that be something given parity and intellectual respect and parity and studied in a similar way. So, therefore, we have also- So we have the meeting- My point in saying that Buddhism is as much a science - or more a science even, than religion - and therefore should interact with Western science the same way it interacts with Western religion in interreligious dialogue - there should be interscientific dialogue.

00:24.48

Rather than that the Buddhists are just new subjects for our Western scientific measurements and so forth. That's just my point. So that the Dalai Lama, for example, his interest and

fascination in science is not just his personal idiosyncrasy. It's actually a natural thing about the encounter of the civilizations, you could say.

TEED ROCKWELL

00:25.06 Can I respond to you?

BOB THURMAN

00:25.08 Oh yeah. Well, I had one more point, but-

TEED ROCKWELL

00:25.11 Ok. I'll take the whole thing.

BOB THURMAN

00:25.12 Well, no, the other one is not for you. So you respond to those two things, sure.

TEED ROCKWELL

00:25.17 Yeah, I only wrote this over a two week period, so I'm not real attached to being, you know, any of the points in this. But the- I mean, one of

the points I was trying to make that the kind of reports you're talking - the texts - should be considered one of these cases where Buddhism has similarities to science.

00:25.34

That this idea that we can create something called a first person science, particularly as Chalmers has defined it, is forlorn. And so I was thinking, yes, we do need to rely on the texts. Now, this other idea of yours about, you know, we could conceivably develop some sort of perception of other people's states. If you look at the, you know, the traditional Western idea of how we become aware of other people's states it, you know, was mostly articulated by Hume.

00:26.01

Where, you know, I've got this sort of sensation and then there's this vibra- you know, or a feeling and then, you know, I vibrate in a certain way and you vibrate another way and so, you know, I've got a feeling in my head and it travels across the room, makes a copy in your

head. You know, I don't feel very happy with that description of what's going on.

00:26.18

And I, you know, feel very strongly that the idea that, you know, knowledge consists of, you know, and our perception consists of making a copy of the outside world in our head is seriously mistaken. And I think, you know, given that there are causal connections between my feelings and your feelings, I don't think there's any reason to assume that we're having two different feelings.

00:26.40

I think that if you say if they're hooked up that way, I'm very sympathetic to the idea that we're just- It's not that I'm having a copy of your feeling. You and I are having the same feeling. And I have no problem with that idea at all, but I would guess that an awful lot of other people probably would.

BOB THURMAN

00:26.54

Oh, of course they would. Yeah. But the main thing is that people who live in their discursive mind and inner monologue, verbalizing all the time and feel that's it, resist being trained. And I know myself, resist the training of like learning how to deal with their own inner voices in a different way. Which is what meditation does and systematic contemplative training therefore, is something that I think the future will hold for a lot of those people. Without a doubt.

TEED ROCKWELL

00:27.21

Oh yeah. And for developing any kind of knowing how skills. I mean, particularly when you were talking about, you know, being able to develop mathematical skills - I think there's far too little of that in pedagogy. We just say oh, certain people have math ability, others don't, you know. And, you know, and some of the knowledge of something like the Buddhist introspective techniques would, I think, increase

our abilities to teach people to know how to learn science.

00:27.43

And that that's something I think we could learn from contemplative traditions.

BOB THURMAN

00:27.46

Ok good. Then the third thing I just wanted to say about Gary's thing about memorizing aphorisms in the Buddhist educational tradition. The universities of India and Tibet, at least that I know about particularly, a little bit less in East Asia, perhaps. But in those traditions, the memorizing of texts is, of course, really critical.

00:28.06

So in my thing about encouraging Chris to defy authority, I wasn't saying that there isn't a lot of aphorisms and things that are learned. But, because that's that paradoxical point. You know, Georges, perhaps, you know, experience or what they translate as perception - pratyaksa, what is

called pratyaksa - in epistemology even the sort of the most seemingly high tech element of Buddhist thought, the logic epistemology thing - the direct experience, which is unarticulable verbally, is the more real one.

00:28.38

And it is cognition, you know. It is not non-cognition because it's indeterminate - for the Buddhists. The Naiy_yika, that's their complaint about it. Is that if you can't articulate it, then you don't have it. Do you know what I mean? But from the Buddhist point of view, direct experience is the one that's in contact with actual reality, so you're being more real and more efficient causally when you can't say what you're doing than when you later go and live in your interpretation and try to describe it.

00:29.05

And therefore, that means that in their logic and epistemology, there's an a priori disclaimer of the possibility of an absolute dogmatic description of any sort of logical operation. And

therefore, that doesn't shut down the philosophers in trying to describe these things, but that opens the door for infinite more and more sophisticated discussions of language and logic and this and that.

00:29.26

All knowing that the real thing is to get back to direct experience of reality and to try to disassociate the fact that most of us live in our heads and we can't distinguish between my concept paper, words on paper, et cetera and something amazing of looking at this, which is like- which only a poet would know. Holding this crazy thing.

00:29.46

Like, Tignat Han (ph), he would see here all the forests, you know, of North America and like, some sawmills and some trucks and some weirdo capitalists and-

TEED ROCKWELL

00:29.56

Infinity in a grain of sand, eternity in an hour.

BOB THURMAN

00:29.58 Exactly, exactly. So, anyway, I just wanted to put that in that there is a lot of this thing, but then they all do tend to be self-transcending in the tradition, just as Gary said.

TEED ROCKWELL

00:30.09 Well, one of the things I was gonna put in that I left out of this draft is that in many ways, I think you have to see the artifact of science as defined by the function it's supposed to perform. And I think that the function that the artifact is supposed to perform is to enable us to achieve a certain kind of wisdom.

00:30.26 Now, do you have to make a difference between the artifact and, you know, the state of mind that the artifact is designed to create. That was really largely what I was trying to say.

BOB THURMAN

00:30.35 And maybe the encounter, therefore, with the Buddhist scientific tradition and the Western one could help the Western one overcome a certain pre-imposed self-limitation that we can't know certain things and we only can just explore this thing or measure that thing.

TEED ROCKWELL

00:30.49 That the artifact is all that there is.

BOB THURMAN

00:30.51 That could be challenged. Yeah, exactly. That could be challenged. By the encounter.

TEED ROCKWELL

00:30.55 Do you want to say something?

PAUL GAILEY

00:31.01 We could take just a moment here if there are any of the other panelists from other panels here on the front row who would like to make a comment.

We could do that before we take some of the other questions. Got some row-front mikes.

BOB THURMAN

00:31.14 Take off your coat, Georges, and grab a mike.

QUESTIONER

00:31.23 This is a question to Piet, actually. I really like the idea of the three levels of discourse and the idea that at this third level one can really engage into a fruitful dialogue that you, you know, kind of envisioned. So I was wondering whether you could elaborate a bit more on what would it entail and how- to be more specific, how would it differ from the Husserlian method of simply bracketing off theories and just looking at the phenomenology? If you could elaborate a bit more.

00:32.00 Because, I mean, it's very appealing to me because one of the things that I'm personally concerned in this kind of interdisciplinary

dialogue is that given the fact that when it comes to discussions of reality, you know, unavoidably and implicitly most of us somehow assume the dominance of scientific language and scientific paradigm.

00:32.24

So, there is a danger that you know, that certain Buddhists insights and understanding and framework could be reduced into, you know, a kind of a scientific framework and scientific discourse. And I'm personally very, you know, wary of that kind of danger. So, this third level of discourse that you, you know, discussion that you envisioned seems to hold something quite interesting. So if you could elaborate a bit more.

PIET HUT

00:32.58

No, that's really a challenge, but I brought it on myself by starting to talk about it, so I'll try to follow up on the challenge. Let's see what I can say in just a few words. So, we can look at

the pillar as a solid object. We can look at it as consciousness, in the sense that the pillar is given in our experience and what we experience is, by definition, the experience of the pillar.

00:33.24

That's not so difficult and that is what Husserl tried to do, which is (unintell). And he pointed out that most of his students didn't get it and he told his students you have to do it for a few months and then something else will happen. But they all went out and wrote about it, in a more intellectual way, most of them.

00:33.43

But, you can really work with that for a few months and you really get the sense of the difference between the thing - seeing a pillar as solid and seeing a pillar as experience of consciousness. But, to see a pillar as presence, as being, to really focus on the presence of everything, it is something which artists have a much better way to talk about.

00:34.09

I mean, seeing the world in a grain of sand, for example. And all of us have experiences like that. And they come occasionally for often no particular reason. But the challenge is to recognize those experiences and to cultivate them. And as soon as they slip by and become memory, then once they are memories, then they are back in the normal stratum.

00:34.34

And the danger of art and poetry is also that they're being encapsulated. So art, poetry can be helpful, it can also be a hindrance by co-opting it. So, if I just- I mean, the really honest answer is, if I talk from my personal experience, I mean this is something I've been struggling with for a large section of my life.

00:34.59

And if you were to ask me three years ago, I would have tried to give you an eloquent answer because somehow three- there was a point in my life three years ago - until then I was firmly convinced that any knowledge I had, of any type -

scientific, everyday life, contemplative,
whatever - that any knowledge I could simplify
and give in a nutshell to anybody and then if you
wanted to know more, I could say more.

00:35.28

If you'd never seen an airplane, you could say
it's like a bird. Well, it doesn't flap and it's
a little bit bigger and you can go on it, as an
approximation. But you can always start with
something simple. And I was sort of proud of
that. I thought, oh, well, you know, why come
other people don't that. That's strange, but
somehow I don't seem to have any difficulty doing
that.

00:35.50

But then three years ago, I realized to my great
surprise that something went wrong in a
completely unexpected way. It was not that I
started to have experience which I could not
explain. That part stayed the same. The
surprising change was that I started to have
really important insights for which the best

explanation sounded exactly the same as I would have said a number of years before when I didn't see it so clearly.

00:36.23

So, then I began to realize sort of like, physically on an embodied level, to my shock, that certainly I couldn't explain it because the explanation would be misunderstood. The simplest example I can think of and that is almost a caricature, but just to give a feeling, is that if somebody says, oh, it's nice weather today there is one meaning.

00:36.50

And then if that person has a terrible disease and almost dies and then sort of just makes it again and then says, oh, it's nice weather today. There's a completely different meaning for that person than first, but the words are exactly the same. So, in a way I have to say I cannot answer you. But in a way I can talk about the way I cannot answer and I can describe the way in which, collectively, we can try to add

experiments to theory and if this is going to really take off in the next ten, twenty, thirty, forty years - this dialogue between ways of knowing - there has to be an experiential part to that.

00:37.33

And theory just doesn't cut it.

ROBERT VAN GULICK

00:37.37

Can I say something just quick to respond to Piet? On this very point. I don't want to interrupt. Because the question came up of the relationship to Husserl and I think that's a very natural transition in the phenomenological tradition because if you think what happens next in Heidegger, coming out of German Romantic tradition, which I think connects maybe with your third mode of experience - present-ness - part of what Heidegger was saying was wrong was that he wanted to recapture a kind of primordial openness to being.

00:38.06

And, of course, Heidegger very much read Eastern texts. I mean, this was a part of his influence and so, I wonder whether or not you see any resonance between this third state that you're suggesting to us and that one which comes out of 19th century - whether it's the Sublime or the Transcendental or the Romantic - and then finds a manifestation in Heidegger's later phenomenology in rejecting the Husserlian approach and saying there needs to be this openness to being.

PIET HUT

00:38.34

Thank you. This started off as a very interesting no-self, or at least no-other experience, because we were all wondering who was talking because with this sound system it was not clear where it came from. But, yes, Heidegger and Husserl form a very, very interesting juxtaposition because their method of presentation is so different.

00:38.57

Husserl started off as a mathematician, actually as an astronomer first then became a

mathematician and then a philosopher. And Heidegger started off in a more theologic-like way. And they used that approach. Husserl only wanted to say what he could argue from basics. And Heidegger was happy to just jump in and give his deepest feeling about this crossed-out being, et cetera.

00:39.26

So, I do think that Heidegger had a real intuition of what I was trying to talk about. When I read it, it sort of like jumps out of the pages. That is clear. But it is like an island. It's like a little opening in the clouds - you don't know how he gets to it. He makes parallels with all kinds of previous tradition, but he doesn't tell you how he gets to it.

00:39.47

Husserl tells you a little bit more. And if you read Husserl's Briefwechsel, his letters, then he says a lot more. Then he tells his friends and his family and his students what he doesn't want to write in official literature. And he tells

them that there are all kinds of intuitions he has.

00:40.08

He cannot yet connect with his basic premises, but I'm convinced that from reading the letters that he had a similar sense as what Heidegger had. And I think that Heidegger got a lot from him, as well as from the Eastern sources. He was just much more of a public speaker and he was willing to just throw it out there.

00:40.32

But, science as opposed to art, science is a multi-generational enterprise. And each generation adds a little bit and it's very slow, but then it can be integrated and people can continue. In that sense, Husserl was a scientist and Heidegger definitely was not. And I think the Husserlian tradition in some way or other is just waiting to be taken up again and then slowly carried forward.

PAUL GAILEY

00:41.02 Alan?

ALAN WALLACE

00:41.04 Piet, as far as I know, I think you're the only physicist on the panels, so the iron is hot. Oh, you are of course Paul, but you haven't been speaking as a panelist. But either one of you, but since Piet - either one, actually.

00:41.16 We've heard this term, physical. Physical being used very nonchalantly, actually, all day. As if we actually know what it means. And my impression is that a lot of psychologists, perhaps and neuroscientists when they're reusing the term, they're using it exactly as if we're still living in 1879 when the scientific study of the mind ostensibly began.

00:41.37 That is the physical is constituted by particles and fields and their properties. But as you know, from 1887, the whole mechanical explanation of fields fell away. And then from the advent of

quantum mechanics, now we have things like probability waves, which may be collapsing. If they do collapse, there's no physical mechanism for the collapse of the probability wave from a purely informational state to an actual physical reality.

00:42.04

Since 1915, we have space-time actually influencing configurations of mass-energy. And then if we move ahead to M-theory, now we have what is 11 dimensions, most of which nobody ever perceives (unintell) as there's no empirical evidence whatsoever.

00:42.21

There may be one day, but we don't know. So in this whole bandwidth, it looks like we have kind of a physicalism of a gaps. You know, analogous to the god of the gaps. The theists - if you don't understand it, well, god did it. And it looks like we're in a similar situation now. If we don't know what mental states really are, well of course they must be physical.

00:42.38

We don't know which one. We haven't even identified the neural correlates of consciousness, but of course it must be physical. So, as a physicist - either one of you, maybe you can team up here - what do you mean by physical? What constitutes physical as opposed to non-physical?

PIET HUT

00:42.53

Well, I can give two completely different answers. And let me give the card-carrying physicist to answer first and then I'll hide my card. The card-carrying answer is yes, this is really fascinating and indeed, the fact that you can speak on the mike that happens through electromagnetic waves, the wireless transmission, and electromagnetic waves are waves which don't have a medium in which they are waving.

00:43.26

The ether is tossed out as an unnecessary assumption. We don't know what the wave- where

the waves occurring in, but they are occurring and we know the properties of the waves. So, all of physics has gone from ontology to epistemology, if you want.

00:43.31

Elementary particles are described by their properties and no physicist wonders about what they really are beyond their properties. It's all described in terms of what happens. In that sense, physics has become phenomenology, too. The notion of phenomenology is a very interesting one and it's changing in many ways.

00:44.00

So, already as a card-carrying physicist I would say, yes, you're absolutely right and Bob also started off with that. And everything is utterly dissolved. In quantum mechanics things in a sense, don't really exist until they are measured.

00:44.18

John Wheeler talked about the game of 20 Questions. It's by measuring something that

something comes out and there is not a unique answer before you see it. So, all of that is true. But let me become- let me give a second answer, which is much more radical. And the much more radical answer is, well, the previous story was a story within the first of the three stages.

00:44.43

The stage in which we look at nature, which is already remarkably dissolvable under quantum mechanics and everything. But, that means that we have already started and taken place, taken our stage on a particular stage, our place on a particular stage.

00:45.03

And if you watch a movie or if you, if you would be able to analyze something in a dream or whatever. But let's take a movie. If you watch a movie and if you want to talk about whether light comes from in the movie, then every light in the movie comes either from the sun or a lamp or whatever.

00:45.24

But, both the dark and the light places in the movie are really projected by the projector. So if we now talk about where the light comes from in a certain scene in the movie, it depends, I mean, what you mean. And the second answer would be to step out of the movie and to talk about the projector. And that is not something which is normally done in physics of today.

00:45.47

I think it will be done in physics a few hundred years from now, but because it has to be continuous and multi-generational, I think this will be at least a few hundred years, if not quite a bit later.

PAUL GAILEY

00:46.00

Add just a little comment and just turn around from Piet's very nice description on the three levels and the third level in which we're merely in a state of being and not projecting onto that some concept. If we start from that position,

that's a very honest position, which is I think is particularly nice about it.

00:46.25

Because these are the things we can certainly say is what our perception is. Beyond that, we move into other systems of thought that we draw from in making our statements. But if we start with Piet's third position then we can come backwards at the problem of physics. And ask what it is particular from that state, if we assume that that's our starting point, how we come back from that to something like physics.

00:46.54

And one of the qualities, I think, that you would say is that we have a certain ease of agreement. So there's a relative ease with which we can repeat experiments and so forth and so we have a certain easiness of getting to agreement.

00:47.12

Now, we could argue that that agreement is merely an illusionary agreement. That it's merely a decision. But then we also have to add the fact,

as Piet said, that over periods of time we can carry forth certain knowledge that has a certain repeatability.

00:47.32

So, I think there is a path towards understanding what physical means. I don't know that I have the answer to it, but I think we could with some of what Piet said tonight, like help in that direction.

PIET HUT

00:47.47

Can I add one more short thing and then I'll give it up to the rest? I think one of the fundamental problems is that if you start consciously or unconsciously with the normal way the world is given, then what does it mean to be, to get wisdom, to be enlightened, to see through, to get more understanding?

00:48.10

Take this example of a movie. If you look at the movie, the movie is a two-dimensional play of light from the projector with a certain meaning,

a certain story and if you watch the movie, you fall into the movie and it becomes three dimensional and real.

00:48.25

And that is how we enjoy the movie. And if somebody would be watching and would for some reason not know it would be a movie and if you then have to point out that it is a movie, then they will ask you well, what does it mean that everything is light? They have these three dimensional buildings and all these solid things and you say it is all light.

00:48.48

So, they would think that the three dimensional objects they think they see on the screen can be dissolved in light. But actually, it is the two dimensional patterns which are given by light, which are interpreted as three dimensional things and which are then mistaken. So if somebody tells you, you have to see through it. Don't start with the world as it is given and try to sort of dissolve everything in light.

00:49.15

And the pillar becomes light and everything. That is the wrong attitude since you have already jumped too far. You have to go back to a more, earlier rudimentary way before you can talk about how you can have a different types of insight. Well, this requires much more than a few minutes, but maybe in a future meeting.

PAUL GALEY

00:49.36

We have another comment.

QUESTIONER

00:49.38

Yes, I normally speak from the standpoint of the three H's - Husserl, Heidegger and Hegel, but I'd like to play the devil's advocate for a moment. I have not heard anything about the status of mathematical entities. We've talked a great deal about the experiential component and various phenomenological matters, but after all, the West began with Pythagoras's claim that the world is made of number.

00:50.12

And I should like to know how that- something about the ontological status of number. I don't think we want to think of it as etiolated matter, subtle matter. I wonder if anyone would care to comment on the status of mathematical entities, particularly since artificial life theorists are making so much of it.

BOB THURMAN

00:50.44

Well, from the Buddhist perspective, a mathematical language is another conventional language system. And it's actually considered part of the outer sciences in India. You know, there are the inner sciences and the outer sciences. And therefore, mathematics is useful for engineering, construction, astronomy and this sort of thing. And therefore it's considered a very necessary language, also conventional, for the outer sciences, I think we would say, in India.

00:51.11 Right? Jodishi (ph) - it connects very much with astronomy, I think, in India, right?

GARY TUBB

00:51.16 It connects in a practical way with it - astronomy and architecture and things like that. But much of the intellectual place that numbers have in the West is taken up by grammar in India and things that we would think of expressing in mathematical ways, they express through complicated grammatical technicalities. So, it's a different system.

BOB THURMAN

00:51.41 But a higher order conventionalism would be the- both I think Buddhist and Hindu way of thinking. Well, Hindus might say that language was not conventional because it's the body of Brahma, something. Some of them. Right? The grammar, the alphabet is Devanagari, but the- but mathematics is a higher order conventionalism, I think.

00:52.02

Therefore, the mysticism of mathematics that somehow is 11 dimensions are gonna be discovered 50 years from now and then, the boys will have control of the universe to understanding the 11 dimensions would be considered delusional from the Buddhist point of view.

GARY TUBB

00:52.17

And from the Naiy_yika point of view - although Steve or Georges could talk about this better - numbers are somewhat of an embarrassment as properties because the role of individual psychology in the production of numbers has to be recognized, but it's inconvenient. Isn't it?

PIET HUT

00:52.39

Well, I can't resist because my name starts with an H, too. Like Husserl, Hegel and Heidegger. I'm not a German philosopher - I'm neither German nor philosopher. But I'm Dutch and I do read German. And I like all three of them, to read them. But my answer would be that I think numbers appeal so

much because extracting numbers from experience is a way to get an invariant which seems to have a reality in itself, independently of the substrate where you take it from.

00:53.11

Just like phenomenology can extract phenomena independently whether she thinks as material objects or as experience or as just awareness. So I think mathematics, in a sense, it's not surprising that it was in a number of cultures part of a contemplative tradition.

BOB THURMAN

00:53.34

One other thing that just, in the gap here unless someone else is speaking - Susan Carey earlier brought up the idea of what she called the core knowledge that is discovered in infants by empirical experimentation as questioning the experiential, conceptual or the linguistic, non-linguistic, conceptual/perceptual dichotomy in Georges's language. Using perception for experience or (unintell).

00:54.00

And I just thought it would be amusing and intriguing maybe to the more- to you scientific and Western philosophy types that Dharmakirti himself uses the pre-linguistic knowledge of infants as a proof of the previous lives. As an evidence for previous lives and particularly, he chooses the infants going for the breast, you know.

00:54.24

That an infant knows how to do that and so these things which would be considered genetic - imprinting without language - they would have been language knowledge in previous lives. And that would go for apes and everything, since apes have been- apes were tenured professors once, in a previous life. All apes and all animals in that view.

00:54.42

So it's presented as that core knowledge thing. They get out of being- of having their thing questioned of that dichotomy by saying there was

language knowledge in previous lives. But language was misused in those lives and therefore, now they're like being experimented upon by scientists in Columbia. The poor apes at this moment. I thought that was fun. That's all. I'm sorry.

PAUL GAILEY

00:55.04

Any other comments? We have some wonderful questions here but I'm- my sense is that wisdom dictates we begin to end today's session. First of all, I'd like to thank everyone again. It was a long day and people showed enormous stamina today and I hope you all enjoyed it as much as I know I did.

00:55.33

I'd like to invite you back tomorrow morning. The panels will start promptly at 8:30, so if you can get here a little bit before that - 8 or 8:15 - that would be great. And so, we'll look forward to seeing you tomorrow. And one last comment - if the panelists would come up to the stage for a

brief meeting, just for a couple moments. Thanks
very much.

APPLAUSE

SESSION END