

CLASSES at Wisdom's Goldenrod, Hector, NY
with Anthony Damiani (AD)
February 12b, 1982 (includes 0212, 0219, 0225, 0226)
PHYSICS: QUANTUM MECHANICS

TOPIC: Physics

SUBJECT: Quantum Mechanics

SUBSUBJECTS: Schrödinger's Wave Equation, Gnostic and Fabricative, Matter/Form, Knowing/Willing/Feeling, Nidana Chain and Four Intellects, Particle/Wave/Form

CONTENTS:

Physics a problem of instantiation of Ideas in sensible world
Dancing cube example: demonstrates complementarity; mind's role in synthesizing twelve lines into cube perception
Measurement components: 1) object 2) apparatus 3) observer
Two approaches to analyzing experience: 1) perceptual approach; 2) force/energy approach; cannot experience both approaches simultaneously
Quantum mechanics and system description: Schrödinger's wave equation; problem of indeterminate state remains; infinite regress until real subjectivity introduced
Two levels of physics: 1) complementary pairs level; 2) potentiality to actuality level; requires non-empirical subject
Psychological analysis in terms of sense data; physical analysis in terms of energy; soul produces the thing and the knowing
Fabricative: energetic view, particle; gnostic: perceptual view, wave; uncertainty principle governs knowledge limits
Grid of gnostic and fabricative
To analyze instantiated forms, have to go back through gnostic apparatus, not energetic basis
Scientists only interested in quantitative analysis; most traditions include quantitative and qualitative
House and ring view of last four houses
K.C. Bhattacharyya's knowing willing feeling applied to three levels of physics
Nidana chain and four intellects analysis
Soul contains living images of ideas in Intellect; each species the embodiment of a certain idea
Form can be viewed from fabricative or gnostic perspective, both meet here; matrix of possibilities before data converted into knowledge

BOOKS READ FROM OR REFERENCED:

- Paul Brunton, *The Hidden Teaching Beyond Yoga*
- Krishnachandra Bhattacharyya, *Studies in Philosophy*, Vol. 2, “The Concept of the Absolute and Its Alternative Forms

DIAGRAMS embedded in this transcript:

- FIGURE 1982 0212b-1. Dancing Cube.
- FIGURE 1982 0212b-2. Grid of Gnostic and Fabricative Planetary Powers, Wave and Particle, Perceptual Functions and Elements. Earth Level: Psychoid, Energetic, Form.
- FIGURE 1982 0212b-3. Gnostic and Fabricative, and Soul.
- FIGURE 1982 0212b-4. House and Ring View of Last Four Houses.
- FIGURE 1982 0212b-5. Table Correlating Willing, Feeling, Knowing with Subject-Object-Relation, Three Kinds of Consciousness, and Three Kinds of Physics.
- FIGURE 1982 0212b-6. Nidana Chain and Four Intellects.
- FIGURE 1982 0212b-7. Particle, Wave, Form.

RETYPE AND REFORMAT by IT 2021

NOTES:

- **RETYPE PARTIAL TRANSCRIPT (hence V10).** From 1982 0212 and 19 25 26 PHY 07R21.PDF. THERE ARE NO AUDIO CASSETTE TAPES EXTANT. Presentation by V. Mansfield.
- This is **1982 02/12b (includes 0212, 0219, 0225, 0226)**, a write-up summarizing a series of classes on physics, **and the second entry** associated with this date. **1982 02/12a = Alchemy; Kalachakra.** Note that AD was in Columbus on 2/12/82.
- This event is among those in later 1981/early 1982 when Anthony was exploring Astrology/the Zodiacs, Cosmology, Physics, Astronomy, Soul, Nature, and The Grid: Gnostic and Fabricative.
- For more on The Grid: Gnostic and Fabricative, please see the Appendix to WG Seminar 1981 1016a.
- Typing and diagrams in the original partial transcript are by JF.
- V. Mansfield is Victor Mansfield, member of Wisdom’s Goldenrod, professor of physics and astronomy, Colgate University. See <https://www.paulbrunton.org/victormansfield.php>.
- Numbers spelled out where appropriate, most abbreviations have been spelled out for clarity.

1982 02/12b (includes 0212, 0219, 0225, 0226) at Wisdom's Goldenrod Physics: Quantum Mechanics

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Feb. 12, 19, 25 & 26, 1982

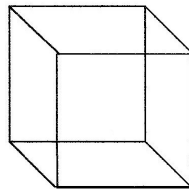
QUANTUM MECHANICS (role of the observer) & DISCUSSION

Presentation by V. Mansfield

* See paper from July, 1981 for review of quantum mechanics in its objective aspects (definitions, electron gun & photon experiments, Schrödinger's cat, etc.)

* Physics is a problem of the instantiation of the Ideas in the sensible world. We would like to discuss how the Witness Consciousness or the Productive Imagination is required for the self-consistency of the theory of quantum mechanics.

* The dancing cube example is analogous to the quantum mechanics situation. 12 straight lines are drawn on the board, and the observer sees a cube, which can have one of two faces as its forward-facing one.



[FIGURE 1982 0212b-1. Dancing Cube. Computer generated by NT from 1982 0212 and 19 25 26 PHY 07R21.PDF.]

In the dancing cube example, the mind or subject:

1) bounces back and forth between the two views. This is an example of complementarity, analogous to the trade-off between waves and particles in that:

- a) both are not seen at the same time,
- b) both are valid ways of viewing the object,
- c) both are tied in with the subject.

2) There are only 12 lines drawn on the blackboard, so prior to the appearance of one face or the other, the mind must synthesize these 12 lines and project them into a cube.

* Quantum mechanics has nothing to do with motion (like in relativity). The object cannot be known in isolation from the apparatus--they have to be seen in some kind of unity. There are three things we are trying to measure: 1) the object, 2) the apparatus, 3) the observer.

* It was suggested there are two approaches to analyzing experience (not matter), the perceptual vs. force or energy. Analogous to particles are the tiny perceptual units, that you can know (directly). Analogous to waves is energy, the matrix of possibilities, that you can't know.

Most analysis of the world until modern times was done in terms of perception only. (An example is the F E A W [Fire Earth Air Water] division of the elements.) The modern physicist's analysis is in terms of energy. One can experience either perceptual phenomena or energy phenomena, but not both at the same time.

If the perceptual units are made as small as possible, it is difficult to tell them apart from energy.

* Quantum mechanics must not only be adequate to describe the object (say Schrödinger's cat) but also to describe the apparatus.

The total system (Schrödinger's wave equation) is: $\Psi_{\text{TOT}} = \Psi_{\text{CAT}} \Psi_{\text{AP}}$

However, even in including the apparatus, there is still the problem of the indeterminate state of the system. The system is just bigger. Even including the sense functioning (like the eye that reads the meter), or the molecular motions in the brain, the system is still indeterminate. There is an infinite regress until a real subjectivity is brought in, that is, until the productive imagination takes that indeterminate presentation (which includes the object, apparatus, sense organs, brain, etc.) of the Cosmic Soul and turns it into a determinate primal image.

There are two levels of physics:

1) There's the level of complementary pairs, wave and particle. Which manifests is dependent on the unity of the object and the apparatus, and this determines what type of object is revealed, for objects are not in isolation.

2) Coming around the full circle, to bring the world from potentiality (wave form) into the world of actual measurements, (sense data) necessitates a non-empirical subject, i.e., one that cannot be described in dualistic language. Here the world is envisioned as precipitated by the subject's "willing consciousness".

The object, apparatus, and brain, etc are only potential (from a matrix of possibilities). As in the *Hidden Teaching*, the objective status is precipitated from a real subjectivity. Thought is primary in a person's experience.

* A deeper problem (than wave vs. particle) is how the matrix of possibilities is actualized in terms of one of the possibilities.

As soon as you try to make the matrix of possibilities an object, as a percept, it reveals only one of its attributes. The object that reveals both of these characteristics is revealed other than in the sense world.

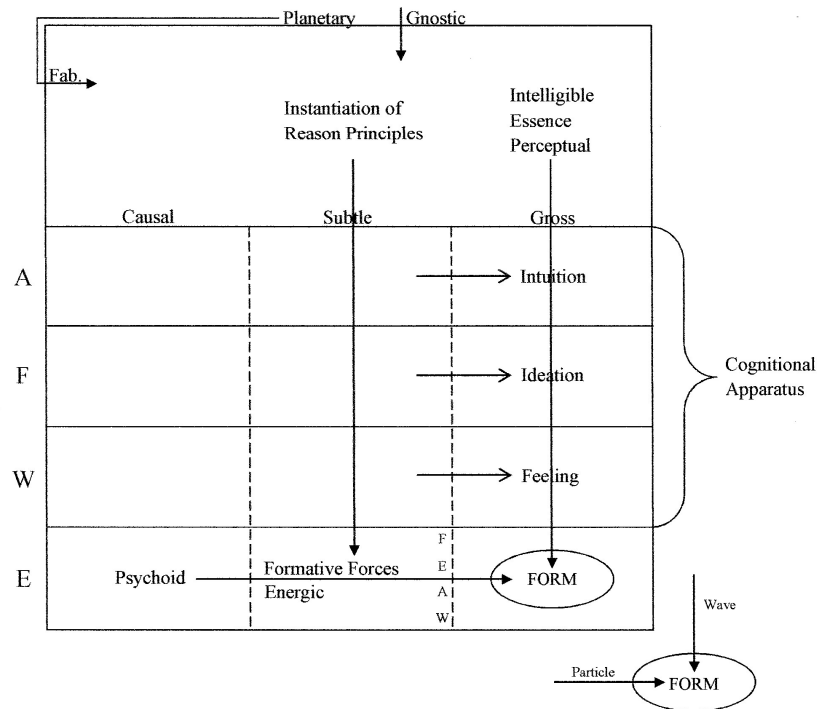
* There is an analysis in terms of psychology (sense data) vs. the physicist's analysis in terms of energy. The physicist's view is that water, ice, steam are all states of the same substance (water), but the other view is that the experience of water, ice, steam, is of various states of perception.

What's complementary is that you have a perceptual experience and an energetic process. What the Soul produces is not only a thing, but also the knowing, and the thing cannot be separated from the knowing of it.

These two, the fabricative and the gnostic, are related in the origination of cognition. The fabricative and gnostic in the cognition is the origin of the split. The energetic view is the fabricative, the particle; the perceptual is the gnostic, the wave. If you want to know substance you have to relax your desire to know function and vice versa, and the uncertainty principle tells you how much you can know of each at one time.

Shape or wave brings in the notion of intelligible whereas particle only implies spatial location, not form. It is the last quanta of intelligibility.

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[FIGURE 1982 0212b-2. Grid of Gnostic and Fabricative Planetary Powers, Wave and Particle, Perceptual Functions and Elements. Earth Level: Psychoid, Energic, Form. E W F A = Earth Water Fire Air; Fab. = Fabricative. Computer generated by NT from 1982 0212 and 19 25 26 PHY 07R21.PDF.]

Going both ways, the physicist looks at FORM. The aggregates, the etheric formative forces are energies. But to analyze the forms that are instantiated, one has to go back through the cognitional (gnostic) apparatus, rather than through the energetic basis.

The Soul, insofar as it interprets the degrees, makes a paradigm of those ideas.

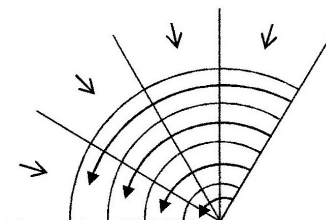
gnostic	fabricative	The production takes place in the 12 th H.
↓	↓	The Soul is the realm of vital innate knowledge (which cannot be further decomposed).
makes the living image of the ideas.	manifests those forms that are in the Soul.	

[FIGURE 1982 0212b-3. Gnostic and Fabricative, and Soul. H. = House. Retyped from 1982 0212 and 19 25 26 PHY 07R21.PDF.]

* We perceive the world in terms of qualities or quantities. The scientists are not interested in the qualities of the perceived world but in a quantitative analysis.

Most traditions include both ways, the manifestation in terms of forms, and an energetic basis in which those forms are instantiated. We speak of the fabricative and gnostic functions of the planets.

For example, we can view the last four houses of the cosmos in two ways. There is the Demiurgic Intellect “illuminating matter”, the four Realms of the Kabbalists, the energetic view. There is also the ring view, in which the subjective Soul (World Soul as Sun in Aquarius) is manifesting the forms on the basis of the illumined matter. This is the perception--the meaning.



[FIGURE 1982 0212b-4. House and Ring View of Last Four Houses. Computer generated by NT from 1982 0212 and 19 25 26 PHY 07R21.PDF.]

* PHYSICS & KCB

K.C. Bhattacharyya in his “Concept of the Absolute” has different levels of knowing, willing, and feeling. We may attempt to apply them to physics in the following manner. KCB speaks of cognition (encompassing KWF [Knowing Willing Feeling]) in three different ways--

Knowing reveals the object as self-subsistent, independent of the subject.

Willing (consciousness). The subject is creating, conditioning the object, bringing it into being.

Feeling joins subject and object.

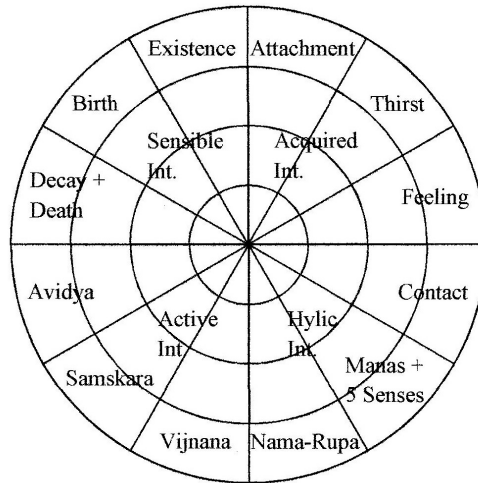
Subject	Relation	Object
(Willing)	(Feeling)	(Knowing)
Heisenberg	Einstein	Newton
Super-reflective	Reflective	Unreflective
W F K	W F K	W F K
③	②	①

[FIGURE 1982 0212b-5. Table Correlating Willing, Feeling, Knowing with Subject-Object-Relation, Three Kinds of Consciousness, and Three Kinds of Physics. W F K = Willing Feeling Knowing. Computer generated by IT from 1982 0212 and 19 25 26 PHY 07R21.PDF.]

One way of viewing Newtonian physics is that the chief purpose of the physicist is to reveal the object in itself, independent of the subject. In the unreflective mode, ① the observer is part of the apparatus, in that the molecular activity of his brain is part of the object. Newtonian physics ① is the level where you try to attribute wave or particle behavior to an object.

The more modern view has forced the issue--knowing is more constructive of the object, like in Kant, or with the productive imagination. The mathematical formulation in modern physics leads inexorably to the idea that the subject is the creative force. To speak of a person knowing, you must go to another level. You can't speak of a particle in isolation. In quantum mechanics isolated objects cannot be meaningfully addressed. This is the reflective level of consciousness (KCB--subject/object or feeling). The phenomena at the reflective level are grasped with respect to the content.

* Another way of viewing this is by using the 12th House Nidana Chain, and the four intellects.



[FIGURE 1982 0212b-6. Nidana Chain and Four Intellects. Int. = Intellect. Computer generated by NT from 1982 0212 and 19 25 26 PHY 07R21.PDF.]

The whole thing is in Soul, and something is coming in from the outside; the hylic intellect goes out to grasp that. We won't know the forces in themselves, but only as the Soul knows them. (How much of NAMA and RUPA there is determines what MANAS + 5 contacts, feels, etc).

Think of yourself as a knowing person, the knowing produces the form you perceive. Your KWF (represented by the Rulers, Exaltations, Detriments) produce RUPA, produces the feeling of hardness you experience. It has to be associated with something that compels us to believe in that production, i.e., what's needed is the intellectual force or the demiurgic energy of the Soul.

ETHER is active intellect = AVIDYA and the Spark of the Bodhicitta = VIJNANA.

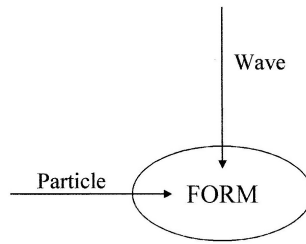
The hylic intellect is what grasps NAMA-RUPA, MANAS + 5, CONTACT, and takes the forms in the Soul.

The acquired intellect, FEELING, DESIRE, ATTACHMENT, is the forms, the etheric formative forces.

The sensible manifestation is the sensible intellect.

Insofar as what our Soul thinks our intelligibles, this is the source of the power and the understanding--this produces FORM or RUPA.

Within the Soul are the forms or ideas, which are living images of ideas in the intellect, and which embody the ideas of the intellect in terms of flesh and blood. For example, if you strip away all the perceptual qualities of the python, what is left is a living image, which is self-identical with itself. This is in the active intellect. This is the way the Egyptians saw each species representing the embodiment of a certain idea.



[FIGURE 1982 0212b-7. Particle, Wave, Form. Computer generated by NT from 1982 0212 and 19 25 26 PHY 07R21.PDF.]

To recapitulate in brief: in the FORM itself you can take either view, but they both meet here--that here is the moment that the data is converted into a piece of knowledge, and until that moment arises, all you have is a matrix of possibilities.

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