THE LIMITS OF SCIENCE: ON THE INEFFABILITY OF THE QUALITATIVE PSILOCYBIN PHENOMENOLOGY

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Psilocybin has been described as a "consciousness expanding" compound. This generic definition has far-reaching ramifications because consciousness lies at the very core of human experience. Moreover, science itself is a cognitive activity which takes place *within* consciousness. From a purely rational point of view it is an undeniable fact that consciousness is primary to all human activities (including thought itself). This statement is a logical necessity which can be formalized as a valid syllogistic argument. Without consciousness there is no thought, without thought there is no science. Ergo, the expansion of consciousness has deep implication for the discipline of science as a whole, especially in the context of epistemology and ontology. The profound effects of psilocybin on human consciousness are not easily communicable through abstract symbol systems (i.e., language) and the term "ineffable" is often used to describe this linguistic limitation. That is, the qualitative phenomenology of psilocybin cannot be described in words, especially to someone who is not familiar to its phenomenology due to subjective first-hand experience (the "epistemic gap" can not be bridged by linguistic tools). The problem is reminiscent of a classical *Gedankenexperiment* in the philosophy of mind which is usually termed "Mary the colorblind neuroscientist" (the "Knowledge Argument" formulated by Jackson, 1982). This highly influential thought experiment goes as follows:

Mary is a brilliant scientist who is, for whatever reason, forced to investigate the world from a black and white room via a black and white television monitor. She specializes in the neurophysiology of vision and acquires, let us suppose, all the physical information there is to obtain about what goes on when we see ripe tomatoes, or the sky, and use terms like "red", "blue", and so on. She discovers, for example, just which wavelength combinations from the sky stimulate the retina, and exactly how this produces via the central nervous system the contraction of the vocal cords and expulsion of air from the lungs that results in the uttering of the sentence "The sky is blue". ... What will happen when Mary is released from her black and white room or is given a color television monitor? Will she learn anything or not? (Jackson, 1982, p. 130)

The same argument holds true for the phenomenology of psilocybin. Let's imagine a super-scientists in the year 3082. He knows *everything* about the neuronal and psychological processes which underpin perception. He knows everything about quantum-process at the microtubular level and how they relate to various states of consciousness. He knows everything about genes and how they relate to all the neurotransmitter systems in the human brain. He is an absolute expert in neurochemistry and and there are no more open questions about the complex interactions between various neurotransmitter systems and how they interact with human consciousness. All this is objectively known. The question is: Does he learn anything new when he takes psilocybin himself? Does he gain additional first-hand knowledge which would otherwise be unavailable to him? We leave the question for the reader to ponder... The question has far-reaching epistemological ramifications. Can science possibly give an accurate description of the psilocybin phenomenology. Specifically, is it possible to describe the qualitative experience in linguistic terms or does science meet its final frontier - the frontier of ineffability? Is it even possible to conduct proper scientific investigations of psychedelia without entering the deep epistemological waters of first-hand experience? And is the neuroimaging of psychedelic states just an advanced form of phrenology? What did Hume and other great thinkers exactly mean when they talked about "arm chair philosophy". Would they apply the same argument to uninvolved and cautious psychedelic research? Is any neutral and allegedly objective scientific investigation *just* "armchair science"?

"To ask the 'right' question is far more important than to receive the answer. The solution of a problem lies in the understanding of the problem; the answer is not outside the problem, it is in the problem."
˜ Sri Jiddu Krishnamurti

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