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Planck Versus Poe: Scientific and Poetic Approaches

Anita Kelkar

The British theoretical physicist, Paul Adrien Maurice Dirac, wrote that "In science one tries to tell people, in such a way as to be understood by everyone, something that no one ever knew before. But in poetry, it's the exact opposite."¹ This leads to the inevitable question: Do both approaches suggested in Dirac's statement enjoy equal success in expanding human knowledge?² First it is necessary to explain the individual approaches of science and poetry. From there I hope to discover if an expansion of human knowledge actually occurs from these approaches. However, the phrase "human knowledge" is ambiguous and can mean different things. Human knowledge can refer to the knowledge obtained by humans about the world around them or it can represent knowledge about themselves. After taking into consideration every aspect of Dirac's statement, I hope to come to a conclusion of whether both approaches stated in the quotation enjoy equal success in expanding all aspects of human knowledge.

"In science one tries to tell people, in such a way as to be understood by everyone, something that no one ever knew before." According to Merriam-Webster science is defined as the "systematic acquisition of knowledge". This definition is the basis of the scientific method, which is the core of every researcher's methodology. A researcher's approach to a possible study begins with a review of background literature that will ultimately culminate in a hypothesis. This is followed by a methods section and the actual experimentation, analysis, results and conclusions. Hence, when one is trying to relay scientific discoveries, one must provide data and statistical analyses to support one's statement. This scientific approach has ultimately led to the evidence based medicine movement that dictates our approach to diagnoses and treatment today. Along with quantitative evidence of her discovery; the researcher must further prove that the conclusion is generalizable under all similar conditions. Generalizable information is an essential component for patient treatment. For example, if a certain cancer drug is proven to remain efficacious for all situations under all circumstances then the acceptance factor of that drug increases. Since there is no room for the statement to be denounced, it must be accepted.

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It is also important to explain this "systematically obtained knowledge" in such a way that it is understood precisely and unambiguously. The foremost goal of the scientific approach is for newly discovered information to be understood by all and accepted. The information must be easily understood by the audience, which requires the information to be worded in accordance to the ability level of the information receiver. This can be seen in the information dissemination that occurs after a groundbreaking scientific discovery has occurred. When new discoveries are made in cancer research, the description of the discoveries written in JAMA will be more in

-depth and the language more technical than when the same discovery is relayed to AP Biology students in high school. The expressed information must be clear, precise and have no room for doubt or misinterpretation. It is only after the information has been conveyed in a precise manner, will the audience understand what is being said.

The successful dissemination of scientific information requires the public to accept what is being said, for the public has gained knowledge only when the new information has been accepted. In the clinical sciences, lack of knowledge dissemination or acceptance can have grave consequences. A prime example of this can be seen in the controversy regarding the supposed link between the MMR vaccine and autism. One of the authors of the Wakefield study that initiated the link between vaccines and autism has recently stated “There is now unequivocal evidence that MMR is not a risk factor for autism -- this statement is not spin or medical conspiracy, but reflects an unprecedented volume of medical study³.” Even before this statement, despite the volumes of data and scientific knowledge disproving the link between autism and vaccines, millions of parents refused to accept this knowledge as true. Hence parents had been ultimately committing a harmful disservice to not only their children, but a disservice to the health of the public.

The scientific approach for expanding human knowledge requires precision, clarity, evidence and generalizability of the information conveyed. Ultimately, regarding the expansion of the human knowledge, the strength of the scientific approach lies in the fact that information is presented in a clear, logical and unambiguous fashion, and is supported by analytical evidence.

The second part Dirac’s statement requires the analysis of a poet’s approach in extending human knowledge. Since poetry attempts to convey the poet’s ideas that may not be necessarily something new or unique or even easily understood, this method can be considered as al-

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most polar opposite of the scientific approach,. In poetry instead of tangible and scientific facts, the "human knowledge" that is addressed, is the knowledge about human beings themselves. Poetry is defined as “writing that formulates a concentrated imaginative awareness of experience in language chosen and arranged to create a specific emotional response through meaning, sound, and rhythm.”³ The poetic approach can be divided into two areas: one being how the poet states what she wants to say and the other is the content being of what she says. Each poet has his own unique style and is not required to conform. How then can one say that a poetic approach expands human knowledge? Unlike a scientist, a poet

does not necessarily write for the purpose of disseminating new information. A poet writes to express his own emotions, describe an experience, provide inspiration; a poet’s intent is limitless. Since the poet is not necessarily conveying a set message, the reader is free to interpret a poem in a way that appeals to himself. Unlike science where misinterpretation of conveyed information can have serious consequences, poetry is open to many interpretations; interpretations that the author may not have initially intended. One of the differences in interpretation can be due to the fact that it may be difficult for a person to understand an emotion they have yet to

experience. For example in Edgar Allan Poe's "A Dream" a heartbroken lover might see the plight of unrequited love, while a widower might see solitude and loneliness in it. A poet often makes a reader introspective and in doing so helps the reader explore the different facets of his being. Poetry has the ability to reveal to us, the reader, what is hidden and often what we refuse to see about ourselves. It may not be rash to say that poetry may be the mirror to one's soul.

Human knowledge is surely expanded by the poetic approach. The poetic method forces one to extend his imagination and enter the crevices of his own soul. Poetry evokes emotions and reactions, which subsequently give one insight into her thought processes. Not only does it reinforce feelings that may be already present, but poetry also provides a passage to emotions that one might not have yet experienced. It allows the reader to feel the poet's pain, loneliness, love or lust, or touch the tip of emotions that one has yet to embrace. The poetic approach expands human knowledge by ultimately developing or heightening one's self-awareness. If this method can expand this version of human knowledge, then this process to self-discovery is extremely critical as well.

After discussing both approaches of two distinctly different fields it is clear that the each method is successful in its own right. The scientific, objective approach induces a growth of knowledge regarding the observable physical world of humans while the subjective poetic approach focuses on self awareness. Both approaches are equally successful in expanding their angle of the already nebulous concept of human knowledge. Although the types of human knowledge ascertained are distinctly different, the approaches are not mutually exclusive. The scientific approach grants us information of our physical surroundings, and the interpretation of this knowledge helps us to gain insight about ourselves and our existence. Conversely, knowledge from self-discovery is necessary to discover our capacity and capability to deal with the outside world. Hence I must end here, for the only thing that remains certain can be summarized by the writer Samuel Coleridge, "During the act of knowledge itself, the objective and subjective are so instantly united, that we cannot determine to which of the two the priority belongs."⁴

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