

Science and Metaphor

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Danesi (2004) defines a metaphor "as the use of a word or phrase denoting one kind of idea in place of another word or phrase, suggesting a likeness between the two" (p. 116). When I first thought about the question of this essay, "Do you think that all scientific knowledge is forged by metaphor?" I was initially confused by the wording, mainly by the word "forged." When I think forged, I think of it negatively, such as forging a check. This wording led me to consider the question implied if I felt that scientific knowledge was false due to metaphors. Because of this, I looked up synonyms for forged and found words like create and establish. These definitions changed the meaning of the question entirely and gave me my answer. I do not think that metaphors create all scientific knowledge. I believe that scientific knowledge, when initially written, in its proper scientific form with technical language. Scientists then take this specialized language and use metaphors which are "documented across societies as a fundamental source for understanding abstractions such as thinking, belief, understanding, and knowledge" (Danesi, 2004, p. 124) to explain these terms more easily to the general public.

According to Carpi and Egger (2011), "A scientific way of thinking inherently includes creativity in approaching explanations while staying within the confines of data...These different ways of thinking are complimentary-not in competition-as they address different aspects of the human experience". I think this explanation makes a great point in explaining my stance on this issue. While scientists have to keep their theories and explanations within the realm of scientific knowledge, they have essentially used metaphors to instill this knowledge into people who cannot comprehend the scientific terms used in original articles.

One primary example I can think of is "The Big Bang Theory." It is far easier for people to understand that the world as they know it was created from a big, sudden explosion rather than

the scientific explanation of a combined ball of matter with intense density and intense heat expanded and finally became so hot that it exploded and created the universe as we know it. Most people would not grasp that concept; however, people can quickly grasp the abstract idea that a sudden big bang created our universe, and most do not question it beyond that.

Another thing I can think of is when doctors and scientists refer to cancer as aggressive. They are essentially saying the tumor is malignant and potentially life-threatening; however, these scientific terms can be confusing and more challenging to wrap your head around than picturing that your disease is aggressive. I recently talked to a family member diagnosed with cancer and referred to her tumor as aggressive rather than malignant. By imagining cancer as almost a human with an aggressive personality, you are more apt to think you can fight it. If you hear you have a malignant tumor, you are likely to feel hopeless.

These two examples are why I both agree and disagree that metaphors forge all scientific knowledge. The original data and research is written and explained in scientific terms. When scientists present their knowledge to those who are not scientists, it is easier to use metaphorical reasoning to picture metaphors more quickly than complex scientific terminology. Also, with things like our health, we are more comforted when we feel as though our illness has a personality or human-like qualities because we feel they are on our level and we have the ability to fight them.

References

Capri, A., & Egger, A. (2011). *The nature of scientific knowledge*. Visionlearning.

<https://www.visionlearning.com/en/library/Process-of-Science/49/The-Nature-of-Scientific-Knowledge/185>

Danesi, M. (2004). *Messages, Signs, and Meaning* (Third ed.). VitalSource Bookshelf.

<http://bookshelf.vitalsource.com/#/books/9781551308296>