

“LABELS ARE A NECESSITY IN THE ORGANIZATION OF KNOWLEDGE, BUT THEY ALSO CONSTRAIN OUR UNDERSTANDING.” DISCUSS THIS STATEMENT WITH REFERENCE TO TWO AREAS OF KNOWLEDGE.

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“Labels are a necessity in the organization of knowledge, but they also constrain our understanding.” Discuss this statement with reference to two areas of knowledge.

“What's in a name? that which we call a rose. By any other name would smell as sweet.”¹

In William Shakespeare's famous play, *Romeo and Juliet*, Juliet argues that it does not matter that Romeo's name is "Montague", the family name of her family's rival house, as it does not affect who he is. The rose analogy seems to imply that the names or labels we assign to things and people do not influence the way we perceive them which contradicts the title's claim that says, “Labels are a necessity”. Labels attempt to lock everything in little boxes in an attempt to categorize justified true beliefs according to some fixed rules. These rules are dictated by the areas in which knowledge lies. But what if a certain thing does not fit into a single box? What if it doesn't fit into any box? Do these boxes confine our scope of understanding or do they act as magnifying lenses that give us a clearer picture of the thing being labelled? To understand the effect of labels on the interpretation of information, we must first understand their purpose in different areas of knowledge. The real issue lies in the fact that labels often fail to fulfil their purpose which is highlighted in this essay through the discussion of labels in the areas of knowledge, arts and natural sciences.

The actual conceptual knowledge behind a work of art can be obscured by its label as it might conceal the artist's true intentions. More than two thousand years ago, Plato and Aristotle formed a system of classification by dividing literature into 'genres' like poetry, drama and, prose and ever since then, the notion of genres as labels has transcended literature and been applied to other art forms like music and film too. Our evaluation and perception of the artwork is directly influenced by its label. However, the meaning,

validation and purpose of these labels have been questioned and challenged by philosophers like Benedetto Croce and Jacques Derrida² who believe that they inhibit originality and set up erroneous standards of value judgment as the readers or the audience look at the artwork through the lens of the label which might lead to confirmation bias. Since the label or the genre predefines the oeuvre, it sets up an expectation in the minds of the reader or the observer which does not allow them to fully utilize their intuition and emotion to understand the author's purpose. For instance, the books in the series "His Dark Materials" written by the author Philip Pullman, were labelled as 'children's books', however, the author revealed in an interview³ that confining his books to that category prevented the readers from truly understanding the deeper issues of religion, science and, spirituality that he tried to convey. Thus, labels in literature, poetry and any other art form do not let the audience appreciate the artist's true purpose as their understanding is confined to the paradigms created by the labels that form a sort of knowledge filter.

At the same time, the label assigned to an artwork might not play a major role in the transmission of knowledge since the readers/observers rely on the emotional connection established by its themes to gain an understanding of the artist's purpose, instead of relying on the label. Literature and poetry use emotive language to appeal to the reader's emotions, and no matter what genre the work falls into, the reader is captivated by its aesthetic and compelled to look beyond the boundaries that the label of genre sets for the artwork. What the work is labelled as often has nothing to do with its content and narrative, thus its plot and themes are what the reader looks at to understand the underlying message that the author tried to convey. For instance, the novel *The Hitchhiker's Guide to the Galaxy* by Douglas Adams has been labelled as 'science fiction', 'comedy', 'satire' and even 'drama', but the purpose of these labels is not to describe the novel's content, it is to advertise the novel in a certain way. The plot of the novel reveals the real themes that the

author has tried to convey, like the quest for the meaning of life, and the importance of happiness which readers around the world connected to. Therefore, labels play an integral role in branding an artwork, but the brand does not always affect the reader/observer's understanding of the conceptual or moral knowledge transmitted by it.

Labels in natural sciences often fail to atom appropriately define a scientific term as they are created based on a pragmatic approach and are constantly revised due to new observations and perspectives. According to Albert Einstein, "scientists should be willing to go wherever experiment dictates and adopt whatever works"⁴. Knowledge in natural sciences is based on the observation of natural phenomena, and scientific language is nothing but an interpretation of these phenomena. In his classic paper, "Beliefs about science and beliefs about language", Sutton explains how using language as merely a labelling system instead of an interpretive one is an improper way to understand scientific concepts as it ignores the factor of human involvement in gathering scientific information.⁵ Scientists contribute to the shared knowledge in the scientific community by using their personal knowledge to create labels according to 'whatever works' for them and unless their conjectures are refuted, scientific realism allows them to be taken as absolute truths. The problem here is that these refutations occur quite frequently in science and with each refutation, the label for the scientific phenomena or concept is changed. This begs the question, "How trustworthy are labels in natural sciences?". Not only are these labels affected by the errors in a scientist's methodology but also by the limitations he/she has. As a chemistry student, I often come across scientific labels that fail to fulfil their purpose. For example, the model for the structure of an atom has had several labels in the history of science, "Billiard ball model", "Plum pudding model" and "Planetary model", to name a few. Each of these labels was assigned by different scientists who came up with different theories based on their own experimental observations and they all failed to aptly describe

the atom as each theory was falsified by the subsequent one, leading to a change in the label.

On the flip side, it can be argued that scientific language is derived from empirical evidence and the scientific labels aid in generalization, thus facilitating communication between international scientists. There is no room for ambiguity in scientific language as it is arrived at by scientific method and therefore, labels in natural science add to our understanding of the concept or phenomena because these labels can replace a lengthy description with a phrase that gives an insight into the meaning of the thing that is being labelled. For example, all elements in the periodic table are labelled as either metals, non-metals or metalloids. By looking at the label that is assigned to an element, we can get to know a lot about its chemical and physical properties since all the elements that share the label also share some basic characteristics. This classification was not based on hasty generalizations, instead, it was arrived at by experimentation and empirical evidence. Moreover, these labels are independent of the culture so the idea of relativism doesn't apply to these labels since they are assigned to objective facts of the universe. In February 2021, Physicist Nikolai Brilliantov and his colleagues at the University of Leicester discovered a new type of particle that had very unique and confusing properties and they labelled the phase of these particles as a "swirlonic state of matter"⁶. Not only does this label classify the phase as a state of matter, but also describes it as 'swirlonic' due to the unique swirling motion of the particles in the phase. This is a perfect example of how scientific labels provide a brief description of the thing that is being labelled, along with categorizing it, thus making it easier for scientists around the world to draw analogies with other things in the same category.

It can be concluded that labels serve different purposes in different areas of knowledge. While the organization of knowledge might be their primary purpose, they also aim to add

substantive information to areas of knowledge like natural sciences and facilitate communication among professionals from around the world. When used merely to organize and classify information, like in arts, they might prove to be less useful than when used to describe phenomena based on empirical evidence in natural sciences. By no means are labels a necessity, instead they are a convenience for the people who assign these labels but might prove to be deceptive or misleading for the people who gain knowledge through the lens of these labels. From the genre assigned to Philip Pullman's novels to the name assigned to the structure of an atom, implications of assigning labels can not only severely restrict our scope of understanding, but also lead to confusion and chaos when different labels are applied according to different perspectives. On the other hand, genre labels can be instrumental in advertising artworks and labels for scientific phenomena can add to our understanding within an interpretive paradigm.

Maybe the problem lies not in the label itself, but in our interpretation of the label. Instead of looking at labels as definitions, we must look at them as tools that provide context to knowledge, because they are not the key to our understanding of the world around us.

Bibliography

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⁵ Sutton, C. *Beliefs about science and beliefs about language*. *International Journal of Science Education*. 1996, 18(1), 1–18. doi:10.1080/0950069960180101

⁶Sci-news, "Physicists Discover New State of Active Matter", Feb 12, 2021, <http://www.sci-news.com/physics/swirlonic-state-09348.html>