"Seek simplicity, and distrust it" (Alfred North Whitehead). Is this always good advice for a knower?

As knowers, we are in constant pursuit of knowledge and more often than not we hunt for simple, ordered and clear justifications to back our beliefs. Whitehead seems to be emphasizing the importance of simplicity as the fundamental stepping stone to truth. The most appealing interpretation of his saying is that once a knower has found a simple explanation, he/she should distrust it, find its flaws and rebuild an explanation on it so that an idea evolves rather than discarding it once and for all. At the same time, the quote may imply that simple things have a higher likelihood of being untrue; but this doesn't eliminate the possibility that a simple idea can be true. Nevertheless, the dictum gives rise to numerous knowledge issues which we shall explore and evaluate: how do we know what is simple; and principally should a knower always distrust simplicity?

The first question that comes to mind when one reads the saying is where the distinction between simplicity and complexity lies. What one knower may perceive as simple may be dizzyingly complex for another, which highlights a serious limitation of perception. Thus simplicity – and therefore complexity – are not intrinsic, but are in fact relative and subjective. This is especially evident between different cultures. For example, in my local East African language Kiswahili, 7 a.m. in international format is called "saa moja" – literally one o' clock – because it is one hour after the sun rises and an hour after people wake up. Foreigners find this translated format astonishingly complex since they are accustomed to the notion of clocks starting at midnight.

Also, language could have an effect on simplicity. If relatively complex ideas were to be conveyed in language that everybody considered simple, it would seem that more people who previously found the idea complex would now find the idea simpler. Conversely, if simple ideas were to be portrayed in language that everybody found complex, more people would find the idea puzzling. At the same time, a knower's reasoning ability may also play a part in differentiating simplicity and complexity. Whilst a few high school students find advanced concepts such as physical special and general relatively simple, the rest of us find it complex because it challenges our ordinary thinking and contradicts the every-day intuition that space and time are absolute. This draws attention to the fact that a knower's perception of simple depends on their capacity to grasp the notion and therefore simplicity is not absolute, but comparative.

Once the nature of simplicity has been evaluated, it is essential to ask if a knower should always doubt simplicity. The process of paradigm shifts through history reveal, in many instances, that simplistic ideas are false conclusions. The Greeks, for example, modelled the atom as a spherical solid. This simple idea was universally accepted as true until the subsequent empirical discoveries proved that the atom was much more complex and was itself made up of elementary particles. A further attempt to model the atom based on simple existing knowledge on planetary orbital motion was elegant but failed as well. Bohr's consequent model based on the hydrogen atom – the simplest atom – worked perfectly well but fell apart when tested on more complex atoms (Lazar 426-429). The presently accepted model involves a much more complex concept of uncertainty in electron velocity and position. This example exhibits the need to distrust simplicity in the quest for knowledge, and that disbelieving and reviewing basic ideas leads to the evolution of more complex ideas that approach truth.

Moreover, the human mind persistently tries to indentify simple patterns and classify knowledge into straight-forward and discrete categories. As in the contemporary case of global warming, temperatures have risen since the Industrial Revolution accompanied with a corresponding rise in the concentration of carbon dioxide in the air (Schneider 304). However, although most people believe that the increasing carbon dioxide levels have caused global warming, this simplistic confidence can be utterly wrong. The *ergo hoc propter hoc* fallacy may have been committed by confusing causation with correlation (Giddens and Griffiths 82): the fact a positive correlation exists between the two measurements doesn't necessarily mean that one caused the other. Even if the fallacy hasn't been committed and there is sufficient evidence to prove that increased carbon dioxide in the atmosphere does contribute towards global warming, there is a high likelihood that carbon dioxide is not the sole cause of global warming, and that there are other variables outside the scope of this crude analysis. Once again, trusting simplistic lines of reasoning may prove to be illusory, and thus Whitehead's saying should be heeded.

Yet, seeking and distrusting simplicity may not always be in the knower's best interest. Just as creating overly complex ideas may make it exceptionally hard for a knower to interpret things and gain knowledge, simplification may help a knower understand intricate relations. Most of traditional western economic theory is based on the postulates of perfect information (Biddle, Davis and Samuels 320), and no external interference on consumers and suppliers such as coercion or regulation. Although these postulates are exceptionally idealistic – there are always some asymmetries of information and/or some forms of monopolistic or elitist powers that distort the market – and the economic theory is only perfectly valid in exceptional circumstances, the theory models most conditions sufficiently. If all imaginable economic, political, social, demographic and other variables were taken into account and made to hold true unconditionally, the model would be terrifically complicated. Thus in this case, a simplistic idea can be used to analyse and create economic policies and has a great advantage over its complex counterpart because it is much more feasible, and is relatively accurate at the same time.

Unfortunately, simplicity does prove to be deceptive. In the mathematical field of statistics, raw data is collected, and then organized for further analysis. To aid in simplifying data analysis to generate valuable information such as trends and variations, we often make use of averages. Using statistical averages usually means considering only the middle 50-95% of the data. Thus a considerable amount of data on both tail-ends is lost in this process. Such simplicity may need to be distrusted because the elimination of information could be potentially misleading. Eliminating data by using only averages means that only simplistic strategically selected data is analysed, which may lead to hasty generalizations and stereotyping.

Nevertheless, it is worth noting that an important implication of Whitehead's dictum is that in order to distrust simplicity, we have to revolutionize the way we interpret things by trying to find imperfections and errors in everything. Scrutiny at such an extent is not absolutely necessary in daily life and would make it hard for a knower to function under "normal" circumstances and may create unhealthy conflicts between knowers. But an even more crucial inference can also be made from the Whitehead's saying. John Locke wrote that "Combining several simple ideas into one compound one, and thus all complex ideas are made" (Locke 94). This is an argument that a complex idea is in fact an amalgamation of several simple ideas. In this case Whitehead's dictum implies that because a complex idea's simplistic fundamental building blocks cannot be trusted, we cannot trust its complexity

either. And since all knowledge has to be either simple or complex, and neither simplicity nor complexity can be trusted, nothing can be trusted at all.

Whitehead makes an important statement in distancing simplicity from truth. His saying seems to hold true for most scenarios, but it should nevertheless be carefully questioned by the knower since it has repercussions as wide as making all knowledge untrustworthy. All that is simple is not necessarily untrue and therefore simplicity need not be completely distrusted. In fact, since distrusting simplicity leads into a regressive spiral of searching for complexity, simple truths may be abandoned for more complex falsities that direct a knower farther and farther away from absolute truth. Instead, I propose that knowers evaluate individual concepts and their proximities to truth using the ways of knowing before deciding on whether simple – or complex – ideas can be trusted or not.

1350 words

Bibliography

Biddle, Jeff; Davis, John B and Samuels, Warren J. A Companion to the History of Economic Thought. New Jersey: Blackwell Publishing, 2003.

Giddens, Anthony and Griffiths, Simon. Sociology. Edition 5. Cambridge: Polity, 2006.

Lazar, Miriam A. Let's Review: Physics-The Physical Setting. New York: Barron's Educational Series, 2004.

Locke, John. An essay concerning human understanding. London: Printed for Thomas Tegg, 1841.

Schneider, Stephen H. Global Warming: Are We Entering the Greenhouse Century? Cambridge: James Clarke & Co., 1990.