

PHILOSOPHY OF CHEMISTRY

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Chemistry is a division of science that deals with the study of the composition of matter and its transformation (Woody, 2014). The philosophy of chemistry comprises of two major segments in which the first part deals with conceptual issues emerging within the field of chemistry that are carefully analyzed and summarized. Much of the problems that originate within chemistry include substance nature, atomic concepts, and the chemical bonding between them. The second segment deals with secondary topics relative to science that include the percentage of reality and its explanation, proving right or wrong and the modeling.

Human basic understanding of chemical substances is the concept of the element and atomic bondages. Every material comprises of atoms of elements such as hydrogen in conjunction with oxygen (Albritton, 1957 pp 701). These particles form the base foundation of the little structures of larger compounds and hence are the principal units the analysis of chemistry. However, the reality within the atomic chemicals became controversial up until the begging of the atoms which form the base foundation of the little structures of larger compounds and hence are the principal units the analysis of chemistry. However, the reality within the atomic chemicals became controversial up until the beginning of the 20th century. Before then the saying "fundamental building blocks" had always remained contradictory.

Even to date, the claims that every substance comprises of elements does not provide enough guidance about their primary status of items and how they should be differentiated each to its characteristics. In this segment to start with the issue of elements which in history famous chemists have given definitions of something is an element. They explain that an element is a substance under which can remain and exist in its secluded state and cannot be broken down further for analysis (Aquilante, Autschbach, Carlson. et al. 2016 pp 510). Chemists also describe an element as a component of a multi-element substance. These two descriptions of an item vary

in the definition in two ways; in the earlier, elements are identified procedurally. They are ingredients in a mixture that cannot be further separated. The second description of an element is more of theory setting elements as components of composite bodies. The modern understanding of elements affirms that they are components.

In accordance to Scerri, (2007) the initial conceptual analysis that concerns matter and the transformations that it undergoes come in an Aristotelian tradition. In modern chemistry, the concentration of the theories of Aristotle was the nature in which matter exists and the changes it undergoes. He gives the original writing of principles of chemistry; on generation and corruption and different parts of physics.

Aristotle identifies that most unexceptional materials are comprised of several substances though he would explain that a few of them are made up of single explicit material. He, therefore, needed to give criteria of purity that could separate and individualize those clear and pure substances. He concluded that the material considered pure would be comprised of similar parts at all levels. Therefore, meaning that if they were combined the compound formed should be uniform at all stages. Every single part of the complex was to be similar to the whole of the compound.

Chemistry mostly would concentrate on more than the constructive block substances. It tries to explain the causes of changes in materials and transforms them into other states of elements. Aristotle contributes to the first crucial analysis of the process of transformation differentiating between the process in which one substance exceeds and displaces the other in proper mixing. The earlier is the closest change of phase while the latter being the chemical combination.

Aristotle explained that proper mixing occurs when substances of amounts that are comparable are put together to result in one element in this case known as the compound. Accordingly, the materials we come across are a result of mixtures of elements and this mixture otherwise compounds have the characteristic that there are ingredients in them that form the compounds (Gill, 1991). Aristotle argues the question of what happens to the original elements or components when the compounds are formed that they can be obtained back by further transformations. It's presumable that he knew that salt and water can be extracted from seawater and also metal obtained one after the other from the alloys or rather the compounds they form. He further says that complex compounds can quickly breakdown is otherwise known as decomposition.

Observation could further explain that the mixed substances can often be divided into individual parts. Therefore, according to chemistry, a composite cannot be named as an element. Not every individual substance can be said to be an element but only that which cannot be divided into different bodies in their various form (Freudenthal, 1995). With the view to the more of modern chemistry, it would be obvious to think that the varying degrees in the primary qualities of humidity and the state of warmth that give features of different bodies originate from combining different amounts of the various elements.

Aristotle makes a brief reference to this opinion when he shows the uniformity of a compound by a combination by sitting out that the part of the compound contains a similar ratio of its ingredients as the whole compound. The existing laws of non-changing and number of ratios handle a conception of proportions of the element there are understood based on the mass idea. The concept was not available to Aristotle.

It is therefore agreeable in theory that Aristotle did define elements based on the conditions they exhibited in their isolation and explained that compounds contained different elements. The properties, however, those elements display in isolation, not any part of which a compound would include. With this in mind the question of how then does it become possible to obtain back the elements from the compounds that they make up when mixed.

It is of course not simple to understand what factors would influence a complex to break down into its original elements on his theory which present wholly driven to proving how stability comes about in a mixture. The existing type of combination of elements process does not appear to apply. How Aristotle's theory would explain obtaining of water and salt from sea water is a questioning that would be contradictory to it. Nonetheless, he advocates proving the presence of the two elements problem would be to differentiate them from the properties both have in their isolated and mixed form.

Tümay, (2016). Aristotle just provided the philosophical foundation for all ensuing discussions about the elements, substances considered pure and even combinations that result from chemical reactions. He affirmed that every pure substance is homogenous and is made up of elements fire, air, water, and earth. These items did not prove to be present in the said elements. There was only the potential of their existence which would only revelation was through further transformational process

However, another chemist commonly known as the father of modern chemistry Antoine Lavoisier provided many elements that learners of chemistry in the modern world would come to terms with and understand (Scerri, 2015). His list, however, is not similar to the modern one. Some of the substances including hydrogen the gas oxygen were referred to as compounds by the

father of chemistry despite us regarding them as gases and their gases molecules. The rest of the items were remains of the Aristotle objects which do not exist in the new modern chemistry.

What is specifically of importance about his system is the discussions he brings about how the basis of elements of particular bodies is determined. The fundamental physical principle of matter conservation that states that matter can neither be destroyed nor created in a chemical process reported here is the same old one as Aristotle. The mass in total of what is in production must add up from that of the elements used as reactants, and if it cannot be identified easily by sight, then it must have other reactants that are less visible (Ascoli, and Wheeler, 2016). The principle provided Lavoisier with the ability to set what was originally Aristotle's opinion of substances in their simplest form to more productive experimental purpose. After his direct rejection of the theories, he put it that if the term element is applied to bring out the idea of this latter point in which can be reached through analysis. Therefore, one must admit that like elements, all bodies that are capable of being reduced to substances by whatever means necessary through decomposition. Hence it means that elements can be identified as the smallest of components bodies that can be produced on experimental procedures.

) Despite the relative nature definition, Lavoisier was free to give a speculative nature of earth and its elements similar to the formation of the oxides of metal in which the decomposition of oxygen was a major necessity for it to occur. Therefore, Lavoisier developed an imperfect conception of elements as based on theoretical last stage of analysis grounds. Lavoisier's sheet of the various elements was made out errors and explained the more by the discovery of other new items that were disclosed in the 19th century. According to Ascoli, and Wheeler, (2016) Humphrey Davy (1778-1829) set apart some of the elements such as potassium and sodium through the process of electrolysis and proving that the earth described by Lavoisier was indeed

a compound. Hence, the changing and increasing number of elements brought for recognition for the necessity of systematization. Lots of trials were made although John Newlands revealed an ancient elaboration that was very influential through the provision of the first periodic table containing the sixty-two elements out of the total sixty-three that were known by then.

In conclusion, much of the existing theories in research by chemists involved the application of an amount of mechanics in chemistry. While as the solutions to many mechanical statements of a chemical situation have not yet been achieved although advanced physics and mathematics applied have possibly made it easier to calculate the chemical characteristics of lots of molecules with accuracy.

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