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## Dissimilarities Between Hypothesis And Theory

If you've studied science, or you're studying science, you've probably asked yourself a hundred questions about the difference of things. You would have asked the difference between law and principle. You would have wondered about how compounds and mixtures are varied. You would have questioned the distinction between weight and mass. Science, admittedly, is a complex subject because it encompasses the entirety of the universe. The universe definitely is the most complicated and multifaceted topic one can ever dig into, and science helps us understand it better and better as we study the field.

One comparison you may have made is on the difference between theory and hypothesis. What's the disparity between the two? What do these concepts mean? In this article, we will define each term and lay down their characteristics, so you could easily tell their variances. If you're a student, having a clear grasp of these two will make you appreciate the theories and hypotheses better.

### Definition of Theory

You may have seen a hundred theories and wondered what the dictionary definition of theory is or what the difference between hypothesis and theory is. A theory is a profound thought and rationalization to come up with a general statement about an event or occurrence. The term theory can be used both in scientific and non-scientific purposes. However, it is more often used in the academe. In order to come up with a theory, a scientist employs the scientific method. That is, they identify the problem, gather data, come up with a hypothesis, test the hypothesis, and coming up with a conclusion. From that conclusion and through repeated research, the theory can be formulated. Usually, it needs acceptance by the scientific community before it can formally be accepted globally and be taught in schools.

Contrary to the popular belief, the word "theory" does not refer to an unvalidated stipulation or untested conclusion. A scientist goes through a long process and a lot of criticism until his/her theory is tagged as accurate. One of the most well-renowned theories known to men is the theory of evolution by Charles Darwin, which explained the origin of men. As of date, the theory is still not widely believed in due to its religious implications.

If a theory is supposedly experimented, validated, and confirmed, what, then, is the difference between a theory and a hypothesis? Let's define a hypothesis to find out.

### Definition of Hypothesis

A hypothesis is less often used in regular conversations than a theory. It is more often associated with scientific work than the latter. By definition, it is a proposed rationalization of an event or occurrence. As mentioned in the previous section, it is part of the scientific method. When a scientist or a researcher comes up with a scientific question, he/she gathers data and formulates a hypothesis or an educated guess based on the collected information. If he/she would like to transform that hypothesis into a theory, he/she would have to perform the rest of the steps in the scientific method. Only upon proving or disproving the hypothesis will a theory

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be possible. Therefore, a theory differs from a hypothesis in that a theory is already confirmed scientifically whereas a hypothesis is yet to undergo the confirmation process.

A hypothesis can be classified into the following: null, working, and alternative. A working hypothesis has been conditionally or provisionally accepted to be the basis of continued research on the matter. Null and alternative hypotheses are more often used in statistical research, with the ultimate goal, usually, to reject the null hypothesis and confirm a relationship between factors being compared to. Do you now get what's the difference between hypothesis and theory?

#### Conclusion of Main Difference between Hypothesis and Theory

Do you now clearly understand what is the difference between theory and hypothesis? The best way to explain what is the difference between hypothesis and theory is to go through the scientific method. If you know these stages by heart, you'd know which comes first. Before you can produce a good and acceptable theory, you must go through the scientific method several times, testing and retesting until you get a conclusive and valid result. Statistics and literature can help you validate your results. It will also be helpful if you'd be able to consult experts in the field. Just remember that a hypothesis comes prior to a theory.

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