the influence of empiricism on scientific inquiry

<https://www.simplypsychology.org/science-psychology.html>

<https://www.sciencedaily.com/terms/empiricism.htm>

Below is an extract from this sit4e:

<https://www.nap.edu/read/10236/chapter/5#58>

#### ****Empirically Based****

Put simply, the term “empirical” means based on experience through the senses, which in turn is covered by the generic term observation. Since science is concerned with making sense of the world, its work is necessarily grounded in observations that can be made about it. Thus, research questions

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must be posed in ways that potentially allow for empirical investigation.[3](https://www.nap.edu/read/10236/chapter/5#p200051e88960059001)For example, both Milankovitch and Muller could collect data on the Earth’s orbit to attempt to explain the periodicity in ice ages (see [Box 3-2](https://www.nap.edu/read/10236/chapter/5#p200051e89960060001)). Likewise, Putnam could collect data from natural variations in regional government to address the question of whether modernization leads to the demise of civic community ([Box 3-1](https://www.nap.edu/read/10236/chapter/5#p200051e89960056001)), and the Tennessee state legislature could empirically assess whether reducing class size improves students’ achievement in early grades ([Box 3-3](https://www.nap.edu/read/10236/chapter/5#p200051e89960064001)) because achievement data could be collected on students in classes of varying sizes. In contrast, questions such as: “ Should all students be required to say the pledge of allegiance?” cannot be submitted to empirical investigation and thus cannot be examined scientifically. Answers to these questions lie in realms other than science.