

In Search Of Infinity

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"The infinite! No other question", declared David Hilbert, "has ever moved so profoundly the spirit of man." Without assuming any specialized knowledge of the audience, it is my goal to lay the foundation for a deeper understanding of Hilbert's remark by engaging in a conversation around some of the paradoxes associated with the concept of infinity. The most famous are perhaps Zeno's paradoxes of motion which are still being debated today. On the other hand, one of the works in the Aristotelian corpus, known as *Mechanica*, contains a problem which attracted wide attention at an earlier time, but is now hardly mentioned. That is the problem of *Aristotle's Wheel*, which is exemplified in something as ordinary as a common rolling pin. Nevertheless, more than two millennia after its inception, the problem surrounding the *Wheel* played a central role in Galileo's greatest work, *Dialogues Concerning Two New Sciences*, published in 1638. The occasion in the *Dialogues* prompting a discussion of the *Wheel* is a question as important as the ultimate constitution of matter. After examining a few seemingly paradoxical ideas and noting their impact in the long history of thought, I hope that by evening's end you can, with William Blake, begin

*to see a World in a Grain of Sand
and a Heaven in a Wild Flower,
Hold Infinity in the Palm of your Hand
and Eternity in an Hour.*

Rudy Rucker, *Infinity and the Mind: The Science and Philosophy of the Infinite* (New Jersey: Princeton University Press, 2005), 2.

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<http://www.framingham.edu/~smabrouk/preskenis/annual/thirteenth.htm>