

Challenging Reductionism—The Truth is *Up* Here!

Thomas M. Adams

Rose-Hulman Institute of Technology
5500 Wabash Ave., Terre Haute, IN, USA
adams1@rose-hulman.edu

Extended Abstract

Reductionism—the view that phenomena can be understood only through breaking things down into constituent parts—so permeates Western scientific thought that we scarcely take notice when we assume this vantage point. Without admitting the legitimacy of large-scale or scale-free phenomena, however, we miss opportunities for understanding and discovery. This talk will purposely encourage us to challenge our reductionist tendencies, arguing that doing so provides a chance for more holistic understanding, new discoveries, and innovation. Examples of a non-reductionist viewpoint will draw not only on the thermal fluid sciences, but also on science and engineering in general as well as philosophy and even psychedelic music played on the ukulele.