

Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Why Trust Physics? The Discovery and Acceptance of Quarks, 1968-1979 MICHAEL RIORDAN, University of California, Santa Cruz — In her recent book, "Why Trust Science?", Harvard University historian of science Naomi Oreskes argues that the credibility of a scientific result or theory is established largely through a complex social process in which a skeptical, diverse scientific community reaches consensus on a subject for example, anthropogenic climate change. I examine this proposition in the context of the discovery of quarks during the 1970s and their acceptance by essentially the entire physics community by the end of that decade, a topic about which I wrote in my 1987 book, "The Hunting of the Quark." In so doing, I address the social constructivist picture of this process, and the nature and role of scientific consensus in establishing the "reality" of a new "object."

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Date submitted: 15 Jan 2020

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