In 2009, the director of the National Institute for Genomic Medicine publicly announced the discovery of a national genome in Mexico. This event led to a proliferation of meanings in the popular discourse and scientific community that unsettled taken-for-granted assumptions about the population and raised questions about the state of scientific research in Mexico. The national genome’s status as a black box was ephemeral leading to the temporary questioning of other black boxes in genomic science such as mestizaje. This talk traces how the idea of a national genome, once named, took on a life of its own in ways that were unintended and unexpected, making the meanings, effects, and affects difficult to control. The institute’s administrators used various strategies aimed at mitigating the repercussions, which eventually led to the reconfiguring of resources, technology, and collaborations between research institutions. Drawing from theoretical insights in the Anthropology of Science and Science and Technology Studies, this talk examines the complex ways the idea of a national genome ventured far beyond the laboratory causing ruptures and entanglements that ultimately led to changes in how science is done in Mexico while leaving assumptions about the genetic variation of the population largely intact.