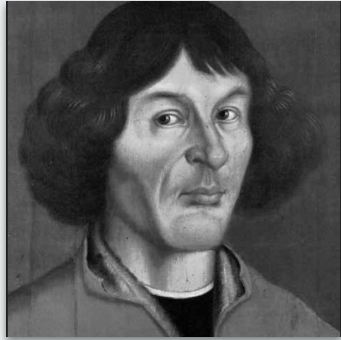




Countercultural Science

The minority pioneers of good science



Goal

To use historical precedents and biblical principles to demonstrate that the majority rule does not determine *truth*, and to provide a proper sense of confidence as we venture into what many find to be a challenging topic.

counterculture | noun

worldview

a way of life and **a set of ideas that are completely different from those accepted by most of society**, or the group of people who live this way

Cambridge Dictionary

mainstream | *noun*

most of a society

Cambridge Dictionary

HEARD @ LIPPMANN HOUSE

March 14, 2013

Nieman Reports
Winter 2013

“Truth Is Not About What the Majority Believes”

Documentary filmmaker and author Errol Morris on how we are all error-generating machines

ARTICLE BY

ERROL MORRIS @errolmorris



Dina Rudick/The Boston Globe via Getty Images

Errol Morris, who once worked as a private detective, has a reputation for being relentless in his search for truth. His investigation into the murder of a Dallas police officer for his 1988 film “The Thin Blue Line” led to the release of the man who had been convicted and sentenced to death. In his new book “A Wilderness of Error,” Morris takes on the infamous trial of Jeffrey MacDonald for the 1970 murder of his wife and two daughters. MacDonald, who has long maintained his innocence, was found guilty after more than a decade of trials and appeals. He is currently serving three life sentences. Morris believes MacDonald is innocent and didn’t get a fair trial, though he concedes that it may be impossible—given the passage of time and the shortcomings of the police

Erasmus Journal for Philosophy and Economics,
Volume 7, Issue 2,
Autumn 2014, pp. 54-72.
<http://ejpe.org/pdf/7-2-art-3.pdf>

Challenging the majority rule in matters of truth

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Abstract: The majority rule has caught much attention in recent debate about the aggregation of judgments. But its role in finding the truth is limited. A majority of expert judgments is not necessarily authoritative, even if all experts are equally competent, if they make their judgments independently of each other, and if all the judgments are based on the same source of (good) evidence. In this paper I demonstrate this limitation by presenting a simple counterexample and a related general result. I pave the way for this argument by introducing a Bayesian model of evidence and expert judgment in order to give a precise account of the basic problem.

Keywords: competence, evidence, social epistemology, testimony, trust in experts, two-expert problem

JEL Classification: C11, D71, D82, D83

Surprises can be useful in epistemology. Epistemology is most helpful when it leads to normative recommendations that are surprising in that they are counterintuitive or in contradiction with established practice (Miriam Solomon 2006, 30).

Seeking and utilising the advice of experts is a very common and useful practice in a complex world; this is especially so given the ever-increasing stream of information, which no single individual can comprehend and process entirely on her own. We regularly ask experts for advice. And in many cases we ask different experts for their independent advice on one and the same issue. If we, for instance, fear a serious disease we may well ask several medical specialists for their diagnoses. But what if the diagnoses given are inconsistent?

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A.



B.



MAJORITY RULES

“Countercultural movements are evidence of a society’s diversity and vitality. Many of the biggest advances in science have come from people outside or on the fringes of the science establishment.”

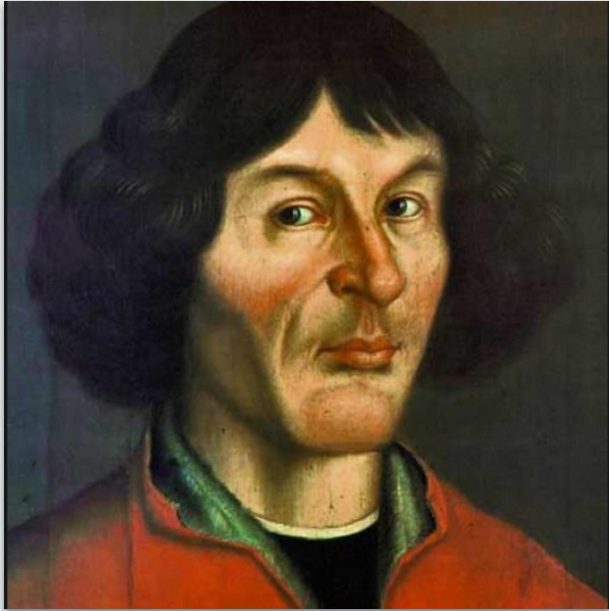
The Scientist | December 9, 2013

The cultural acceptance of a scientific theory does not affect or indicate its accuracy.

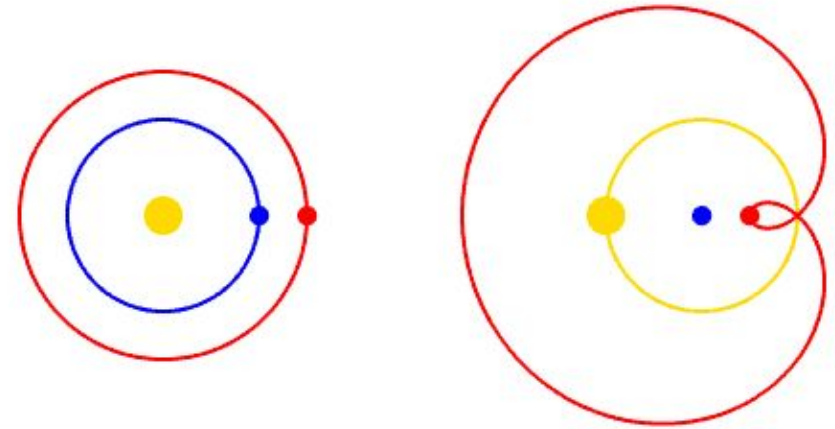
Even when debated for centuries.

—

Nicolaus Copernicus



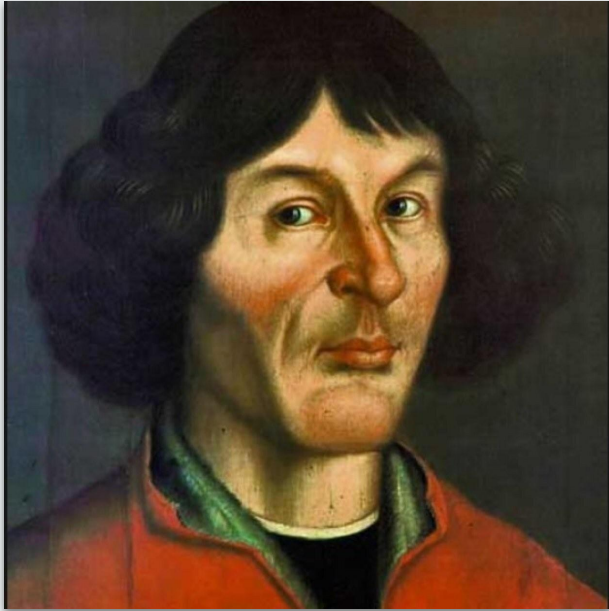
1473 – 1543



The Countercultural Idea

Heliocentrism: Earth, and other nearby celestial bodies (now known as the solar system) revolve around the Sun. We are not, therefore, the fixed “center of the universe”.

Nicolaus Copernicus

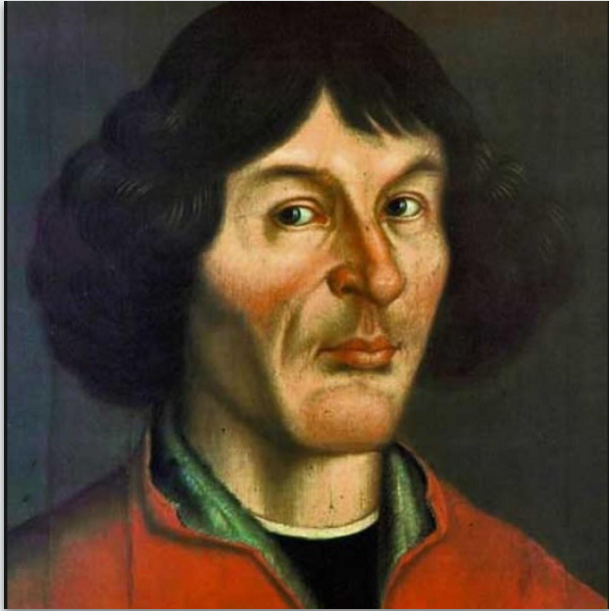


1473 – 1543

Why was he rejected?

His heliocentric theory held extraordinary explanatory power, but “lacked a mechanism”.

Nicolaus Copernicus



1473 – 1543

What's the big deal?

"We indeed are not ignorant that the circuit of the heavens is finite, and that the earth, like a little globe, is placed in the centre."

"The heavens revolve daily, and, immense as is their fabric and inconceivable the rapidity of their revolutions, we experience no concussion. How could the earth hang suspended in the air were it not upheld by God's hand? By what means could it maintain itself unmoved, while the heavens above are in constant rapid motion, did not its Divine Maker fix and establish it."

John Calvin, writing on Genesis and Psalm 93

Aristarchus of Samos



circa 310 – 230 BC

... 1800 years prior ...

The cultural acceptance of a scientific theory does not affect or indicate its accuracy.

Even when debated for centuries.

—

Alfred Wegener



1880 – 1930

The Mainstream

Land masses (continents, islands, etc.) are, and always have been, fixed in position relative the planet.

The Countercultural Idea

Continental Drift: land masses were once conjoined and have “drifted” apart over time, to create continents, islands, etc.

(Later described as plate tectonics)

Alfred Wegener



1880 – 1930

Why was he rejected?

His continental drift theory held extraordinary explanatory power, but “lacked a mechanism”.

Alfred Wegener



1880 – 1930

Why was he rejected?

“The drift theory ‘takes considerable liberties with our globe,’ [Rollin T. Chamberlin, University of Chicago geologist] wrote. It ignores ‘awkward, ugly facts’ and ‘plays a game in which there are few restrictive rules.’ Young Chamberlin also quoted an unnamed geologist’s remark that inadvertently revealed the heart of the problem: ‘If we are to believe **Wegener’s hypothesis** we must forget everything which has been learned in the last 70 years and start all over again.’”

Smithsonian Magazine, June 2012

Abraham Ortelius



1527 – 1598

... 350 years prior ...

The cultural acceptance of a scientific theory does not affect or indicate its accuracy.

Even when debated for centuries.

—

For believers in the Creator of the universe and author of the Bible, countercultural ideas are more than acceptable – **they are to be expected.**

counterculture | noun

worldview


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Cambridge Dictionary



**Elijah, the
countercultural
prophet of
Jehovah**

1 Kings 18-19



“But you are a chosen race, a royal priesthood, a holy nation, a people for his own possession, **that you may proclaim the excellencies of him** who called you out of darkness into his marvelous light...”

1 Peter 2:9

For believers in the Creator of the universe and author of the Bible, countercultural ideas are more than acceptable – **they are to be expected.**
