

Vanguards of Germ Theory

On February 13, 1843, future Supreme Court Justice Oliver Wendell Holmes addressed the Boston Society for Medical Improvement about the contagiousness of puerperal fever,¹ a potentially lethal infection arising in women following childbirth.² Although puerperal, or childbed, fever had been known for thousands of years³, its cause was a mystery generating “[n]umerous bizarre theories.”⁴ When Holmes proclaimed in his address that childbed fever was a contagious disease often transmitted by doctors and nurses to their female patients,⁵ he was met with vigorous opposition that lasted for over a decade.⁶

A continent away, Hungarian doctor Ignaz Semmelweis took a similar interest in puerperal fever. In May 1847, a doctor at Vienna’s lying-in hospital cut his finger while performing an autopsy on a woman who had died of childbed fever. Days later, puerperal fever took his life.⁷ Noting the incident, Semmelweis reasoned that “the disease was being carried on the hands of medical students to the women in labour and insisted that medical students should wash their hands before attending deliveries.”⁸ The death toll from puerperal fever in the hospital “fell from 12% to 2%,”⁹ all but confirming his conclusion.

Like Holmes, Semelweis faced opposition from his peers. The Viennese medical community refused to embrace Semelweis’s recommendations, eventually driving him to return to Hungary in 1850.¹⁰ Once there, he worked at the University of Pest Hospital, where he “enforced antiseptic practices and reduced the death rate from puerperal fever to 0.85%.”¹¹ Despite this decline, medical authorities in the country and elsewhere rejected Semelweis’s ideas.¹² Semmelweis finally suffered a breakdown and was sent to a Viennese mental hospital, “where he died of an infection contracted during an operation he had performed.”¹³

Even Joseph Lister, who was influenced by Semmelweis, faced persecution. While working in Glasgow, he used carbolic acid to treat wounds and wash instruments and surgeons’ hands. The managers of the Glasgow Royal Infirmary dismissed Lister’s practices, arguing instead that a patient’s nutritional state was more important than antiseptics. Lister eventually left Glasgow for the chair of surgery at Edinburgh.¹⁴ Despite the hardship faced by these men, germ theory would ultimately triumph in the coming years, bolstered by Louis Pasteur’s work in disproving spontaneous generation.¹⁵

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Pellagra and Persecution

Before its cause was discovered to be a deficiency of niacin, pellagra was simply known to be the “disease of the four D’s”: diarrhea, dermatitis, dementia, and death.¹ During the period of 1906 to 1940, three million Americans developed pellagra, resulting in 100,000 deaths.² As the disease reached “epidemic proportions in the South,” Dr. Joseph Goldberger was appointed by the U.S. surgeon general in 1914 to resolve the crisis.³

Goldberger’s observations led him to reason that pellagra was not caused by germs, but rather, by dietary factors. After monitoring “mental hospitals, orphanages, and cotton mill towns”⁴ for the disease, Goldberger received food shipments from Washington that were given to children in two orphanages and to inmates at the Georgia State Asylum.⁵ Those placed on the new diet received meat, milk, and vegetables—a deviation from the cornbread and molasses diet typical amongst poor Southerners⁶—and either recovered from pellagra if they had it, and did not develop it otherwise.⁷

These findings suggested that germs were not the cause of pellagra, contrary to popular belief at the time.⁸ To convince steadfast skeptics of the dietary explanation, Goldberger placed eleven healthy prisoners in a Mississippi prison on a corn-based diet in 1915. After five months, six inmates showed symptoms of pellagra.⁹ Nevertheless, some refused to accept the results. W.J. MacNeal wrote against the findings in the *Journal of the American Medical Association*, while other skeptics said the experiment was fraudulent and “half-baked.”¹⁰ Dedicated to convincing the incredulous, Goldberger upped the ante by holding filth parties in which he and others would inject themselves with blood or consume scabs and body fluids from pellagra sufferers.¹¹ No participants in the filth parties developed pellagra as a result, yet “a few physicians remained staunch opponents of the dietary theory of pellagra.”¹²

As poverty increased in the South during the 1920s, Goldberger predicted an increase in pellagra cases. The Public Health Service implored Southerners to devote relief for the poor, yet concerns about investment and tourism in the South conjured opposition to the relief efforts.¹³ Goldberger continued his research, traveling through the Mississippi valley to collect statistical data while also “delivering jeremiads against the system that left the poor too destitute to eat a healthy diet.”¹⁴ Unfortunately, his message was not received kindly: “he was a northerner pointing out flaws in Southern society.”¹⁵ Sadly, Goldberger died of cancer in 1929, eight years before niacin deficiency was specifically identified as the cause of the disease he worked so hard to eradicate.¹⁶

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Is Global Cooling Heating Up?

According to a Newsweek article, there are “ominous signs that the earth’s weather patterns have begun to change dramatically,”¹ paving the way for food production decreases and political strife. The evidence for these changes “has now begun to accumulate so massively that meteorologists are hard-pressed to keep up with it,”² and countries from Canada to Pakistan have reason to be concerned.³ The cause of all this alarm: “the earth’s climate seems to be cooling down,” or so meteorologists believed back in April 1975, when Newsweek ran an article proclaiming the approach of a global cooling trend.

This decades-old article has attracted a deal of attention in light of current climate change concerns,⁴ and has some wondering whether fears of global warming are exaggerated.⁵ Newsweek’s more recent article goes on to highlight differences between the global cooling situation 30 years ago and the global warming scenario now. Scientists today have “vastly more data, incomparably faster computers and infinitely more sophisticated mathematical models”⁶ that trump the predictions made in the 70s. The contrast is clear: according to a climate scientist quoted in the recent article, global cooling forecasts “never approached the kind of widespread scientific consensus that supports the greenhouse effect today.”⁷

However widespread that consensus is, there are some voices articulating a different view of climate change. A 2006 story that ran in Canada’s National Post describes “the work of a crew of scientists who forecast a new wave of global cooling brought on by a decline in activity in the sun.”⁸ This cooling would be adequate to overcome global warming until 2050, giving “the Earth some breathing room in the face of climate change over the next 50 years.”⁹ In other words, global cooling would give humans enough time to combat manmade global warming.

Another study from a Chinese duo echoes the study cited in the National Post. Their findings also indicate that current manmade global warming is insufficient to overcome an approaching period of natural cooling, though they predict this will last for only 20 years at current CO₂ concentrations.¹⁰ Whether it’s half a century or 20 years, some evidence suggests earth may have a grace period before global warming takes effect.

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