

A commentary on ‘Science’ by Jonathan Wells
from his column *As Good as Your Word*

The Semmelweis Reflex

If Galileo, the “Father of Modern Science,” were alive today, he might tell us that a suffering America is at the mercy of a serious psychological disorder as well as a deadly disease. Our utter failure to cope with the coronavirus is a consequence of a pandemic mental aberration which has been called the “Semmelweis Reflex.”

Since long before Galileo, misunderstanding and neglect of and refusal to accept scientific knowledge has plagued human progress. The falsification, distortion, and suppression of such knowledge for political or doctrinal purposes has afflicted humanity for thousands of years.

With worldwide struggle between reason, logic, and wisdom on the one hand, and magical ideas, wishful hoping, “gut” feelings and conspiracy theories on the other, a universal understanding of science is becoming urgent at light speed. Well-grounded facts are being ignored or denied when they contravene some doctrine or political agenda. Religious convictions are incorrectly presented as off-limits domains which “science” can’t touch. Expert advice is spurned. Fantasy-world decisions are made that just don’t work in the real world.

The word “science” comes from Latin *Scientia*, which comes from “*scio*” meaning “I know.” What I “know” is therefore “knowledge.” “Science” is a systematic enterprise in which knowledge is built and organized upon the creation and rigorous testing of hypotheses about the universe founded on credible facts, logic, and reason. “Scientific” therefore means based on or characterized by the methods and principles of science.”

Being scientific simply means that when you have a serious question to be answered, or problem to be solved, you use the “scientific method.” Starting with the creation of a hypothesis— basically an informed guess about the answer based on what you already know. From this hypothesis you make a plan to find what evidence you need to know to prove it right or wrong. You collect data, evaluate it, make sure of your premises, and then test your hypothesis rigorously to prove or disprove it. Often you will repeat the process to refine the answer.

In 1847 an Austrian physician, Ignatz Semmelweis, observed that often-fatal childbed fever occurred more frequently when deliveries were attended by physicians than when handled by midwives. He hypothesized that something was being done by physicians that was not done by midwives. This outraged the doctors, who apparently thought that being a doctor imparted some magical quality. “How could we be doing it?” they said, “We’re physicians!” Research revealed that

doctors came straight from cadaver dissection to the delivery room without washing their hands, thereby transmitting the disease organisms. Semmelweis's hypothesis was ultimately proven—a landmark triumph for science.

The attitude of the hidebound doctors illustrates what's now called the "Semmelweis reflex"—our strong human inclination to stick to existing beliefs and to reject fresh ideas that contradict them, even though there is persuasive evidence for the new ideas. In this era of pandemics, our survival requires that we change our beliefs as change and scientific inquiry demand, and purge ourselves now and forever of this life-threatening Semmelweis Reflex.

Jon3sticks@gmail.com would be glad to have your comments and criticisms.