Defense of Science

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Science has always been a field of controversy. From the ancient world in which the beginnings of modern day science began to the Middle Ages to as recent as the autism vaccine controversy, one needn’t look far to know what anyone in the field is aware of. Not unlike previous eras, science is not only under scrutiny by the powers that fund it, but by the masses. While a mob and pitchfork mentality towards science may have worked in the days of the Inquisition, how on earth could such a mentality persist in the modern day? Much of this can be attributed to the inability to differentiate reliable information from unreliable ones and accept scientific without bias.

As a STEM major, I never cease to see posts on social media about something of a scientific nature only to watch people distort its meaning or refute it all together if it does not fit their agenda. Perhaps somewhat worse is the scenario in real life, in which someone who has possibly read two scientific journal articles in their lifetime will argue with me about a subject I have studied at length in my program. While I initially debated until an agreement was reached, I realized this did neither side any favors simply because the other side did not engage with the intention of listening. In the age in which we live in, the impact of science is undeniable. Without science and technology, we would not have our cellphones, laptops, vaccinations, pasteurized milk, cleaning products, and countless other items that we can attribute to our health or daily routine; the regressive mentality that has taken hold is a danger to our future.

A scientific writing class I took noted that much of the general population is actually not very well briefed on scientific matters. While apathy is partially to blame, scientific literacy is low because much of science is under lock and key. For instance, many articles are not open access (accessible without buying), and even if they were, a phrase such as “examining effluent from a specialized nitrogen extraction system” doesn’t go over too well without prior knowledge of effluents or extraction systems. When scientific literacy is low, it is incredibly easy for science to then be distorted by entities with an agenda, and creates a mistrust (unrightfully) of those within the scientific profession. Students, professors, physicians, and researchers are all seen as suspects, rather than authorities, unless the science fits the agenda of the entity manipulating information. By touting a single credible, peer reviewed study, it becomes easy to then spout information that seems veritable enough to not fact check. The danger of this however comes into play when the public refuses to admit that global warming exists,
or that lead is indeed toxic, regardless of the level. In an age of disinformation, science remains as a champion which prides itself on the ability to remain honest regardless of public opinion.

I fear that despite our technological advancements, we are going in the exact opposite direction of progress. Rather than the Brave New World – like fear of scientific intervention in every aspect of life in the future and proliferation of information, we may very well face the fate Wells outlined in the Time Machine, in which humanity moved forward in year, and regressed in knowledge. Without scientific investigation, we would lack the regulations which ensure proper food safety and sewage regulations or still worry about smallpox and perfectly treatable diseases on a mass scale. Before you think of denying any piece of science, challenge yourself: do you know what you are challenging? Are you familiar with why it is important? Are you neutrally examining your stance and reputable information, or spouting off in accordance with your personal views? For posterity sake, it is important that in an age of technology, we continue to challenge what we know and to investigate and grow, not simply google what fits our agenda and discard the rest.

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