

Things Which Should Be Cancelled

From my blog.

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01 Price Controls

In a free market the producers try to maximize profits, and the consumers try to minimize costs. Most of us are the consumers, and one effort to minimize costs is to influence politicians so they will set price controls. It works because we consumers have more influence at the polls than the producers, although the producers have more money to give the politicians. So it's a battle and the politician is the middle man.

Price controls are a limitation on the free market for, locally, the social good. I will give many examples of how that backfires for the larger economic system.

Rent Control

Rent control is the law passed in a city to limit the amount of rent that can be charged for certain apartments of apartment buildings. I have no idea how those apartments are chosen, but I'm certain no landlord chooses to do this on their own. The lower rent means that citizens of lower means can find housing. But that's not what happened.

Managers of rent-controlled apartments found themselves with a meager income, typically not enough to cover taxes, mortgage and maintenance. With a money-loser on their hands, they kicked everyone out and boarded up the place and walked away. And the number of apartments went down. Like, 40% down. And the poor, looking for housing, found none. So rather than making housing more affordable, the rent controls limited availability to the point that non-rent-controlled apartment prices went way up, and only the fortunate had a cheap place to live.



And it wasn't the poor who had those places. Many rich people would gather up several of these cheap-rent apartments and use them as offices or places for business people to stay when in town. And the housing for the poor diminished further.

A free housing market maximizes the number of housing units available. Some will be more expensive, because there are always wealthy people who want the nicest houses. But there are always less nice places with lower rent. And some dumps with very low rent. The problem isn't the rental price, it's the number of apartments. Free markets maximize the number of apartments.

Price Floors

A price floor is a minimum price for a commodity. Wheat, for example, has been a target for price floors. Because we must guarantee the production of food in the US, the federal government will guarantee the price of wheat, so that no farmer will need to leave wheat production for some other crop. To keep the price above the floor, the government would buy the surplus. They would store it

for a possible drought in the future, or for sale to another country (or as a gift to another country the US wanted to impress) until all the storage was filled. And then it went into old Navy ships for storage, or was dumped and left to rot.

With high prices for wheat, consumers turned elsewhere for food. They stopped consuming so much wheat, which generated more excess and more dumping. Farmers switched to crops with no price floor, because the possibility of more profits was more alluring than a guaranteed price.

Similar programs exist or existed for almost all grown commodities.

Free markets let the farmer and the consumer find an optimal price that will keep the farmer in business and the consumer fed.

Anti-price-gouging Laws

Natural disasters are setups for price gouging, raising the price on goods and commodities because the disaster has made those things valuable and hard to get. Most local governments make price gouging illegal because it sounds morally wrong and restricts the availability of needed goods from those who need them. Things like bottled water, lumber, generators, gasoline, non-perishable food. But do the laws work?

As you remember from COVID lockdowns, some things are in big demand. Like toilet paper. What happens when the prices are kept low? Hoarding. It didn't keep items on the shelves. They went way faster, because the price held was so low. So some people got lots, the rest got none. Black markets were the result.

When gasoline became scarce in the 1970's an odd sort of hoarding was evoked because the price of gasoline was restricted. The fuel wasn't too expensive, but it seemed to be in short supply. Actually it wasn't. Drivers thought it was hard to find gas, so instead of filling when the tank was less than 20% full, they refilled at 50%. Drivers were hoarding gasoline in their own tanks. They visited gas stations more often, giving the impression that gasoline was in greater demand than it was. Which made them hoard all the more.

Take hotel prices when a hurricane makes landfall. Those evacuating need housing, and hotels are great for this. Price gouging laws make all rooms cheap, so a family with kids will get two rooms. Soon all rooms are rented, and the rest need to look further from home for lodging.

In these cases, let prices follow the free market and the problems solve themselves. The available stock, while very limited, can now be accessed by everyone because you can't hoard at a high price, not just a few who got there first and bought the stock out. Same for the hotels. High prices encourage the family to get just the one room, leaving space for other families.

The advantage of the truly free market is enormous. Sellers charge whatever they want, knowing that when they charge too much they don't sell much either. Seller want to sell. Buyers want to buy. Each wants the price to go a different direction, and the free market optimizes the price for the greatest distribution of the goods available.

UPDATE June 2022:

John Stossel just posted a video on the topic of rent control:

<https://www.youtube.com/embed/Tc8XQGEoEpY>

He states the case well: rent control goes in to protect housing for the poor. New apartment construction drops to zero because there is no more profit to be made there. Rich people get the apartments for second offices or playrooms. Poor people move to a new town. It's a city scam to get the poor out of their town, and enhance the tax base. No wonder city leaders are voting for it.

02 Watching for Iniquity

We live in a judgmental culture. Very judgmental. Every social media post is held as a document of condemnation, of a potential failing of the moral character. That scrutiny for iniquity is destroying any hope we have of being friends.



Isaiah 29:20-21 (KJV)

“²⁰ For the terrible one is brought to nought, and the scorner is consumed, and all that *watch for iniquity* are cut off:

²¹ *That make a man an offender for a word*, and lay a snare for him that reproveth in the gate, and turn aside the just for a thing of nought.

Isaiah 29:20-21 (NIV)

“²⁰ The ruthless will vanish,
the mockers will disappear,
and *all who have an eye for evil* will be cut down—

²¹ *those who with a word make someone out to be guilty*,
who ensnare the defender in court
and with false testimony deprive the innocent of justice.

2 Nephi 27:31-32 (Quoting Isaiah)

“³¹ For assuredly as the Lord liveth they shall see that the [terrible one](#) is brought to naught, and the scorner is consumed, and *all that watch for iniquity are cut off*;

³² And they that make a man an [offender](#) for a word, and lay a snare for him that reproveth in the [gate](#), and [turn](#) aside the just for a thing of naught.

“ 50 And calamity shall cover the mocker, and the scorner shall be consumed; and *they that have watched for iniquity* shall be hewn down and cast into the fire.

There are plenty of verses in all books that tell us to avoid iniquity, but only these one tells us to avoid watching for it. And you have to admit, social media is all about watching for iniquity. And condemning the "guilty."

Why do we watch for iniquity?

We are human. We can't be expected to be perfect.

Now, speaking of why, perfectionism is an emotional health problem. Probably from childhood, some of our parents made it clear that unless we are perfect for them we can't be loved. It's part of performing well in school, part of being obedient when we were little, and certainly part of being on social media. Perfectionism is one of the poorest ways to "earn" love. Because you can't earn love, it is given freely. But when we were kids it wasn't given freely. It came with conditions. And that makes perfectionists out of kids (and those it don't become perfectionists become rebels, which isn't as bad, or become loathers of themselves, which is way worse).

Where does the desire to watch for iniquity come from?

Moses 4:1-4 (Pearl of Great Price, LDS Scripture)

“ 1 And I, the [Lord God](#), spake unto Moses, saying: That [Satan](#), whom thou hast commanded in the name of mine Only Begotten, is the same which was from the [beginning](#), and he came before me, saying—Behold, here am I, send me, I will be thy son, and I will [redeem](#) all mankind, that one soul shall not be lost, and surely [I](#) will do it; wherefore [give](#) me thine honor.

2 But, behold, my Beloved [Son](#), which was my Beloved and [Chosen](#) from the beginning, said unto me—[Father](#), thy [will be](#) done, and the [glory](#) be thine forever.

3 Wherefore, *because that [Satan rebelled](#) against me, and sought to destroy the [agency](#) of man*, which I, the Lord God, had given him, and also, that I should give unto him mine own power; by the power of mine Only Begotten, I caused that he should be

[cast down](#);

4 And he became [Satan](#), yea, even the [devil](#), the father of all [lies](#), to [deceive](#) and to blind men, and to lead them [captive](#) at his will, even as many as would not [hearken](#) unto my voice.

Forcing everyone to be perfect while here on Earth is the only way I can imagine Satan making sure that no one would ever make any mistake. Perfectionism was Satan's plan. We would give up our agency (and any possibility of eternal progress) and Satan would get the glory; we sacrifice for him. Heavenly Father's plan was to give us our agency, and Jesus would make the sacrifice. His was the better plan. The biggest thing ever to happen on this planet was when Jesus performed the atonement for all of us, freed us from our own iniquity, and made it so that having accepted Jesus our mistakes would never trail after us.

Pretty amazing, I think.

03 Propaganda as Science

I have a keen ear for science in the news. I also have a keen ear for propaganda, earned by listening for hours, in my younger days, to Radio Pyongyang and Radio Moscow. Those stations never managed to say anything which was true.

Trouble is, the news in the US is sounding the same these days. National radio and TV outlets are no longer just reporting, they are commentating, and they are no longer using their own people to find stories, they sit back and wait for activists to bring stories to them.

The worst kind of the propaganda is science propaganda, usually because the science is so poor the scientists can't convince their colleagues they are right.

Global warming is one of them. I just described how I did the analysis of the US thermometer data, and the warming is very small, but that doesn't suit the political needs of the alarmists and the news people remain completely gullible.

In fact, many "science" topics, none of which can be proven (multiverse, string theory, dark energy, dark matter) all lead the news, because to be believed the "scientist" must engage in propaganda to be believed. If we can really prove something, we just prove it and move on. Fake science needs propaganda to survive.

“ The researches of many commentators have already thrown much darkness on this subject, and it is probable that, if they continue, we shall soon know nothing at all about it.

— Mark Twain

In *The Sciences*, September-October 1989.

In the field we have a term: "hand-waving." During a seminar, when the presenter begins to wave their hands about, we know they don't believe what they are saying, and they try to impress on the audience how believable it is by gesticulating more towards the audience, trying to push the idea toward us. When I see handwaving, I generally tune out. I know it's a lie. Sometimes they wave sideways when asked a challenging question. "This is not the answer you are looking for."



“ There is something fascinating about science. One gets such wholesale returns of conjecture out of such a trifling investment of fact.

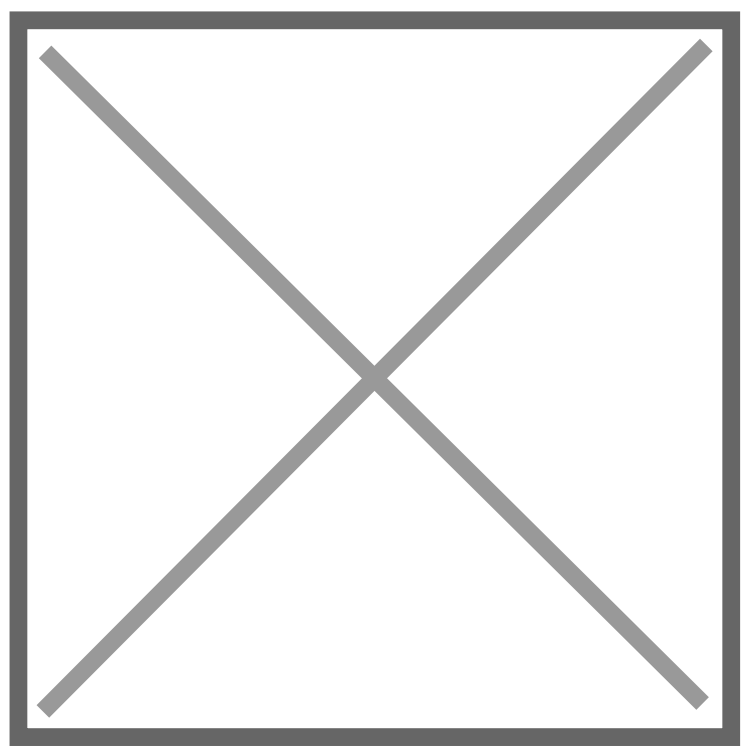
Mark Twain, *Life on the Mississippi*

04 Apocalypse!

There is a fine old tradition of predicting the end of the world. It's been happening for millennia, and I can't see it stopping for anything.

The term is from the Greek, it means "from cover," things exposed to view. The Bible translates that to "Revelation."

There seem to be long-range apocalypses, and short-range ones. The long-range apocalypse doesn't have a definite date, but on occasion someone will predict a particular day.



The short-range apocalypse is always about 30 years away, but it moves forward as fast as the calendar advances.

Here is the Wikipedia list of apocalyptic predictions:

Past predictions

First millennium CE (11 predictions)

Date (CE)	Claimant(s)	Description
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66-70	Simon bar Giora, Jewish Essenes	The Jewish Essene sect of ascetics saw the Jewish uprising against the Romans in 66-70 in Judea as the final end-time battle which would bring about the arrival of the Messiah . By the authority of Simon, coins were minted declaring the redemption of Israel.
365	Hilary of Poitiers	This early French bishop announced the end of the world would happen during this year.
375-400	Martin of Tours	This French bishop stated that the world would end before 400 AD, writing, "There is no doubt that the Antichrist has already been born. Firmly established already in his early years, he will, after reaching maturity, achieve supreme power."
27 May 482	Hydatius	This bishop of Aqua Flaviae (modern Chaves, Portugal) wrote his chronicle (c. 469) in his firm belief that humanity was living in the end times, marching towards its certain doom on this day, when Jesus would come back and the world would end.
500	Hippolytus of Rome , Sextus Julius Africanus , Irenaeus	All three predicted Jesus would return in this year, with one of the predictions being based on the dimensions of Noah's Ark .
6 Apr 793	Beatus of Liébana	This Spanish monk prophesied the Second Coming of Christ and the end of the world on that day in front of a large crowd of people.
800	Sextus Julius Africanus	This Christian historian revised his prediction from the year 500 to 800.
799-806	Gregory of Tours	This French bishop calculated the end would occur between 799 and 806.
847	Thiota	This Christian declared in 847 that the world would end that year, though later confessed the prediction was fraudulent and was publicly flogged .

992–995	Various Christians	Good Friday coincided with the Feast of the Annunciation ; this had long been believed to be the event that would bring forth the Antichrist, and thus the end-times, within three years.
1000	Pope Sylvester II and others	According to several sources, various Christian clerics predicted this date as the Millennium , including Pope Sylvester II . As a result, riots are said to have occurred in Europe and pilgrims headed east to Jerusalem. Other historians, however, have disputed that any of these events ever took place.

11th–15th centuries (7 Predictions, 18 so far)

Date (CE)	Claimant(s)	Description
1033	Various Christians	Following the failure of the prediction for 1 January 1000, some theorists proposed that the end would occur 1000 years after Jesus' death, instead of his birth.
1200–1260	Joachim of Fiore	This Italian mystic determined that the Millennium would begin between 1200 and 1260.
1284	Pope Innocent III	Pope Innocent III (died 1216) predicted that the world would end 666 years after the rise of Islam in 618.
1290 1335	Joachimites	After his 1260 prediction failed, the followers of Joachim of Fiore rescheduled the end of the world to 1290 and then again to 1335.
1346–1351	Various Europeans	The Black Death spreading across Europe was interpreted by many as the sign of the end of times.
1368–1370	Jean de Roquetaillade	This French alchemist predicted the Antichrist was to come in 1366 and the Millennium would begin either in 1368 or 1370.
1378	Arnaldus de Villa Nova	This Joachite wrote that the Antichrist was to come during this year.

16th century (14 predictions, 32 so far)

Date (CE)	Claimant(s)	Description
1504	Sandro Botticelli	This painter believed he was living during the Tribulation, and that the Millennium would begin in three and a half years from 1500. He wrote into his painting The Mystical Nativity that the Devil was loose and would soon be chained.
1 Feb 1524	London astrologers	A group of astrologers in London predicted the world would end by a flood starting in London, based on calculations made the previous June. Twenty thousand Londoners left their homes and headed for higher ground in anticipation.
20 Feb 1524	Johannes Stöffler	A planetary alignment in Pisces was seen by this astrologer as a sign of the Millennium.
1525	Thomas Müntzer	1525 would mark the beginning of the Millennium, according to this Anabaptist . His followers were killed by cannon fire in an uneven battle with government troops. He died under torture and was beheaded.
27 May 1528	Hans Hut	This German Anabaptist predicted the end would occur on this date.
1528	Johannes Stöffler	A revised date from Stöffler after his 1524 prediction failed to come true.
19 Oct 1533	Michael Stifel	This mathematician calculated that Judgement Day would begin at 8:00 am on this day.
1533	Melchior Hoffman	This Anabaptist prophet predicted Christ's Second Coming to take place this year in Strasbourg . He claimed that 144,000 people would be saved, while the rest of the world would be consumed by fire.
5 Apr 1534	Jan Matthys	During the Münster rebellion , this Anabaptist leader declared that the apocalypse would take place on this day. When the day came he led a failed attack against Franz von Waldeck and was decapitated.

1555	Pierre d'Ailly	Around 1400, this French theologian wrote that 6845 years of human history had already passed, and the end of the world would be in the 7000th year.
1585	Michael Servetus	In his book <i>The Restoration of Christianity</i> , the Spanish born reformer claimed that the Devil's reign in this world had started in 325 AD, at the Council of Nicea , and would last for 1260 years, thus ending in 1585.
1588	Regiomontanus	This mathematician and astronomer predicted the end of the world during this year.
1600	Martin Luther	Luther, a German priest and professor of theology known for starting the Protestant Reformation , predicted the end of the world would occur no later than 1600.

17th century (19 predictions, 51 so far)

Date (CE)	Claimant(s)	Description
1 Feb 1624	London astrologers	The same astrologers who predicted the deluge of 1 February 1524 recalculated the date to 100 years later after their first prophecy failed.
1648	Sabbatai Zevi	Using the kabbalah proclaimed that the Messiah would come during that year. Later claimed to be the Messiah in 1666-7
1651	Unknown author from Lübeck, Germany	The apocalypse maps tell of an Antichrist, the rise of Islam and other events following Judgement Day that was predicted to occur in 1651.
1654	Helisaeus Roeslin	This physician made a prediction that the world would end this year based on a nova that occurred in 1572.
1656	Christopher Columbus	In his <i>Book of Prophecies</i> (1501), Columbus predicted that the world would end during this year.

1655-1657	Fifth Monarchists	This group of radical Christians predicted that the final apocalyptic battle and the destruction of the Antichrist were to take place between 1655 and 1657.
1658	Christopher Columbus	Columbus claimed that the world was created in 5343 BCE, and would last 7000 years. Assuming no year zero, that means the end would come in 1658.
1660	Joseph Mede	Mede claimed that the Antichrist had appeared in 456, and the end would come in 1660.
1666	Sabbatai Zevi	Following his failed prediction of 1648, Zevi recalculated the end of the Earth for this year.
	Fifth Monarchists	The presence of 666 in the date, the death of 100,000 Londoners to bubonic plague , and the Great Fire of London led to superstitious fears of the end of the world from some Christians.
1673	William Aspinwall	This Fifth Monarchist claimed the Millennium would begin by this year.
1688	John Napier	This mathematician calculated the end of the world would be this year based on calculations from the Book of Revelation .
1689	Pierre Jurieu	This prophet predicted that Judgement Day would occur this year.
1694	John Mason	This Anglican priest predicted the Millennium would begin by this year.
	Johann Heinrich Alsted	This Calvinist minister predicted the Millennium would begin by this year.
	Johann Jacob Zimmermann	Believed that Jesus would return and the world would end this year.
1697	Cotton Mather	This Puritan minister predicted the world would end this year. After the prediction failed, he revised the date of the end two more times.
1700	John Napier	Following his 1688 prediction, Napier recalculated his end of the world prediction to 1700 in <i>A Plaine Discovery</i> , a book published in 1593.

Henry Archer	In his 1642 work, <i>The Personall Reigne of Christ Upon Earth</i> , Archer predicted the Second Coming of Jesus would occur in approximately this year.
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18th century (12 predictions, 63 so far)

Date (CE)	Claimant(s)	Description
1705-1708	Camisards	Camisard prophets predicted the end of the world would occur in either 1705, 1706 or 1708.
1716	Cotton Mather	Revised prediction from Mather after his 1697 prediction failed to come true.
5 Apr 1719	Jacob Bernoulli	This mathematician predicted a comet would destroy the Earth on this day.
1700-1734	Nicholas of Cusa	This cardinal predicted the end would occur between 1700 and 1734.
16 Oct 1736	William Whiston	This theologian predicted a comet colliding with the Earth this year.
1736	Cotton Mather	Mather's third and final prediction for the end of the world.
1757	Emanuel Swedenborg	Swedenborg, a former Lutheran, claimed that the Last Judgement occurred in the spiritual world this year.
19 May 1780	Connecticut General Assembly members, New Englanders	The sky turning dark during the day was interpreted as a sign of the end times . The primary cause of the event is believed to have been a combination of smoke from forest fires , a thick fog, and cloud cover .
1789	Pierre d'Ailly	The year 1789 would bring the coming of the Antichrist, according to this 14th-century cardinal.
1792 1794	Shakers	The Shakers, a Christian sect founded in 18th century England, predicted the world would end in 1792 and then in 1794.

19 Nov 1795	Nathaniel Brassey Halhed	While campaigning for Richard Brothers' release, Halhead proclaimed that the world would end on this day.
1793-1795	Richard Brothers	This retired sailor stated the Millennium would begin between 1793 and 1795. He was eventually committed to an insane asylum .

19th century (17 predictions, 80 so far)

Date (CE)	Claimant(s)	Description
1805	Christopher Love	This Presbyterian minister predicted the destruction of the world by earthquake in 1805, followed by an age of everlasting peace when God would be known by all.
1806	Mary Bateman	In Leeds, England , in 1806 a hen began laying eggs on which the phrase "Christ is coming" was written. Eventually it was discovered to be a hoax. The owner, Mary Bateman , had written on the eggs in a corrosive ink so as to etch the eggs, and reinserted the eggs back into the hen's oviduct .
19 Oct 1814	Joanna Southcott	This 64-year-old self-described prophet claimed she was pregnant with the Christ child, and that he would be born on October 19, 1814. She died later that year having not delivered a child, and an autopsy proved she had not been pregnant.
1836	Johann Albrecht Bengel	In the 1730s this Lutheran clergyman proclaimed that Judgment Day would come in 1836, with the pope as the anti-Christ and the Freemasons representing the "false prophet" of Revelations.
1836	John Wesley	Wesley, the founder of the Methodist Church, foresaw the Millennium beginning this year. He wrote that Revelation 12:14 referred to 1058 to 1836, "when Christ should come".

28 Apr 1843 31 Dec 1843	Millerites	Although it was not officially endorsed by their leadership, many Millerites expected the Second Coming to occur on April 28 or at the end of 1843.
1843	Harriet Livermore	The first of two years this preacher predicted the world would end.
21 Mar 1844	William Miller	Miller, a Baptist preacher, predicted Christ would return on this day.
22 Oct 1844	Millerites	After Christ did not return on 21 March 1844, the Millerites then revised William Miller's prediction to 22 October that year, claiming to have miscalculated Scripture. The realization that the predictions were incorrect resulted in the Great Disappointment .
7 Aug 1847	George Rapp	Rapp, the founder of the Harmony Society , preached that Jesus would return in his lifetime, even as he lay dying on August 7, 1847.
1847	Harriet Livermore	The second prediction of the end of the world from this preacher.
1862	John Cumming	This Scottish clergyman stated it was 6000 years since creation in 1862, and that the world would end.
	Joseph Morris	Originally an English convert to Mormonism , Morris had revelations to gather his followers and wait for the Second Coming , through successive prophesied days.
1863	John Wroe	The founder of the Christian Israelite Church calculated that the Millennium would begin this year.
1873-1874	Jonas Wendell	Wendell, along with other Adventist preachers, predicted the Second Coming of Christ would occur in 1873 or 1874. In 1870, Wendell published his views in the booklet entitled <i>The Present Truth, or Meat in Due Season</i> concluding that the Second Advent was sure to occur in 1873. After the prediction did not bear out, Nelson H. Bardour reinterpreted the prediction holding that Jesus had in fact returned in 1874 but in an invisible form.

1881	Mother Shipton (attrib.)	This 15th-century prophet was quoted as saying "The world to an end shall come, In eighteen hundred and eighty one" in a book published in 1862. In 1873 it was revealed to be a forgery; however, this did not stop some people from expecting the end.
1890	Wovoka	The founder of the Ghost Dance movement predicted in 1889 that the Millennium would occur in 1890.

20th century (75 predictions, 155 so far)

Date (CE)	Claimant(s)	Description
1901	Catholic Apostolic Church	This church, founded in 1831, claimed that Jesus would return by the time the last of its 12 founding members died. The last member died in 1901.
1910	Camille Flammarion	Flammarion predicted that the 1910 appearance of Halley's Comet "would impregnate that atmosphere and possibly snuff out all life on the planet", but not the planet itself. "Comet pills" were sold to protect against toxic gases.
1892-1911	Charles Piazzi Smyth	This pyramidologist concluded from his research on the dimensions of the Great Pyramid of Giza that the Second Coming would occur somewhere between 1892 and 1911.
1914	Charles Taze Russell	Russell, who founded the Bible Student movement , said "...the battle of the great day of God Almighty... The date of the close of that 'battle' is definitely marked in Scripture as October 1914. It is already in progress, its beginning dating from October, 1874."
1915	John Chilembwe	This Baptist educator and leader of a rebellion in the British protectorate of Nyasaland predicted the Millennium would begin this year.
1918	International Bible Students Association	" Christendom shall be cut off and glorification of the Little Flock (The Church) in the Spring of 1918 A. D."

1920	International Bible Students Association	In 1918, Christendom would go down as a system to oblivion and be succeeded by revolutionary governments. God would "destroy the churches wholesale and the church members by the millions." Church members would "perish by the sword of war, revolution and anarchy ." The dead would lie unburied. In 1920 all earthly governments would disappear, with worldwide anarchy prevailing.
13 Feb 1925	Margaret Rowen	According to this Seventh-Day Adventist , the angel Gabriel appeared before her in a vision and told her that the world would end at midnight on this date.
1926	Spencer Perceval	This British MP, who was one of the 12 apostles of the Catholic Apostolic Church , believed that the world was growing nearer to the Apocalypse due to what he viewed as the rampant immorality of the times in Europe.
1934	Walter Marks	Marks, an Australian MP, told the House of Representatives that Armageddon would occur in 1934 and culminate with the Royal Navy bringing Christ's chosen people to Jerusalem.
Sep 1935	Wilbur Glenn Voliva	This evangelist announced that "the world is going to go 'puff' and disappear" in September 1935.
1936	Herbert W. Armstrong	The founder of the Worldwide Church of God told members of his church that the rapture was to take place in 1936, and that only they would be saved. After the prophecy failed, he changed the date three more times.
1941	Jehovah's Witnesses	A prediction of the end from the Jehovah's Witnesses, a group which branched from the Bible Student movement .
1943	Herbert W. Armstrong	The first of three revised dates from Armstrong after his 1936 prediction failed to come true.

1947	John Ballou Newbrough	The author of Oahspe: A New Bible predicted the destruction of all nations and the beginning of post-apocalyptic anarchy in this year.
21 Dec 1954	Dorothy Martin	The world was to be destroyed by terrible flooding on this date, claimed this leader of a UFO cult called <i>Brotherhood of the Seven Rays</i> . The fallout of the group after the prediction failed was the basis for the 1956 book When Prophecy Fails .
22 Apr 1959	Florence Houteff	The leader of the Branch Davidians predicted the apocalypse foretold in the Book of Revelation would proceed on this date. The failure of the prophecy led to the split of the sect into several subsects, the most prominent led by Benjamin and Lois Roden.
1951-1960	Johann Gottfried Bischoff	On December 25, 1951, Bischoff stated the Second Coming would occur before he died. He died on July 6, 1960.
4 Feb 1962	Jeane Dixon , various Indian astrologers	Dixon predicted a planetary alignment on this day was to bring destruction to the world. Mass prayer meetings were held in India.
20 Aug 1967	George Van Tassel	This day would mark the beginning of the third woe of the Apocalypse, during which the southeastern US would be destroyed by a Soviet nuclear attack, according to this UFO prophet, who claimed to have channeled an alien named Ashtar .
1967	Jim Jones	The founder of the People's Temple stated he had visions that a nuclear holocaust was to take place in 1967.
9 Aug 1969	George Williams	The founder of the Church of the Firstborn predicted the Second Coming of Christ would occur on this day.
1969	Charles Manson	Manson predicted that Helter skelter , an apocalyptic race war, would occur in 1969.

1972	Herbert W. Armstrong	The second of three revised dates from Armstrong after his 1936 and 1943 predictions failed to come true.
Jan 1974	David Berg	Berg, the leader of Children of God , predicted that there would be a colossal doomsday event heralded by Comet Kohoutek .
1975	Herbert W. Armstrong	Armstrong's fourth and final prediction.
	Jehovah's Witnesses	From 1966 on, Jehovah's Witnesses published articles which stated that the fall of 1975 would be 6000 years since man's creation , and suggested that Armageddon could be finished by then.
1976	Brahma Kumaris	The Brahma Kumaris founder, Lekhraj Kirpalani , has made a number of predictions of a global Armageddon which the religion believes it will inspire, internally calling it "Destruction". During Destruction, Brahma Kumari leaders teach the world will be purified, all of the rest of humanity killed by nuclear or civil wars and natural disasters which will include the sinking of all other continents except India .
1977	John Wroe	The founder of the Christian Israelite Church predicted this year for Armageddon to occur.
	William M. Branham	This Christian minister predicted the rapture would occur no later than 1977.
17 Feb 1979	Roch Thériault	Thériault, who called himself Moïse (Moses), led a commune in the wilderness of eastern Quebec in the late seventies. Formerly a Seventh-Day Adventist , he told his group they would form the center of a new society during God's 1000 year reign following Armageddon.

1980	Leland Jensen	In 1978 Jensen predicted that there would be a nuclear disaster in 1980, followed by two decades of conflict, culminating in God's Kingdom being established on Earth.
1981	Chuck Smith	The founder of Calvary Chapel predicted the generation of 1948 would be the last generation and that the world would end by 1981 at the latest. Smith identified that he "could be wrong" but continued to say in the same sentence that his prediction was "a deep conviction in my heart, and all my plans are predicated upon that belief."
10 Mar 1982	John Gribbin , Stephen Plagemann	Gribbin, an astrophysicist , co-authored the 1974 book <i>The Jupiter Effect</i> which predicted that combined gravitational forces of aligned planets would create a number of catastrophes, including a great earthquake on the San Andreas Fault .
21 Jun 1982	Benjamin Creme	Creme took out an ad in the Los Angeles Times stating that the Second Coming would occur in June 1982 with the Maitreya announcing it on worldwide television.
1982	Pat Robertson	In late 1976 on his 700 Club TV programme, Robertson predicted that the end of the world would come in this year.
1985	Lester Sumrall	This minister predicted the end in this year, even writing a book about it entitled <i>I Predict 1985</i> .
29 Apr 1986	Leland Jensen	Jensen predicted that Halley's Comet would be pulled into Earth's orbit on this day, causing widespread destruction.
17 Aug 1987	José Argüelles	Argüelles claimed that Armageddon would take place unless 144,000 people gathered in certain places across the world in order to " resonate in harmony " on this day.

11–13 Sep 1988 3 Oct 1988	Edgar C. Whisenant	Whisenant predicted in his book <i>88 Reasons Why the Rapture Could Be in 1988</i> that the rapture of the Christian Church would occur between September 11 and 13, 1988. After his September predictions failed to come true, Whisenant revised his prediction date to October 3.
30 Sep 1989	Edgar C. Whisenant	After all his 1988 predictions failed to come true, Whisenant revised his prediction date to this day.
23 Apr 1990	Elizabeth Clare Prophet	Prophet predicted a nuclear war would start on this day, with the world ending 12 years later, leading her followers to stockpile a shelter with supplies and weapons. Later, after Prophet's prediction did not come to pass, she was diagnosed with epilepsy and Alzheimer's disease .
9 Sep 1991	Menachem Mendel Schneerson	This Russian-born rabbi called for the Messiah to come by the start of the Jewish New Year .
1991	Louis Farrakhan	The leader of the Nation of Islam declared that the Gulf War would be the "War of Armageddon which is the final war."
28 Sep 1992	Rollen Stewart	This born-again Christian predicted the rapture would take place on this day.
28 Oct 1992	Lee Jang Rim	Lee, the leader of the Dami Mission church, predicted the rapture would occur on this day.
1993	David Berg	Berg predicted the tribulation would start in 1989 and that the Second Coming would take place in 1993.
2 May 1994	Neal Chase	This Bahá'í sect leader predicted that New York City would be destroyed by a nuclear bomb on March 23, 1994, and the Battle of Armageddon would take place 40 days later.
6 Sep 1994 29 Sep 1994 2 Oct 1994	Harold Camping	Camping predicted the rapture would occur on 6 September 1994. When it failed to occur he revised the date to the 29th of September and then to the 2nd October.

31 Mar 1995	Harold Camping	Camping's fourth predicted date for the end. This would be Camping's last prediction until 2011.
26 Mar 1997	Marshall Applewhite	Applewhite, leader of the Heaven's Gate cult , claimed that a spacecraft was trailing the Comet Hale-Bopp and argued that suicide was "the only way to evacuate this Earth" so that the cult members' souls could board the supposed craft and be taken to another "level of existence above human". Applewhite and 38 of his followers committed mass suicide.
10 Aug 1997	Aggai	The 1st-century bishop of Edessa predicted this date to be the birth date of the Antichrist and the end of the universe.
23 Oct 1997	James Ussher	This 17th-century Irish archbishop predicted this date to be 6000 years since creation, and therefore the end of the world.
31 Mar 1998	Hon-Ming Chen	Chen, leader of the Taiwanese cult Chen Tao - "The True Way" - claimed that God would come to Earth in a flying saucer at 10:00 am on this date.
Jul 1999	Nostradamus	A quatrain by Nostradamus which stated the "King of Terror" would come from the sky in "1999 and seven months" was frequently interpreted as a prediction of doomsday in July 1999.
18 Aug 1999	The Amazing Criswell	The predicted date of the end of the world, according to this psychic well known for predictions.
11 Sep 1999	Philip Berg	Berg, dean of the worldwide Kabbalah Centre , stated that on this date "a ball of fire will descend, destroying almost all of mankind, all vegetation, all forms of life."
1999	Charles Berlitz	This linguist predicted the end would occur in this year. He did not predict how it would occur, stating that it might involve nuclear devastation, asteroid impact , pole shift or other Earth changes.

Hon-Ming Chen	The leader of the cult Chen Tao preached that a nuclear holocaust would destroy Europe and Asia in 1999.	
James Gordon Lindsay	This preacher predicted the great tribulation would begin before 2000.	
Timothy Dwight IV	This 19th century president of Yale University predicted Christ's Millennium would start by 2000.	
Nazim Al-Haqqani	This Sufi Muslim sheikh predicted that the Last Judgment would occur before 2000.	
1 Jan 2000	Movement for the Restoration of the Ten Commandments of God	An estimated 778 followers of this Ugandan religious movement perished in a devastating fire and a series of poisonings and killings that were either a group suicide or an orchestrated mass murder by group leaders after their predictions of the apocalypse failed to come about.
	Jerry Falwell	Falwell predicted God making judgement on the world on this day.
	Tim LaHaye, Jerry B. Jenkins	These Christian authors stated that the Y2K bug would trigger global economic chaos, which the Antichrist would use to rise to power. As the date approached, however, they changed their minds.
	Various	During and before 1999 there was widespread predictions of a Y2K computer bug that would crash many computers on midnight of January 1, 2000 and cause malfunctions leading to major catastrophes worldwide, and that society would cease to function.
6 Apr 2000	James Harmston	The leader of the True and Living Church of Jesus Christ of Saints of the Last Days predicted the Second Coming of Christ would occur on this day.
5 May 2000	Nuwaubian Nation	This movement claimed that the planetary lineup would cause a "star holocaust", pulling the planets toward the Sun on this day.

2000	Peter Olivi	This 13th-century theologian wrote that the Antichrist would come to power between 1300 and 1340, and the Last Judgement would take place around 2000.
	Ruth Montgomery	This self-described Christian psychic predicted the Earth's axis would shift and the Antichrist would reveal himself in this year.
	Edgar Cayce	This psychic predicted the Second Coming would occur this year.
	Sun Myung Moon	The founder of the Unification Church predicted the Kingdom of Heaven would be established in this year.
	Ed Dobson	This pastor predicted the end would occur in his book <i>The End: Why Jesus Could Return by A.D. 2000</i> .
	Lester Sumrall	This minister predicted the end in his book <i>I Predict 2000</i> .
	Jonathan Edwards	This 18th-century preacher predicted that Christ's thousand-year reign would begin in this year.

21st century (20 predictions, 175 so far)

Date (CE)	Claimant(s)	Description
2001	Tynnetta Muhammad	This columnist for the Nation of Islam predicted the end would occur in this year.
27 May 2003	Nancy Lieder	Lieder proposed the Nibiru cataclysm , which was predicted to occur on this day. She claimed aliens in the Zeta Reticuli star system told her a planet would enter the solar system and cause a pole shift on Earth that would destroy most of humanity.
30 Oct–Nov 29 2003	Aum Shinrikyo	This Japanese cult, which carried out the Tokyo subway sarin attack in 1995, predicted the world would be destroyed by a nuclear war between 30 October and 29 November 2003.

12 Sep 2006	House of Yahweh	Yisrayl Hawkins, pastor and overseer of The House of Yahweh, predicted in his February 2006 newsletter that a nuclear war would begin on September 12, 2006.
29 Apr 2007	Pat Robertson	In his 1990 book <i>The New Millennium</i> , Robertson suggests this date as the day of Earth's destruction.
May 2008	Pyotr Kuznetsov	Followers of Kuznetsov, 31 adults and 4 children (one 18 months old), went into a cave in Russia in November 2007 thinking they would be safe from an apocalypse occurring in the spring. Kuznetsov did not join them, was later committed and attempted suicide when some had left the cave in the spring. By the time all the followers had left the cave in the spring, two adults had died.
2010	Hermetic Order of the Golden Dawn	This magical organization , which existed from 1887 to 1903, predicted the world would end during this year.
21 May 2011	Harold Camping	After several unsuccessful predictions in 1994 and 1995, Camping predicted that the rapture and devastating earthquakes would occur on 21 May 2011 , with God taking approximately 3% of the world's population into Heaven, and that the end of the world would occur five months later on October 21.
29 Sep 2011	Ronald Weinland	Weinland, the founder of the Church of God Preparing for the Kingdom of God , stated Jesus would return on this day. After his prophecy failed to come true he changed the date to 27 May 2012.
21 Oct 2011	Harold Camping	When his original prediction failed to come about, Camping revised his prediction and said that on May 21, a "Spiritual Judgment" took place and that both the physical rapture and the end of the world would occur on 21 October 2011.

Aug-Oct 2011	Various	There were fears amongst the public that Comet Elenin travelling almost directly between Earth and the Sun would cause disturbances to the Earth's crust , causing massive earthquakes and tidal waves. Others predicted that Elenin would collide with Earth on October 16. Scientists tried to calm fears by stating that none of these events were possible.
27 May 2012	Ronald Weinland	Weinland's revised date for the return of Jesus following the failure of his 2011 prediction.
30 Jun 2012	José Luis de Jesús	This cult leader predicted that the world's governments and economies would fail on this day, and that he and his followers would undergo a transformation that would allow them to fly and walk through walls.
21 Dec 2012	Various	The 2012 phenomenon predicted the world would end at the end of the 13th b'ak'tun . The Earth would be destroyed by an asteroid, Nibiru, or some other interplanetary object; an alien invasion ; or a supernova . Mayanist scholars stated that no extant classic Maya accounts forecasted impending doom, and that the idea that the Long Count calendar ends in 2012 misrepresented Maya history and culture. Scientists from NASA , along with expert archaeologists, stated that none of those events were possible.
23 Aug 2013	Grigori Rasputin	Rasputin, a Russian mystic who died in 1916, prophesied a storm would take place on this day where fire would destroy most life on land and Jesus would come back to Earth to comfort those in distress.

Apr 2014–Sep 2015	John Hagee , Mark Biltz	The so-called blood moon prophecy , first predicted by Mark Biltz in 2008 and then by John Hagee in 2014. These Christian ministers claim that the tetrad in 2014 and 2015 may represent the beginning of the Messianic end times . Some Mormons in Utah combined the September 2015 blood moon with other signs, causing a large increase in sales of preppers survival supplies.
23 Sep–15 Oct 2017	David Meade	Conspiracy theorist David Meade predicted that Nibiru would become visible in the sky and would "soon" destroy the Earth.
23 Apr 2018	David Meade	After his 2017 prediction failed, Meade predicted the rapture would take place and that the world would end on this date.
9 Jun 2019	Ronald Weinland	Weinland, who previously predicted the world would end in 2011, 2012, and then 2013, predicted in 2018 that Jesus would return on June 9, 2019. Prior to the date occurring he began to express some doubts regarding his own prediction.
2020	Jeane Dixon	Dixon predicted that Armageddon would take place in 2020. She previously predicted the world would end on February 4, 1962.

Future predictions

21st century

Date (CE)	Claimant(s)	Description
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2021	F. Kenton Beshore	This American pastor bases his prediction on the prior suggestion that Jesus would return in 1988, i.e., within one biblical generation (40 years) of the founding of Israel in 1948. Beshore argues that the prediction was correct, but that the definition of a biblical generation was incorrect and was actually 70–80 years, placing the second coming of Jesus between 2018 and 2028, and the rapture during 2021 at the latest.
2026	Messiah Foundation International	This spiritual organization predicts that the world will end in 2026, when an asteroid collides with Earth in accordance with Riaz Ahmed Gohar Shahi 's predictions in his book <i>The Religion of God</i> .
2028	Kent Hovind	While clarifying there is no way to be certain, this Christian fundamentalist evangelist speculated in 2015 that 2028 was the "most likely" date for the rapture.

22nd–23rd centuries

Date (CE)	Claimant(s)	Description
31 Dec 2129	Said Nursî	This Sunni Muslim theologian, author of the Risale-i Nur and founder of the Nur movement , wrote in a letter to one of his students (the 21st in the so-called Kastamonu Appendix) that by applying numerology to a hadith he had arrived at a date of 1545 for the arrival of doomsday. 1545 in the Hijri calendar would be 2122; in the Rumi calendar it would be 2129. Nursî added that this was not a definite prediction, as "nobody knows the time of doom in a strict manner".

30 Sep 2239	Talmud, Orthodox Judaism	According to the Talmud in mainstream Orthodox Judaism , the Messiah will come within 6000 years of the creation of Adam , and the world may be destroyed 1000 years later. This would put the beginning of the period of desolation in 2239 and the end of the period of desolation in 3239.
2280	Rashad Khalifa	According to this Egyptian-American biochemist's research on the Qu'ran, the world will end during that year.

Far future predictions

See also: [Timeline of the far future](#) and [Global catastrophic risk](#)

Estimated timeframe (years)	Claimant(s)	Description
300,000	Peter Tuthill	In approximately 300,000 years, WR 104 , a triple star , is expected to explode in a supernova . It has been suggested that it may produce a gamma ray burst that could pose a threat to life on Earth should its poles be aligned 12° or lower towards Earth. However, spectroscopic observations now strongly suggest that it is tilted at an angle of 30°-40° and so any gamma ray burst should not hit Earth.
1 million	The Geological Society	Within the next 1 million years, Earth will likely have undergone a supervolcanic eruption large enough to erupt 3,200 km ³ of magma , an event comparable to the Toba supereruption 75,000 years ago.
100 million	Stephen A. Nelson	It is estimated that every 100 million years, Earth is hit by an asteroid about 10–15 km in diameter, comparable in size to the one that triggered the K-Pg extinction which killed non-avian dinosaurs 66 million years ago.

500–600 million	Anne Minard	<p>A gamma ray burst or a massive, hyperenergetic supernova, would have occurred within 6,500 light-years of Earth, close enough for its rays to affect Earth's ozone layer and potentially trigger a mass extinction, assuming that the hypothesis of a previous such explosion triggering the Ordovician–Silurian extinction event is correct. However, the supernova would have to be precisely oriented relative to Earth to have any negative effect.</p>
600–800 million	Various	<p>The Sun's increasing brightness causes the rate of weathering of the planet's crust to increase. This will cause the level of carbon dioxide in the atmosphere to drop dramatically, making photosynthesis in plants impossible. This will very likely cause a mega mass extinction of the Earth's vegetation. The lack of oxygen-producing plants will cause oxygen in the atmosphere to disappear as well as the ozone layer, making animal life impossible. Even if photosynthesis were still possible, rising surface temperatures from the brighter sun will make complex life (plants and animals) impossible.</p>
1–5 billion	Various	<p>The estimated end of the Sun's current phase of development, after which it will swell into a red giant, either scorching or swallowing Earth, will occur around five billion years from now. However, as the Sun grows gradually hotter (over millions of years), Earth may become too hot for life as early as one billion years from now.</p>
1.6 billion	Various	<p>It is estimated that all eukaryotic life will die out due to carbon dioxide starvation, with only prokaryotes remaining.</p>

7.59 billion	David Powell	The Earth and the Moon will most likely be destroyed by falling into the Sun, just before the Sun reaches the largest of its red giant phase when it will be 256 times larger than its current size. Before the final collision, the Moon will possibly spiral below Earth's Roche limit , breaking into a ring of debris, most of which would fall to Earth's surface.
22 billion	Various	This is the end of the Universe in the Big Rip scenario, assuming a model of dark energy with $w = -1.5$. Observations of galaxy cluster speeds by the Chandra X-ray Observatory suggest that the true value of w is approximately -0.991 , indicating the Big Rip would not occur.
10¹⁰⁰	Various	The time estimated for the heat death of the universe , a hypothetical event in which the universe would diminish to a state of no thermodynamic free energy , becoming no longer able to sustain directed motion or life.

Missing from this very estimable list is the constantly-advancing climate disaster, which since the 1970s is always 10 to 30 years away. Hot controlled fusion is also always 30 years away and has been since the 1970s, and that comes with an apocalyptic prediction of a world-destroying black hole.

The tally so far: 175 predictions, none of which happened. The one apocalyptic event that might be on the list is Noah's flood, but nobody predicted that. So 175 predictions, 0 delivered. Zero for 175. Not a betting proposition.

How do these keep going? Maybe one driver of these is folks responding to the titillation of coming destruction. Maybe one is a short memory; if you can't remember the weather last year every storm is a new apocalypse. Whatever the reason, we are suckers for global-scale disaster.

“ To all appearances, we were normal Midwestern Americans, we wore clean clothes, spoke proper English, took small bites and chewed with our mouths shut, mowed our lawn, played softball and Monopoly and shot baskets, read the paper, were polite to strangers, but in our hearts we anticipated the end of the world.

05 The New Mythology

I was just watching a NOVA episode about black holes. Every scientist they had told a story of black hole formation, accretion, combination, action on nearby masses. Then I realized, we've never seen any of this. Even one scientist admitted we only see snapshots over time of different systems, each at it's own stage.

Other fields do the same: we tell the story of evolution, when we've never seen even one species turn into another or split into two. We believe in the action of atoms and tell the story of a reaction using the properties of bulk matter to explain that action when we know the properties of individual atoms are different from the properties of bulk atoms. We tell stories of the creation and modification of rock, when the process is too slow to observe with the exception of earthquakes, and they we can't say what lead to the build up of energy that caused it. We describe animal behavior when we have limited observation.

For example, the image NOVA gave us to demonstrate the black hole isn't real; it's invented, and it's not even describing what we imagine the real behavior of matter around a black hole might be:



We tell stories. But these stories are not based on what we saw, and when we tell them to non-scientists we don't even try to say why we believe it. These stories aren't reports, they are myths. We tell these scientific stories exactly the way we tell myths. Lay people know science only through these stories, recognize them for what they are, and then we scientists are bothered lay people don't believe us. Well they shouldn't believe us, having heard only the myths.

The problem in telling myths is we leave it to the layman to sus out how much is real and how much is made up and they can't do that. Scientists are creative and inventive. They can tell a great story. They can convince anyone of things that just aren't so. The layman has to trust, and they are correct in not trusting scientists. We have given them so little proof they'd need to be idiots to believe the story.

How do we fight this?

Be skeptical. We've all but lost skepticism in science. Scientists have specialized to the point we can't recognize the myths in any field but our own, and in our own we tell the stories to describe it to other scientists. And no one says, "Prove it," especially in the stories we tell.

Science writers can't tell the difference between guess, hypothesis and theory.



[Myth:] If it's called a theory, it's the same as a hunch: That's true sometimes, when you're just beginning to look into a phenomenon. But after a while, the word merely means that you didn't actually see the event play out—even if all the evidence tells you what happened. The theory of evolution? A fact. The Big Bang theory? A fact. But unless you're 13.8 billion years old, you weren't here to witness it all.

[Time: Top 10 Science Myths](#)

Everything they described has no proof. It hasn't been through the scientific method, where hypotheses are tested in every way we can imagine to disprove them. Some can't be tested. That does not give them a "bye" to advance to the next level, theory; it locks them into hypothesis. Some are locked into the guess level there is so little evidence. And some can't even prove themselves beyond the hunch level, which is where the UFOs live. Heck, conspiracy theories have more supporting evidence than some of our scientific theories have.

So doubt everything. Make the scientist prove what he says. If they can't you are free to ignore them. Be skeptical. Be cynical if you like, but I don't see an advantage of cynicism over skepticism.

Good luck out there.

06 PR

Public relations are ubiquitous. Here is an announcement from UVU this morning:

“ On Wednesday December 1, 2021, UVU donors, supporters, and friends celebrated the opening of the Brandon D. Fugal Gateway Building. The completion of the Brandon D. Fugal Gateway Building marks a new beginning for UVU. As UVU strives to provide more and better opportunities for students and the greater community, we are excited to celebrate Brandon Fugal's gift and honor him with this naming opportunity.

Note the "...marks a new beginning at UVU." The building is a hallway between the administration building and the old business building, which is being abandoned by the business department. No hallway marks any beginning; it is by definition the *middle*. Hyperbole like this makes UVU look silly, and neither the PR department nor administrators who approve the copy can see that. Perhaps they are silly people.

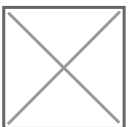
From the Axios news this morning:

“ In a midterm preview, top Democratic strategist Anita Dunn advises the party's House and Senate members to frame Republicans "as being against the economic interests of working Americans."

What she's saying: "Explicitly framing Republicans as opposing policies to lower costs does better than simply framing Republicans as the 'party of no,'" Dunn, White House senior adviser until August, writes in the memo.

"Explicitly framing Republicans as opposing policies to lower costs" is exactly the opposite of what's happened in the last two years. Inflation is the highest it's been in what, 20 years? And that's with massive fiscal support for low inflation from the Fed. When the truth won't work, sell the lie.

Ugh. Like lawyers, they are professional liars. And there is no self-corrective measures in the industry. In fact, the best lies are given [awards](#). Truth isn't a thing for them, profits are.



07 Out-of-context Journalism

<https://www.youtube.com/embed/Xs9ZblcCsIQ>

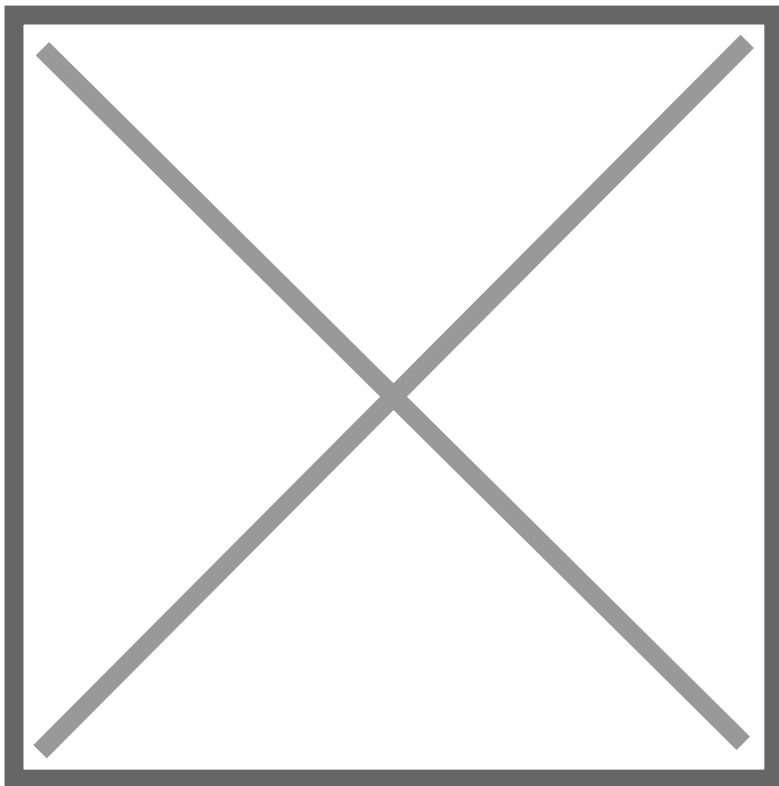
Out-of-context news reporting is now the standard. It got that way because of clickbait headlines, and that because of online news funded by advertising.

I have two proposals:

1: Reporters must have Asperger's, or be on one end of the autism spectrum. Folks with autism are not socially driven, don't pose, and can really get into a subject. All are perfect for reporting non-clickbait news in context.

2: Establish a website, like RottenNews.com, where news articles are graded for accuracy and context.

Yeah, I know neither has any chance of happening, but until the news industry and the advertising industry decide to be honest, they will never self-police.



08 The Multiverse

I saw the new Spiderman movie last night. More of the multiverse is in it. The idea that there are an infinite number of parallel universes, each inaccessible to the others, except in Marvel movies. Where did this idea come from, a parallel universe that we can never experience?



The Problem

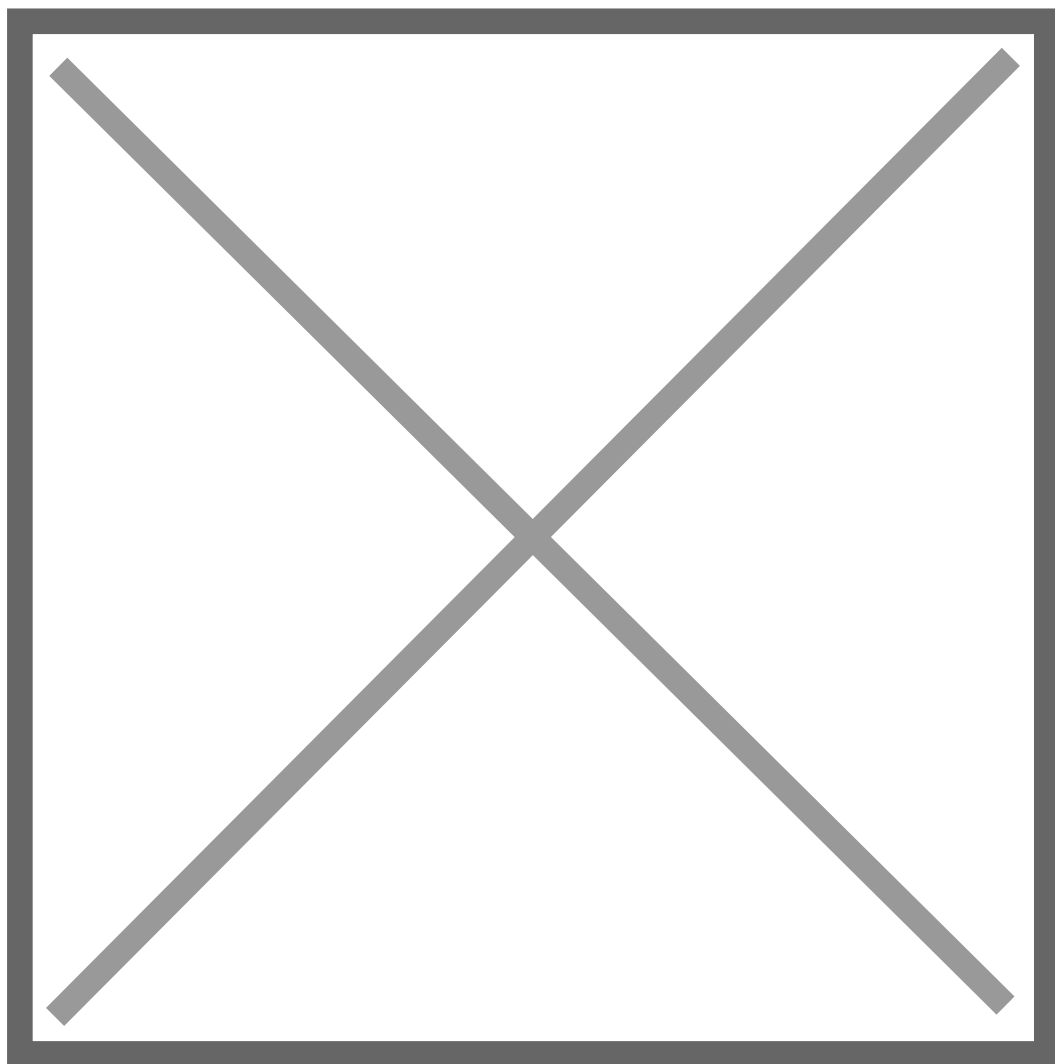
In 1913 Niels Bohr, in Copenhagen, proposed a model of the hydrogen atom which calculated the energy of an electron in the atom by describing it with an integer,

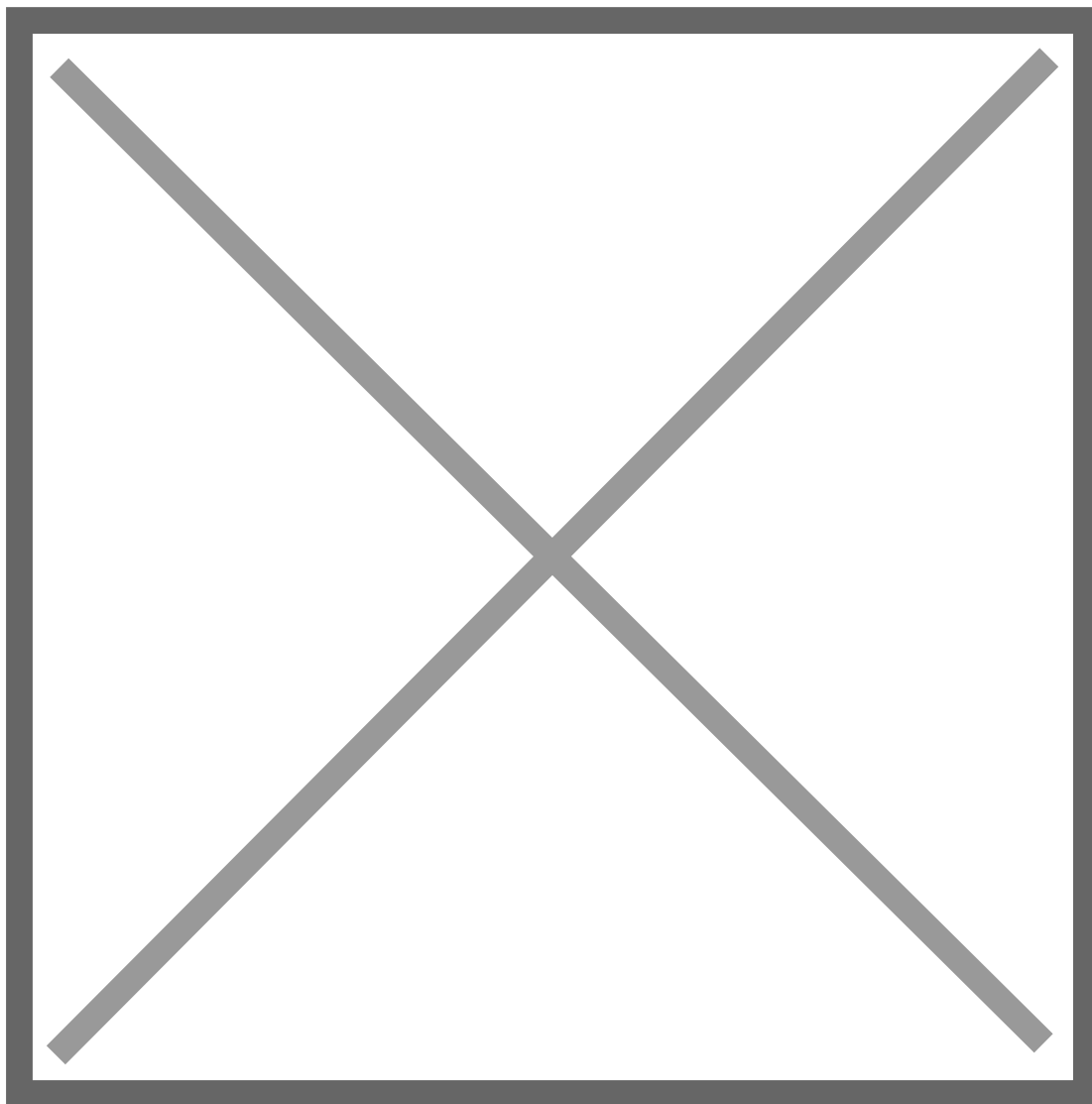
$$n = 1, 2, 3, \dots$$

such that

$$E_n = -R_H/n^2$$

Where R_H is a constant. In any formulation of this equation, n can never be a non-integer, like 1.2 or 4.6. This equation was quickly taken to represent energy levels within the hydrogen atom, where $n = 1$ was the lowest energy level, $n = 2$ was the next higher, etc. We cannot observe these levels directly; we only observe the jumps between these energy levels as light emitted (jumping down to a lower value of n) or light absorbed (jumping to a higher value of n).





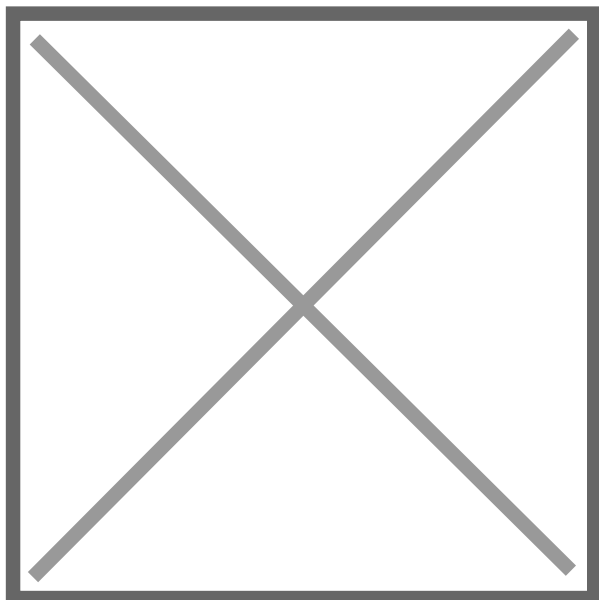
How an integer becomes a single energy value is the heart of quantum theory, and in 1925 two proposals were put forward to explain this.

Quantum Physics

The first was proposed by Werner Heisenberg, Max Born, and Pascual Jordan. This is the matrix mechanics version, also known as the Copenhagen interpretation. They used square matrices to describe the energy levels as the row index and quantum states (like "initial" and "final," which they called "eigenstates") as the column index. The data inside the matrix they called "eigenvectors," German for "unique vectors." The matrices had some internal properties I won't go into now, but the problem might already be apparent to you. The spectroscopists, those who study the interaction of light with matter, had the energies nailed down for 25 years already. And in this method, the matrix uses two different variables to represent that one measurement (the difference of which equals that one measurement) or one energy in, two variables out. This is where all the trouble starts. I'll get back to this flaw later.

The second proposal came from Edwin Schrödinger. His was known as Wave mechanics, and it is the way quantum chemistry is done today. Schrödinger thought of the electrons in the hydrogen

atom as waves, standing waves held in place by the opposite charge of the nucleus. The idea of physical matter behaving as a wave was proposed a year earlier by De Broglie and demonstrated to be true in the following three years. Schrödinger formulated an equation that produces the energy of any orbital in hydrogen, or any other atom, using mathematical equations which describe that standing wave ("eigenfunctions"). To describe all orbitals in all atoms he needed two more quantum numbers, ℓ and m_ℓ . Three variables in, one energy out.



This equation calculates the total energy of the electron by adding the kinetic energy of the wavefunction (which is represented as a single variable, ψ) to the potential energy, V .

The method of Schrödinger was by far superior to that of matrix mechanics, and the wave model was soon adopted by all the chemists who work with atoms. Soon the method was expanded to account for the properties of molecules by combining many atomic wavefunctions into bonding orbitals (valence bond theory) or into molecular orbital (molecular orbital theory). The calculated energies can be compared to the measured energies to see if the model is correct.

Schrödinger's method made a simple assumption: that the waving electron acted much like a note on a guitar string, with nodes (not-waving bits) at the ends, and antinodes (the waving bits) toward the middle. The quantum numbers were just the count of the antinodes in any particular wavefunction.

Data

How you represent data is vital in interpreting what the data means. In these two approaches we have two very different ways of handling the measured energies. The matrix mechanics model used two energies to describe one measurement, which is represented by four variables inside the matrix. For one energy measurement, four variables are being manipulated to describe it. In the wave mechanics model, the differences in energy are ignored, and just the one energy of one state, initial or final, is calculated from three quantum numbers (the situation is more complex: the three quantum numbers allow you to select the equations to be used in calculating the energy,

each dependent on the x, y and z coordinates around the nucleus, but in the end you are dependent on three variables either way). Summarizing:

Matrix mechanics: One measurement generates four variables

Wave mechanics: three variables generate one measurement

When I was doing X-ray crystallography we measured the intensity of the many dots of X-rays that came from a single beam of X-rays directed onto a crystal. For a 20-atom molecule we typically measure 1500 - 2000 dots, which were our data. We would then model that data using a molecule; the exact locations of the atoms, and how they thermally vibrated, was used to calculate the X-ray pattern, and that was compared to the measured data. Each atom had three spatial coordinates, and six thermal parameters, for nine variables per atom. For 20 atoms, that's 180 variables. The data/variable ratio was 8.3, not bad, not great. If that ratio dropped below 5 we'd begin to question how well our model was fitting our data. Below 3.0 we could not trust the model at all, because there are so many variables we could adjust we always got a very good fit of the data even if the model was completely wrong.

Matrix Mechanics

For the matrix mechanics method, the data/variable ratio is 0.25. For each measurement, there are four variables to adjust. The data is measured, then the variables are found.

Wave Mechanics

In wave mechanics, the order of the operations is reversed; variables are first determined, then the energy is calculated and compared to the measurement. This means the data/variable ratio doesn't apply here. This was Schrödinger's genius, and why we trust wave mechanics over matrix mechanics methods.

The Multiverse

So where does the multiverse come in? It comes from matrix mechanics. It's one of the four variables calculated for one measurement. A very simple version looks like this:

$$x^2 = 1$$

so

$$x = 1 \text{ and } x = -1$$

Our universe is the $x = 1$ universe, and the other one is the $x = -1$ universe. The multiverse is a product of having four variables "add up" to one measurement, when those variables can be all sorts of different numbers which make the math work. In other words, the multiverse is the product of a lousy way of representing a physical phenomenon in a very mathematical way. The $x = 1$ and $x = -1$ are then described the same way (hey, they are both 1!) and taken as being the same thing

(parallel universes) and there you are, a *multiverse*.

There is not a shred of evidence that a multiverse exists. It's a figment of a poor calculation. It ignores that a far better calculation exists, one that doesn't predict oddities.

Schrödinger's Cat

Schrödinger saw the oddities in the matrix mechanics model, and wanted to point it out. So he invented a situation that looks entirely silly. It's now known as Schrödinger's cat: put a cat into a box along with a radioisotope that has a 50/50 chance of triggering a device within an hour which will kill the cat (the original was a cyanide capsule, but after the Nazis we shy away from that mechanism). After one hour, what is the state of the cat? Before opening the box, matrix mechanics predicts that the cat is neither alive nor dead, but in some sort of in-between state, $x = 0$, the sum of

$$x = (1 + -1) \cdot (1/2)$$

(the "1/2" is to make sure the cat has not become two cats). This was known as "superposition." Schrödinger's point is that this is silly; there can't be anything other than an alive cat or a dead cat in the box. Physical reality obviates the matrix mechanics results. "Obviates," a wonderful old word, means to prevent by obviousness.



Superposition

Superposition is still a thing, but not what you read in the news. Some physicists are trying to prove superposition exists by generating two photons and trying to see if changing one can make the other one change. Chemists use superposition of wave functions to describe molecular orbitals. For us it's routine over the size of any molecule, even the bit about changing the wave at one end affecting the wave at the other end. That fits nicely within the wave mechanics method. But those trying to prove the results of the matrix mechanics method are still trying; it's failed many, many times, and the only way to make it look as though it has worked is to make the measurements less precise or less direct, so it can be made to statistically look like something happened, which always fails verification.

In the poor interpretation of this result, in one universe the cat lives, in another the cat dies. It's not clear which universe you inhabit until you open the box. In an even poorer interpretation, when you open the box the universe splits into two universes, one where the cat is alive, one where it is dead. It's pure silliness either way.

Marvel's Multiverse

It's fiction. And it will always be fiction.

Schrödinger's New Cat

The most absurd thing has happened: Because teachers and some scientists didn't understand these two models, they took the results of matrix mechanics to be valid, and Schrödinger's cat to be the proof! They managed to multiverse themselves into something other than reality. That's probably who you heard it from: the ones who didn't understand it.

[EDIT](#) | [DELETE](#) |

09 False Guilt

Using plastic. Driving to work. Eating meat. Not recycling a paper plate. Being white. Being male. Watering your lawn.

Someone wants you to feel guilty about each of these. Even when they don't apply. Or can't apply. They want you to feel guilty so that you will give them money to assuage your guilt. It's total manipulation. And the odd thing is they don't feel the least bit guilty about taking your money.

The stories they use match the topics above:

Pacific trash. Global warming. Cruelty. Waste. Slavery. Bring aggressive. Waste.

Take plastic. The single most useful invention of the 20th century, making food delivery massively safe. But then you hear about the giant swirl of plastic trash in the Pacific ocean, and how it's your fault. Well, it isn't. Your straw did not blow out of a trash can and into a river, when lead to the Pacific and gathered there. The trash in the Pacific was loaded 100 tons at a time onto barges, and purposely dumped in the ocean to get rid of it. The US didn't do it, nor did Japan nor any developed country. It was the poor countries who did it. Countries who could not afford to develop and operate a trash dump. Most of it [comes from eleven countries](#): China, Indonesia, Philippines, Vietnam, Sri Lanka, Thailand, Egypt, Malaysia, Nigeria, Bangladesh and South Africa. China dumps 30% of it. The first six on the list dump more than half of it.

Each topic above can be handled similarly by asking one question: Did I do that? If the answer is no, or if you have no idea when you might have done it, then you didn't and are guilt free.

All the guilt is manufactured by PR people to get your money. It's a manipulation. Don't give in; don't let them ruin your life because they are greedy.

Real guilt come because you hurt someone. You should feel that, deeply enough to make amends.

And for heaven's sake, never let the truly guilty go free because they made you feel bad about punishing them. They deserve it. They are the only ones who do.



10 Politicizing Science

Before August, this is the CDC definition of a vaccine:

“ **Immunity:** Protection from an infectious disease. If you are immune to a disease, you can be exposed to it without becoming infected.

Vaccine: A product that stimulates a person's immune system to produce immunity to a specific disease, protecting the person from that disease. Vaccines are usually administered through needle injections, but can also be administered by mouth or sprayed into the nose.

Vaccination: The act of introducing a vaccine into the body to produce immunity to a specific disease.

Immunization: A process by which a person becomes protected against a disease through vaccination. This term is often used interchangeably with vaccination or inoculation.

After August 26th 2021 it became this:

“ **Immunity:** Protection from an infectious disease. If you are immune to a disease, you can be exposed to it without becoming infected.

Vaccine: A preparation that is used to stimulate the body's immune response against diseases. Vaccines are usually administered through needle injections, but some can be administered by mouth or sprayed into the nose.

Vaccination: The act of introducing a vaccine into the body to produce protection from a specific disease.

Immunization: A process by which a person becomes protected against a disease through vaccination. This term is often used interchangeably with vaccination or inoculation.

Clearly they want the COVID "treatment" to be considered an immunization, but it couldn't meet the real definition. So they changed the definition, not the treatment. It's for political purposes they did this, because the Federal Government (that is, the Biden administration) wants to be seen as doing more for us than they did. It's the slimiest way out of the problem they faced, that they were

not delivering an immunization, just a treatment.

Merriam-Webster changed their definition too.



The World Health Organization changed theirs in the early days of COVID:



Bah! A pox on them all! These definitions are not improvements to the state-of-the-art because real vaccines are old hat to the medical field for the last 70 years (since Salk and the polio vaccine), and the old vaccine definitions are correct. Now they have muddied the waters so badly that the drug companies can release almost anything that helps "stimulate an immune response" and call it a vaccine. Anything that gives you hay-fever is now a vaccine! Pollen is a vaccine! Black mold is a vaccine! Bee stings are a vaccine. Tetanus infections are a vaccine! Welcome to the new definition. The CDC is primarily responsible for this fiasco, but the person in charge there has been working hard to not be noticed by anyone. Rochelle Walensky. Bet you've never heard of her before.

UPDATE June 2022:

Science demands rigorous adherence to the evidence, and I see that adherence lacking in all news-reported science. Here is Thomas Sowell on the subject of trustworthiness in science:

<https://www.youtube.com/embed/cU1mtNt-dCA>

You can stop at 4:40 when the video maker adds his own stuff, which I don't think is very informative, as examples of how science is blended with politics to demonstrate the use of ill-use of science to create political power.

11 New Name = New Thing

In the journal *Inorganic Chemistry* this week there is a cover article titled, " $\text{Mn}^{\text{II/III}}$ and $\text{Ce}^{\text{III/IV}}$ Units Supported on an Octahedral Molecular Nanoparticle of CeO_2 ", written by Sayak Das Gupta, Annaliese E. Thuijs, Ethan G. Fisher, Khalil A. Abboud and George Christou, published February in *Inorg. Chem.* 2022, 61, 17, 6392–6402



The artwork shows the three clusters described in this paper incorporated into a peaceful dawn at the Pyramids of Giza. The clusters are described as ultras-small nanoparticles of CeO_2 in molecular form, so-called "molecular nanoparticles", on which small magnetic Mn_x units are attached; they can therefore be considered molecular analogues of magnetic species on nanoparticle supports. The cluster cores all have an octahedral or bi-octahedral geometry, providing the link to the shapes of the Great Pyramids.

The odd thing about this is the mention of "molecular nanoparticle." What they mean, and what the artwork caption says, is "cluster." Clusters are fairly large collections of some molecule that could be smaller, but isn't. We find them all over biology, we've known of clusters in chemistry for about 150 years. So why the new term for them?

Self aggrandizement. It's the only reason. We have nothing in the abstract saying why the new term for clusters, just a reference to "and are thus ultras-small ceria nanoparticles in molecular form." Well, that's almost the definition of a molecule; take out the "nanoparticles" and they are describing a molecule. I think they name them this to get into the nanoparticle press.

I was massively disappointed when I saw my first demonstration of nanoparticle synthesis: it looked just like any normal synthesis, but the powder was described as being made of nanoparticles. The physical behavior of them was exactly the same as any powder. And the utility of nanoparticles, like buckyballs, the first nanoparticle, is still zero. They just aren't good for anything.

Buckyballs, carbon balls that look like soccer balls, were found in soot in the early 1990's, and were heralded as the new thing in chemistry. Well, after forty years, they have been extensively tested, and they have been found to behave just like soot.

The nano-press is extensive now, and the utility is still zero. It's zero because they are molecules, and we know how they behave. Putting the "nano" in front of a known word doesn't change them

to something new. It just gets them funded more easily by evidently gullible Government grant reviewers.

UPDATE 28 June 2022:

Many years ago I found the pamphlet by Marx and Engles introducing the ideas of communism, *Manifest der kommunistischen Partei* (1848, commonly called the *Communist Manifesto*). I found it very difficult to read because they had redefined so many words. It wasn't that those words needed to be changed, like middle-class and entrepreneurs, they did it, I thought, because they needed to confuse the reader enough that the reader would believe the malarky they proposed. The bad connotations to the term "manifesto" come from the way this book abuses language.

I saw this again when I read my roommate's book, *Science and Health with Key to the Scriptures*, by Mary Baker Eddy (1910). She does the same thing, redefine words that already have very common meanings.

And then I saw it again, in a far more challenging context: articles published regularly in the *Journal of Chemical Education*. It was done regularly, I think, because these authors really had nothing new to say but wanted or needed to publish something, so they defined new words for old things and sold them as new goods. Like "POGIL," *Process Oriented Guided Inquiry Learning*, instead of the old word, group worksheets. This bothered me a lot, and this is when I realized that chemical education professors really had nothing new to say. And it's when I stopped reading *J. Chem. Ed.* (there was actually a second good reason I stopped, when I noticed that no new pedagogy proposed and evaluated ever fared worse than those to which it was compared, meaning the evaluators were rigging the contest).

This was backed up in a very small and mostly anecdotal way when I looked at the grades in my CHEM 1210 courses over two decades by major. The major which did most poorly: geological education majors. And it wasn't a small gap, it was massive. Other education majors also did fairly poorly, but most at least passed the class. Since this realization I actively try to encourage chemical education majors to move to one of the chemistry major disciplines, like professional chemistry or biochemistry, where the job opportunities are far broader and frankly, the expectation for performance is higher as well. Perhaps education majors are there because they consider it an easy and unchallenging path. Unchallenging it is. Education majors have almost guaranteed low-pay high-workload jobs waiting for them: educating your kids. It's a sucky career option, but an easy one. K-12 schools are in such high need of teachers they will hire anyone.

Then I saw this this morning in which a professor, Lyell Asher of Lewis and Clark College, explains rather clearly how this started, and why it persists. It's long, 80 minutes, but packed with good information.

<https://www.youtube.com/embed/0hybqg81n-M>

I have never been trained in teaching. And yet I'm quite good at teaching undergraduate chemists. How could that happen? Because I was trained in *thinking*. My Ph.D. professor, Paul Lindahl at Texas A&M University, College Station, made a point of having us evaluate the claims authors made in scientific paper, and of proving what we said and thought, of being open-minded to better explanations than those we already have. This is how university professors are trained, not by indoctrination, but by it's direct opposite, thinking. And for university professors, training in thinking is enough. No professor in UVU's chemistry department is hired on education credentials, we hire based on education *skills*. And we are a strong department because of it.

<https://edschools.org> This needs a whole different blog post. Dang!

“ Many university based school leadership programs are engaged in a “race to the bottom,” in which they compete for students by lowering standards and offering faster and less demanding degrees.

Credentials have come to overshadow competence.

Executive Summary, *Educating School Leaders*, Education Schools Project,
March 2005 <http://edschools.org/pdf/ESfinal313.pdf>

“ A majority of teacher education graduates are prepared in university-based programs that suffer from low admission and graduation standards.

Executive Summary, *Educating School Teachers*, Education Schools Project,
Sept. 2006 http://edschools.org/pdf/Educating_Teachers_Exec_Summ.pdf

In other words, anyone gets in, everyone graduates. Or, education-degree diploma mill.

12 Settled Science

Every time I hear the term "settled science" I think, "You're not doing it right." History is packed with examples of a "settled" science that was upended:

- The Ptolemaic universe was the only thing going, even with its strange epicycles to explain the retrograde motion of the planets, from 100 AD until Copernicus introduced a sun-centered solar system and Tycho Brahe and Johannes Kepler proved it by 1619.
- Alchemy reigned as the only science of matter for 2000 years before Boyle said experiment trumped everything (1662) and then Lavoisier demonstrated it (1778), creating chemistry. And now our society is addicted to practical chemistry (though there are strong signs we are heading back into the abyss of theory-confirming observation).
- Creationism was completely settled until Lyle and then Darwin proposed alternatives.
- The physicists in the late 1890's thought they had nailed down the physical laws completely, then Einstein's relativity theories upended most of Newtonian physics, and just after, quantum theory upended the rest of physics and all of chemistry.
- Darwin was settled science until Haldane in 1957 did the math behind speciation and found far more time was needed to generate enough mutations to create a new species than we had.



Settled Science

My point here is that science is never settled. It can't be. And bad things happen when you think that science is settled. The alchemists record observations that when a metal rusts, it gains mass. But the theory of Plato and Aristotle used to explain alchemy didn't accept that rusting would gain mass, so the observation was ignored or sometimes discounted as being poorly observed. That's just one example. We have a very long history of good observations being ignored because they didn't fit current theories until someone is brave enough to say, "screw the theory, it's wrong."

So when anyone says "settled science" you know there will follow a series of ignored observations that current theory doesn't explain, and no one will go looking for the better theory. He haven't had a new theory since the 1970's. Many new ideas are called theories, but they are nothing more than hypotheses, or just guesses.

The first person to challenge a settled theory was Petrus Ramus (Peter Rami in the vernacular) who published a thesis in 1536 titled, *Everything Aristotle Said Was Wrong*. He was killed for publishing it by a fan of Aristotle.

So celebrate those who broke from "settled science" and found something new; but don't worship them and think what they did was the new "settled science." No science is settled. Dogma might

be, but never science.



Consensus Science

Consensus science is when scientists agree on something. It's a political term, as all scientists know that theories are ephemeral and therefore faith in them is ill-placed, thus no scientist ever "believes" anything. Instead we allow others to prove their case, and when they can't, or don't, only *then* can beliefs enter in among the less-disciplined. There is no room in science for beliefs; it's just not part of anything we do, other than believe the primary data of other scientists (and hence the harsh punishment when we discover a scientist has lied) and that they are reporting it honestly.

The consensus isn't about proof, because when proof is sufficient it's just there and no one thinks to ask scientists if they believe it, it has been proven. The problems arise when a hypothesis isn't proven. Theories are the consequence, or should be the consequence, of a ton of experimentation, testing of all supporting hypotheses, and a vast array of predictions that are all proven unwaveringly correct. In our media most theories have never risen to that level. Hypotheses, guesses based on a minimum of observations, are called theories by the media in hopes of being taken as a theory. Hypotheses are unreliable, untried, unproven, little more than semi-informed guesses. If you are gullible, you are free to believe a hypothesis is the truth. This is where consensus science is found: among the gullible scientists.

“ We have many studies in teaching, for example, in which people make observations and they make lists and they do statistics, but they do not thereby become established science, established knowledge. They are merely an imitative form of science.... The result of this pseudoscientific imitation is to produce experts, which many of you are - experts. You teachers who are really teaching children at the bottom of the heap, maybe you can doubt the experts once in a while. Learn from science that you must doubt the experts. As a matter of fact, I can also define science another way: Science is the belief in the ignorance of experts.

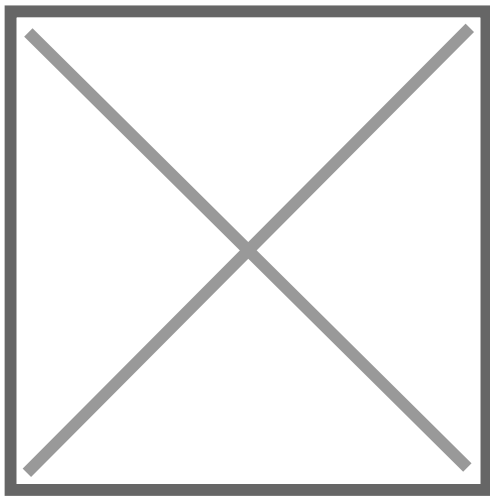
Richard Feynman *The Pleasure of Finding Things Out*, p. 187, 1999

One reason I study alchemy is to experience this gullibility in the writings of the alchemists, to see how they justify their beliefs, or dodged unexplained or contradictory observations. And when I watch for those same sorts of arguments and justifications in modern science I see them all over, in chemistry, but more often in the softer sciences.

Skepticism in Science

From its founding, scientists were skeptical. Coming from a background of Aristotelian and Church authority, the early natural philosophers (as they styled themselves then, science having a different meaning to them than it does to us), the founders of the first scientific society, the Royal Society of London, wanted skepticism hard-baked into their method. Their motto, *Nullium in verba*, "Take no one's word for it," was wisely chosen. The purpose of the Society was to generate fact, abundantly witnessed by doing all experiments in their presence, as the only reliable thing. Everything that anyone said about the fact was up to them and was, as they established, temporary. All scientific conclusions are temporary. That one thing, the temporary nature of science, was the great advance that made science and the technological revolution possible.

Anyone who denies the temporary nature of science is denying the most basic tenet of science. "Settled science" denies science, and should be abandoned.



How to tell the difference between proven science and hypothetical science

When the theory comes before the evidence in the presentation, it's a hypothesis and is thus unbelievable. Robert Boyle in 1650 recognized this as a major flaw in natural philosophy, requiring a theory to explain the observations. That's never how it works, and he made a very distinct point of not allowing that to happen in his observations of the vacuum.

The existence of the vacuum was a major point of contention since the ancient Greek philosophers argued it. The Atomists, who said all matter was made of minute triangles of matter, needed the absence of matter in some space to allow for motion; Plato and Aristotle had a different view of matter which did not require empty space, so they argued for the impossibility of a vacuum. Nineteen-hundred years later when Torricelli made a barometer in 1643 the great debate was re-begun as to what was in the space at the top vacated by the mercury. Since it was enclosed in glass and not accessible, everyone was left to argue anything they wanted (a hallmark of hypothesis territory: inaccessible data). Some argued for a vacuum, most supported some sort of matter being present. Robert Boyle said, essentially, screw the philosophy, let's just put the barometer in a chamber and pump out the air and see what happens. The mercury level dropped, supporting the idea of a vacuum. Thomas Hobbes, philosopher, went ape. He said that the air displaced when the mercury fell into the dish below needed to go somewhere so it went up through

the mercury to occupy the void. Boyle said who cares what explanation you give it, it just happened, which drove Hobbes crazy. Hobbs had the consensus on his side, and he was arguing from the science that had been settled for 1900 years. And Hobbes was dead wrong.

Boyle was so clear-headed about the primacy of data that he set forth the scientific laws of witnesses, people who could not be duped and who could attest to the veracity of the observations. A few good scientists of notable reputation would serve, or a roomful of such men was better, or better yet, describe your work so well and accurately (with great humility and honesty) that the reader felt he was there and feels himself to be a witness. Reproducibility, Boyle said, was rarely done, even by the original experimenter, and is thus a mute witness.

Always start with the data, and never let it leave your focus. I made the [climate series](#) of posts here to point out that when your data becomes suspect, all the hypotheses and theories supported by that data die instantly. Settled science and consensus science are nothing other than simplistic ways to keep unsupported hypotheses alive. Let them die.

“ Science alone of all the subjects contains within itself the lesson of the danger of belief in the infallibility of the greatest teachers in the preceding generation...When someone says, “Science teaches such and such”, he is using the word incorrectly. Science doesn’t teach anything; experience teaches it. If they say to you, “Science has shown such and such”, you might ask, “How does science show it? How did the scientists find out? How? What? Where?” It should not be “science has shown” but “this experiment, this effect, has shown”. And you have as much right as anyone else, upon hearing about the experiments—but be patient and listen to all the evidence—to judge whether a sensible conclusion has been arrived at...The experts who are leading you may be wrong...I think we live in an unscientific age in which almost all the buffeting of communications and television-words, books, and so on—are unscientific. As a result, there is a considerable amount of intellectual tyranny in the name of science...Science alone of all the subjects contains within itself the lesson of the danger of belief in the infallibility of the greatest teachers of the preceding generation.

Richard Feynman quoted in <https://lemire.me/blog/2020/07/12/science-is-the-belief-in-the-ignorance-of-experts/>

13 The Sentience of Inanimate Objects

1. "Sodium forms a +1 ion because it wants to have a noble gas electron configuration."
2. "Plants evolve because it gives them a higher chance of survival."
3. "My truck wants a lot of gas when rock crawling."

Each of these statements imply that inanimate objects have desires. They don't. They respond to energy and to entropy to minimizing the former and to maximizing the latter. And it's not even their own energy and entropy to which they respond, it's the energy and entropy of the entire world that is driving change.

The most important equation in the universe is Gibbs law,

$$\Delta G = \Delta H - T\Delta S$$

ΔG is the Gibbs Free Energy, the energy free to do work, or the energy free to drive the system, which is a description of the current state of affairs and the predicted future state of affairs, such that

$$\Delta G = G_{final} - G_{initial}$$

If this is negative the system will move to completion. ΔG is not directly measurable, so we use Gibbs law to use the two measurable quantities, Enthalpy, ΔH , and Entropy, ΔS , to find it.

Enthalpy, ΔH , is the heat given off by a process. The fun thing about heat is that all forms of energy, heat, light, pressure, sound, falling, will end up as heat, so this term catches all the energies involved.

Entropy, ΔS , is harder to define. This is a measure of disorder in the world, and it's driven by Vegas odds. How many different ways can the current state of affairs exist, and how many ways can a future state of affairs exist. This is a statistical calculation, and when atoms are involved (as they always are) creates massive numbers of different ways, down to the level of where each atom is located and how it is vibrating. The fun thing about entropy is that it always goes up. So ΔS is always a positive number. If a proposed system change generates a negative ΔS , that change can never happen. T is the absolute temperature in Kelvin, so the higher the temperature, the more influence entropy has.

All inanimate things respond to maximize the negative value of ΔG . Most animate things do too. Sometimes it seems like they don't, but they really do. Jogging for fun, for example, seems like that expends a huge amount of energy to build up your muscles, but it's really expending a huge amount of heat (ΔH is very negative) and turning a lot of dissolved sugar into carbon dioxide gas,

making ΔS hugely positive.

It's the world that finds this minimum energy/maximum entropy position, not the lone atoms/plant/whatever. When an atoms ionizes, that electron has to go somewhere, so there must be another atoms to accept that electron, and in the transfer, energy must drop overall, and entropy must rise overall.



So when we examine sodium, it has no wants and desires; the world went to lower energy/higher entropy when the electron transfer happened, so it happened.

The anthromorphization of atoms and plants and anything else is because we don't understand the system or are too lazy to try.

And there is harm in it. By attributing an event to the wrong cause, we are more likely to mistake our observations because our preconceptions color our observations so completely. This was a strong factor in the longevity of alchemy; alchemists thought they were seeing one thing, when something entirely different was happening. They mistook reality for a sort of fantasy world they had read about. When they did a reaction in an iron pan, and the product was green (from iron sulfate or iron chloride), it never occurred to them that some of the iron had reacted; they thought it was just the next step in the synthesis of gold because that's how previous alchemists had described it and that the iron pan was inert. So they plugged along on alchemy and missed reality, so they missed all the observations that would have taken them toward progress. While alchemy and the theories behind it was alive in the minds of alchemists there was no scientific progress. Zero.

It's quite a thing, stopping all progress.

I'm continually on the watch for that happening in our science. And there is a lot of it, if you go back to read my [last post on alchemy](#).

14 Welfare for Illegal Immigrants

Immigration to the U.S. was open and free until 1914. Anyone who wanted to come just needed to get to Ellis Island and in they came, provided they brought no disease with them. But to survive here they had to work, so they did and the economy benefitted very nicely. More workers --> more goods and services --> more money --> more jobs --> more workers --. etc. A nice cycle. There was no real incentive to come to the U.S. unless you were willing to work or here was much better than home. Everybody benefitted by having the immigrants here.

In 1914 Congress restricted immigration because of war in the Naturalization Act. That second condition, here is better than home, became a reality for a major part of the world population during World War I when huge numbers of displaced people came to Ellis Island, and borders were closed to preserve order.



The situation lightened some until the 1930's when the Democrats began establishing welfare programs. Welfare, when any citizen can demand money from the state and federal governments, adding a significant incentive to immigration. With this new influx, immigrants were now required to show they had a job here or that someone with a job would support them before they were admitted.

This requirement to keep immigrants off the welfare rolls had a big impact on the number of immigrants, and it was felt by the economy, especially in the 1960's.

So here is the problem: how to we get immigrants here who will work and not become a burden to the State?

And there was one easy answer: illegal immigration. Illegal immigrants could never make welfare demands on the State so they were in the same situation as immigrants before 1914: come here, work to survive, and everyone benefits. This was especially good for the Boomers, the first generation to reestablish the caste system in middle-class America, where there were jobs too demeaning for them or their children. They needed somebody to do these jobs for them, like yardwork, cleaning, construction, etc., that they would never touch, having attended college.

Provided immigrants have no access to welfare, illegal immigration solved an important economic problem of closed borders in a welfare state.

Well, guess who messed-up this solution? The Democrats began, in the 1990's, passing more laws that allowed illegal immigrants to demand money from the State. Why did they do this? Because they cannot answer one question: at what point will we consider an illegal immigrant to have earned citizenship?

Until that question is answered, or until the middle- and upper-class consider yardwork and house-cleaning a good career, illegal immigration will remain a huge problem, economic and ethical.

But of course you can't deny welfare until there is a path to citizenship. This is a very important thing for the economy, and I wish they'd get on with answering that question. Five years of work to citizenship? Ten? Just make it some amount of work and I'm happy with it. But don't make it just being here feeding off Uncle Sam to earn citizenship. Make it something that demonstrates character.

<https://www.youtube.com/embed/xZb7uv0-De4>

15 Paranoid Science

I read a [blog](#) by a climate scientist, Roger Pielke Jr. He works on the UN climate reports. Recently he posted a book review preview, to be published in *The New Atlantis* (Summer 2022). The book was *Unsettled: What Climate Science Tells Us, What It Doesn't, And Why It Matters* by Steven E. Koonin. In the review, Dr. Pielke talks about a developing thing in science for the masses: dualism.

“ For well over a decade, the American debate over climate change has largely been a battle between two extremes: those who view climate change apocalyptically, and those castigated as deniers of climate science. In institutions of science and in the mainstream media, we see the celebration of the catastrophists and the denigration of the deniers. Predictably, the categories map neatly onto the extremes of left-versus right politics. The most apt characterization of this polarized framing is as a kind of Manichean paranoia—a politics defined by the belief that the debate is really a battle of absolute good against absolute evil over the future of the world.

Dualism is a view of the world where there are two usually-opposed options. Manichaeism is an old religion (200-700 A.D.) that took the [Aristotelian/Gnostic](#) cosmology of heaven and Earth where heaven is the place of all goodness and light, and earth is the place of all evil and darkness, and there is a gulf, a firmament, between them.

What demarks the new politics and science is the paranoia that comes with living at the extremes. Back in 1964 Richard Hofstadter in his *Harper's* essay "[The Paranoid Style in American Politics](#)" wrote

“ I believe there is a style of mind that is far from new and that is not necessarily right-wing. I call it the paranoid style simply because no other word adequately evokes the sense of heated exaggeration, suspiciousness, and conspiratorial fantasy that I have in mind.

The paranoid person

“ does not see social conflict as something to be mediated and compromised, in the manner of the working politician. Since what is at stake is always a conflict between absolute good and absolute evil, what is necessary is not compromise

but the will to fight things out to a finish.

With the recent politicization of climate change, evolution, and energy, the paranoid style now applies to science. Social media is the playfield, not the journals. In fact, mentioning peer-reviewed research results in social media can get you banned ([1](#), [2](#), [3](#)). Science is becoming an argument from the extreme, for the extreme.

From Dr. Pielke:

“Today, the Manichean politics of climate change play out on social media, where leading scientists, journalists, and other combatants seek, to borrow from [Jonathan Haidt](#), “to shame or punish someone publicly while broadcasting one’s own virtue, brilliance, or tribal loyalties.” The incredibly fascinating, important, and nuanced issue of climate change has become an online team sport between the good guys (your side) and the bad guys (the other side).

The politics of Manichean paranoia, as I have elsewhere argued, have had a deeply pathological influence on the debate over climate science and policy. My own experiences—which include being attacked by the White House and investigated by Congress for publishing and communicating peer-reviewed research—are symptomatic of the pathology, but they are only small examples of how the debate seeks to force participants into one of two extreme camps.

Paranoid dualism had in its sights, over time, Masons, Mormons, Catholics, Jews, Blacks, Illuminati, government, antigovernment, communists, McCarthy, religionists, antireligionists, pagans, witches, successful entrepreneurs, hippies, rockers, police, baseball players, baseball owners, bosses, workers, the mob, politicians, Republicans, Democrats, Ralph Nader and whatever party he represented, paying taxes, not paying taxes, Texans, Californians, New Yorkers, Canadians, Mexicans, The Irish, China, Japan, slaves, slave owners, carpetbaggers, soldiers, draft dodgers, General Lee, General Pershing, General Sherman, General Schwartzkopf, General Patton, general mayhem and general order. In the past, this was the attitudes of extremists.

But now no one seems capable of pushing back against the two camps to occupy the reasonable middle. Everyone has turned into an extremist, left or right, utterly vacating the middle ground.

But history gives us some hope:

Will the climate change? Sure.

Will we adapt to future change? We always have, and for the better every time.

Will we run out of current fuels? Eventually.

Will we find new sources of energy? We always have.

Let's have a look at the biggest disruption to climate and humanity in recorded history, the Bronze Age collapse. Around 1200 B.C. there was a massive drought, accompanied by volcanic eruptions and earthquakes, around the Mediterranean (*Ruth* in *The Bible* records the drought, and the Philistines of *Chronicles* and *Kings* were probably those displaced and beaten back by Egypt when Crete became unlivable). Mass migrations ensued, and the wars fought when one people went to the land of another people completely disrupted Bronze-age trade. So what came of this disruption? The Iron Age, when the tin from Crete and other mines was not available, mankind learned better how to mine and smelt iron. And a new trade built up, with stronger arms, bigger boats, more durable goods which the arms protected and the boats transported.

And iron gave way to steel, and steel gave way to silicon. And the industrious and practical middle ground is where these changes happened.

We always survive change, and end up the better for it. It's a fundamental story of history.

"Occupy Wall Street." "Occupy the White House." "Occupy Congress." Nonsense. *Occupy the Middle.*

You can't be extreme nor paranoid in the middle. In the middle we make compromises. In the middle no one is perfect so we allow for other's mistakes. In the middle we work, and we pay taxes, and we do good things. And we screw up on occasion, but nobody's focused on the middle so no one will notice. It's a nice place to live.

So dump your social media accounts until they learn to love being average, get to know to your neighbors, leave the paranoid life behind. The middle is quite comfortable.



And what became of the book review? Koonin

“ present[s] an alternative, nuanced perspective largely missing from public debate. But after some early resistance, Koonin gives in to the Manichean politics, embracing the conventional, divisive framing. The response to the book has been predictable, with both supporters and opponents relishing the battle—combatants in a deeply polarized struggle have an existential need for their mirror image. Koonin’s book could have challenged the pathological politics of climate change. Instead, it reinforces them.

Sigh.

16 Theories Which Can't Predict

One basic of a scientific theory is its ability to make predictions which can be tested. If those predictions are accurate, the theory holds. If they are not, the theory is wrong. This is Basic Science 101. Respectable scientists, seeing a prediction go bad, fix it pretty quick with a follow-up publication, though they won't often go back in the literature and retract the bad theory (those retractions only happen when someone else finds fraud in the data *and* makes it public; scientists are pretty self-aggrandizing that way: hide the bad, brag up the good).

“ Now I’m going to discuss how we would look for a new law. In general, we look for a new law by the following process. First, we guess it [audience laughter], no, don’t laugh, that’s the truth. Then we compute the consequences of the guess, to see what, if this is right, if this law we guess is right, to see what it would imply and then we compare those computation results to nature or we say compare to experiment or experience, compare it directly with observations to see if it works.

If it disagrees with experiment, it’s WRONG. In that simple statement is the key to science.

It doesn’t make any difference how beautiful your guess is, it doesn’t matter how smart you are, who made the guess, or what his name is... If it disagrees with experiment, it’s wrong. That’s all there is to it.

Richard Feynmann, 1964

Some scientists get away with bad theories by choosing fields of research where there is no future to predict: paleontologists, for example, won't have dinosaurs to study in the future, leaving them free to say anything they want. In my mind, they can't be scientists, for they can make no testable prediction. They are, in the mythology of science, stamp collectors.¹

Those who deal with chaotic systems are in the same difficulty, only they do have the power to test their predictions. Their problem is that they can't predict the outcome, because of the chaos. Chaos is the name we give a system determined not by large factors, but by miniscule variations at an almost atomic scale. Unless that variability is well-described (requiring calculations involving 10^{12} to 10^{24} variables), the chaotic system can't be understood well enough to make a prediction, much less a reliable one. The climate is a chaotic system.

Last year the climate scientists predicted a worse-than-average hurricane season. But this has been one of the quietest hurricane seasons ever known. They missed the prediction by miles.

But what is the great sin of the climate "scientists?" Probably hubris. They know they have a chaotic system, and still they make predictions of its behavior. They know their predictions are crap, and still they go on TV and talk about them as though it were fact, thinking, perhaps, that convincing the morons out there that they do understand a chaotic system makes them right. It does take a moron to listen to their predictions over the years and conclude they are even at 50% accuracy. They aren't. Climate predictions are far below 50%.

Here's what a prediction looks like, a real prediction: the temperature in [preferred location here] in one year will be [this temperature] plus-or-minus one degree F. Or, the rain in the month of March in 2024 in [location] will be [this much] plus or minus x mm. But not even the weather forecasters can get this right one week out, not without rather major windows of possibilities, and a public with a very short memory.

It's getting to the point in some disciplines where the scientists and commentators use the weather-level of prediction to be the standard of how a theory is to make predictions. Gone is the exact prediction, which is the only standard that can work.

And how did we get to this sad state of affairs? Propaganda. Politics, Narcissism. It has many names, but the actual mechanism is more prosaic, I think: Incompetence. It's called the Peter Principle.



Employees rise to the rank where they just become incompetent, and that's where they stagnate and make all their mistakes. Common in government positions, industry, business, academia. Interestingly, education is not one of these. You can't get a Ph.D. if you are incompetent. It is at least very difficult.

And finding oneself incompetent to do the job for which you are paid a bundle, it would be difficult to admit that you have no idea what the future will bring, revealing your incompetence to your superiors. So the incompetent make public proclamations about the future, seemingly unaware that the public just heard what they said and will remember it. And when asked later about the failure of the prediction, will deny, push aside, attack the questioner, all those completely unscientific ways to respond to a specific challenge.

The scientific response to a challenge is to produce data which confirms your prediction, or to change your prediction. There is a core of humility needed to be a scientist. This was identified by Robert Boyle back in 1660. I'd quote him here but he is notoriously difficult to quote, being supremely long-winded in explaining everything in every sentence he writes. So I'll quote people who read and understand what Boyle said:



Boyle several times insisted that he was an innocent of the great theoretical systems of the seventeenth century. In order to reinforce the primacy of experimental findings, "I had purposely refrained from acquainting myself thoroughly with the intire system of either the Atomical, or the Cartesian, or any other whether new or received philosophy." And, again, he claimed that he had avoided a systematic acquaintance with the systems of Gassendi, Descartes, and even of Bacon, "that I might not be prepossessed with any theory or principles."²

Boyle's "naked way of writing," his professions and displays of humility, and his exhibition of theoretical innocence all complemented each other in the establishment and the protection of matters of fact. They served to portray the author as a disinterested observer and his accounts as unclouded and undistorted mirrors of nature. Such an author gave the signs of a man whose testimony was reliable. Hence, his texts could be credited and the number of witnesses to his experimental narratives could be multiplied indefinitely.

Shapin, Steven; Schaffer, Simon. *Leviathan and the Air-Pump*: 32 (Princeton Classics) (pp. 68-69). Princeton University Press. Kindle Edition.

In fact, Shapin and Schaffer portray the scientific method as a *social* organization scientists use to find acceptable means of communicating the ideas they have.

“We intend to display scientific method as crystallizing forms of social organization and as a means of regulating social interaction within the scientific community.

Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life (1985)
by Steven Shapin and Simon Schaffer, Princeton University Press, p. 14

Scientific method is more than a set of rules for trusting data or testing theories; they eventually settle on a phrase, *the scientific way of life*, to refer to the totality of complexities the scientist needs to address. But incompetence is never one of them. Incompetence is rejected out of hand. Boyle is right when he tried so hard to make everything about observable fact, *matters of fact* (that phrase originated in the Royal Society of London, which Boyle helped found in 1660, and which bears yet his insistence of provable observations as establishing fact³). Boyle hated the idea that you could approach an experiment with a specific outcome in mind; to be honest with yourself you learn to expect anything, for only then can you learn how nature behaves. Once you learn that, get proof of your observation by having witnesses, and if possible, write up your observations with such honesty that even a skeptic will have no cause to doubt your veracity.

Well, none of that happens in science today. Most things I read, from the abstract to the end, make me doubt that such a thing happened as was reported. Certainly not predictions.

Even this morning there was a [news article](#) proclaiming the discovery on Mars of organic molecules, a sign of past life on the planet. But that will almost certainly be quietly walked back when they recover the rock sample and test it properly. They used a technique called Raman spectroscopy, and that technique gives the identity of the molecule, but these reports lack that specific evidence. But the samples aren't scheduled to return until 2033, so until then the idea of past life on Mars will spread and likely become fully accepted. And when the samples come home, if they do (there is a history of returned samples being damaged before analysis, even from earth orbit, i.e. Stardust mission, 2006), the molecules won't be there and the announcement will go unheeded by the press because it doesn't conform to accepted beliefs.

Incompetence. Incompetence of the scientists involved to announce before they have proof, the narcissism of getting their name in the press, the self-aggrandizement (short lived though it may be) that drives the incompetent scientist to say they are right, even for a short time, with the hope (maybe not even that) that critical scientists won't notice what they've done.

But we see you. We recognize you for what you are.

Incompetent.

Do us a favor: demote yourself one step and get back to where you were competent. Then we can be proud of you.

And one other thing: NEVER take a prediction from anyone who can't describe NOW accurately.

¹There is a mythology in science, mostly in its pith quotation history, like when Ernest Rutherford said that all science is physics, the rest is stamp collecting. There isn't any proof, and barely a hint, that he said it. See <https://quoteinvestigator.com/2015/05/08/stamp/>

²Boyle, "Some Specimens of an Attempt to Make Chymical Experiments Useful," p. 355; idem, "Proëmial Essay," p. 302; on the corrupting effects of "preconceived hypothesis or conjecture," see idem, "New Experiments," p. 47, and, for doubts about the correctness of Boyle's professed unfamiliarity with Descartes and other systematists, see Westfall, "Unpublished Boyle Papers," p. 63; Laudan, "The Clock Metaphor and Probabilism," p. 82n; M. B. Hall, "The Establishment of the Mechanical Philosophy," pp. 460-461; idem, Boyle and Seventeenth-Century Chemistry, chap. 3; idem, "Boyle as a Theoretical Scientist"; idem, "Science in the Early Royal Society," pp. 72-73; Kargon, Atomism in England, chap. 9; Frank, Harvey and the Oxford Physiologists, pp. 93-97. Our concern here is not with the veracity of Boyle's professions but with the reasons he made them and the purposes they were designed to serve.

³The motto of the Society, [Nullius in verba](#), means "Take nobody's word for it." This is the major influence of Boyle on modern science, an influence almost no one, even modern chemists, knows happened.

17 Self and Societal Delusion

I just read the first two paragraphs of Thomas Sowell's *The Visions of the Anointed: Self-congratulations as the Basis of Social Policy*, written in 1995, almost 30 years ago:

“Dangers to a society may be mortal without being immediate. One such danger is the prevailing social vision of our time—and the dogmatism with which the ideas, assumptions, and attitudes behind that vision are held.

It is not that these views are especially evil or especially erroneous. Human beings have been making mistakes and committing sins as long as there have been human beings.

The great catastrophes of history have usually involved much more than that. Typically, there has been an additional and crucial ingredient—some method by which feedback from reality has been prevented, so that a dangerous course of action could be blindly continued to a fatal conclusion. Much of the continent of Europe was devastated in World War II because the totalitarian regime of the Nazis did not permit those who foresaw the self-destructive consequences of Hitler's policies to alter, or even to influence, those policies. In earlier eras as well, many individuals foresaw the self-destruction of their own civilizations, from the days of the Roman Empire to the eras of the Spanish, Ottoman, and other empires.¹ Yet that alone was not enough to change the course that was leading to ruin. Today, despite free speech and the mass media, the prevailing social vision is dangerously close to sealing itself off from any discordant feedback from reality.

Wow.

I've been trying for years to understand one simple question: why did alchemy last so long, when it never worked. I've studied other things that lasted millennia which never worked, and what sustained them for so long. I haven't found that key. I've looked at short-term ideas, but found no good single explanation there, either. So maybe it's time to look into a feature of humanity which sustains us all at some time: pure and simple self-delusion.

Sowell continues:

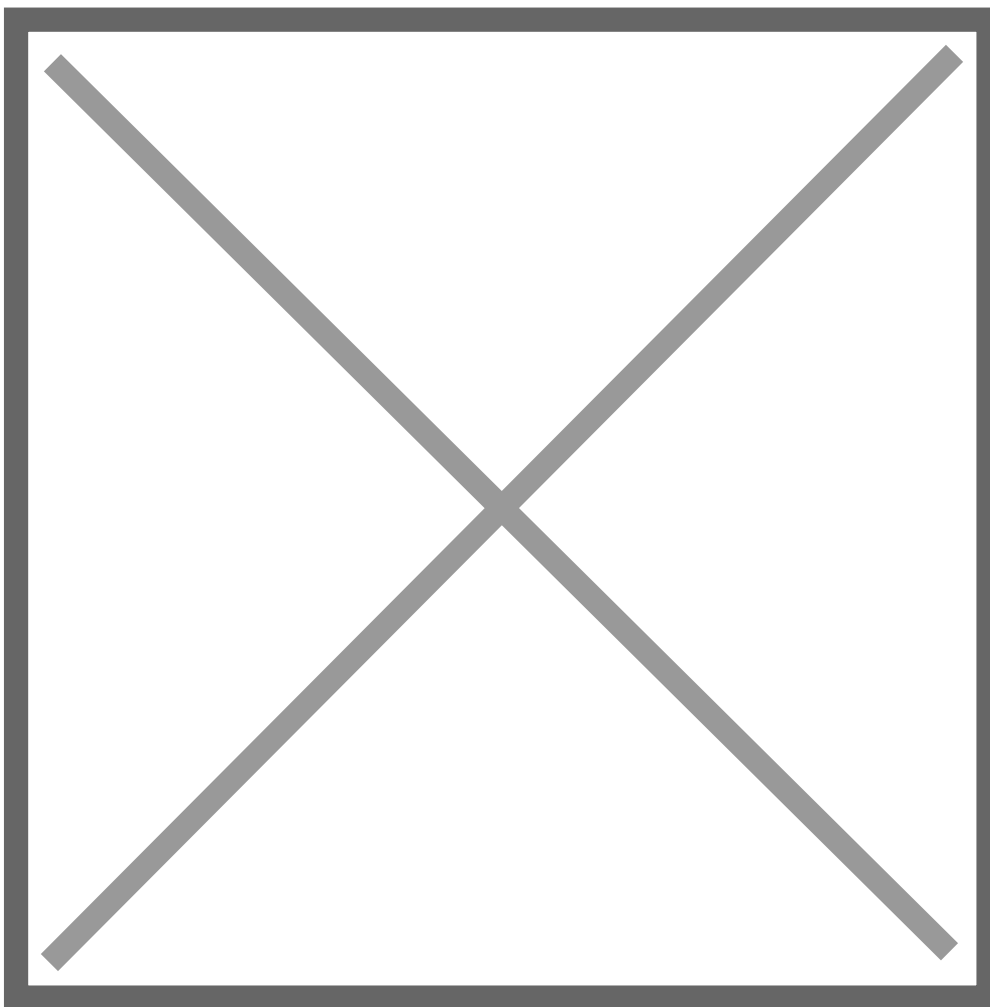
“The focus here will be on one particular vision—the vision prevailing among the intellectual and political elite of our time. What is important about that vision are not only its particular assumptions and their corollaries, but also the fact that it is a *prevailing* vision—which means that its assumptions are so much taken for granted by so many people, including so-called “thinking people,” that neither those assumptions nor their corollaries are generally confronted with demands

for empirical evidence. Indeed, empirical evidence itself may be viewed as suspect, insofar as it is inconsistent with that vision.

This totally describes the problem alchemy had: they had a vision, one which came from Empedocles, Plato and particularly Aristotle, and no empirical evidence seemed to shake it. These are some of the brightest people to have ever lived, and until Peter Rami wrote, "Everything Aristotle Said was Wrong," no one questioned anything Aristotle said 1700 years earlier. The vision of alchemy was modified over the centuries (mercury-sulfur theory, mercury-sulfur-salt theory, etc.) but the core vision remained intact *100 years* after it was *proven* wrong by Robert Boyle (in his *New Experiments*), two millennia after Aristotle established it.

I know my job this weekend: finish that book.

Heavens I do admire Sowell:



The reason this hits home for me so strongly is because I know how strong self delusion can be. I'm autistic, and bright, and I learned to mask very early and very well. So well that my masks *were* my personality; I had lost all sense that there was a *me* in there. This is why, for about five years, I thought I had a false self. You can search the blog for those posts. Masking is a form of defense when I didn't understand the people around me because I never had a sense of what they felt. Masking gave me a modicum of "normality" needed to interact with people. Well, I masked well, and although grad school took me way longer than was needed (again, part of my particular

autism), I got along fairly well in life as a professor. I was alone, of course, because masking is hard work and alone I didn't need to mask, even though I still did, because that was my personality. So being alone, too, was work, and that's where my denial was important.

When life just wasn't good, it was self denial that kept me going. I told myself I was happy, because I had things around me that I liked, and I was doing activities that I liked. And I truly believed that. I felt happy.

I won't go further into my life, but eventually there was a time when reality intruded in the vision of myself, and it wasn't pleasant. One point I want to make: I thought everything was going really well, but no one else thought that. They were anchored in a reality and I wasn't present with them.

I guess my point here is: if everyone around you is having a bad time, and is unhappy, get out of your fantasy that life is great and so are you. It's probably you that is the cause of the unhappiness. And this advice applies to great swaths of society. If people hate you or your party, it's you and your party.

¹See, for example, Carlo M. Cipolla, "Editor's Introduction." *The Economic Decline of Empires* (London: Methuen, 1970), p. 15; Bernard Lewis, "Some Reflections on the Decline of the Ottoman Empire," *ibid.*, p. 227; Bernard Lewis, *Islam in History*, second edition (Chicago: Open Court, 1993), pp. 211-212. I'll add that the Golden Age of Islam fits this category, as does the entire catalog of Aristotle and the Greek philosophers, and the Hermetic arts: Alchemy, Astrology, and Magic.

18 Non-experimental Science

“Science Which Is Not a Science . . .”

Because of the success of science, there is, I think, a kind of pseudoscience. Social science is an example of a science which is not a science; they don't do [things] scientifically, they follow the forms—or you gather data, you do so-and-so and so forth but they don't get any laws, they haven't found out anything. They haven't got anywhere yet—maybe someday they will, but it's not very well developed, but what happens is on an even more mundane level. We get experts on everything that sound like they're sort of scientific experts. They're not scientific, they sit at a typewriter and they make up something like, oh, food grown with, er, fertilizer that's organic is better for you than food grown with fertilizer that's inorganic—may be true, may not be true, but it hasn't been demonstrated one way or the other. But they'll sit there on the typewriter and make up all this stuff as if it's science and then become an expert on foods, organic foods and so on. There's all kinds of myths and pseudoscience all over the place. I may be quite wrong, maybe they do know all these things, but I don't think I'm wrong. You see, I have the advantage of having found out how hard it is to get to really know something, how careful you have to be about checking the experiments, how easy it is to make mistakes and fool yourself. I know what it means to know something, and therefore I see how they get their information and I can't believe that they know it, they haven't done the work necessary, haven't done the checks necessary, haven't done the care necessary. I have a great suspicion that they don't know, that this stuff is [wrong] and they're intimidating people. I think so. I don't know the world very well but that's what I think.

Richard Feynmann, *The Pleasure of Finding Things Out*, **1999**, Basic Books

It's always a pleasure to find someone who can think. It's an even greater pleasure to discover those who can think about science. I don't care if they are a Kuhnian, a Poperian, a historian, or even an anarchic scientist, as long as they can think about what an experiment is, or what a theory is, and how much weight a theory can hold, I'm for it and love reading it.

Many modern books on the history of science miss this fundamental aspect of doing science. Many think that what Copernicus did was different from what Ptolemy did. Most put Copernicus's astronomical heliocentric theory as clearly superior to Ptolemy's work in 100 A.D. But a comparison of the predictions produced by the two astronomical theories found Ptolemy winning. And Ptolemy had circular orbits around the earth with circular eccentrics to explain the planetary motion, and Copernicus had the planets, including the Earth, circling the sun. This conundrum, a better theory

with no better predictions, gave rise to Bernard Goldstein asking, "What was the question for which heliocentrism was the answer?"¹ Goldstein concludes that Copernicus was trying to find a consistent distance/period relationship between the planets, and came to heliocentrism in the derivation. In other words, Copernicus wasn't dissatisfied with the geocentric model and went looking for options; he happened across a different, possibly easier-to-use model in the course of calculating orbital numbers. But Copernicus' orbits were still circular, so he really didn't abandon the fundamentals of Ptolemy's model, he just eliminated some epicycles.

So was Copernicus a scientist? Most say he was, because he was more correct (heliocentric) than Ptolemy (geocentric). But really, what experiment did he do to confirm or to challenge his own heliocentric idea that Ptolemy hadn't already done and done better? In my mind, Copernicus wasn't a scientist, at all. Eventually being right doesn't make one a scientist.

The same applies to Rachel Carson, author of *Silent Spring*. She began in marine science, but quickly moved to anti-pesticide activism when a friend of hers published a description of birds found dead on her land after *DDT* had been oversprayed, making the claim (it turns out erroneously) that the *DDT* killed them. Carson began collecting "evidence" (all anecdotal) of the dangers and harm of pesticides. The industry was celebrating maximal crop yields by eradicating pests, claiming (truthfully) that hundreds of millions were being fed because pests were not killing and eating a portion of the crops (that number is now in the billions of people today).

About the only part of what she said that proved to be correct was that *DDT* was having an effect on certain birds: *DDT*, when attached to dirt and transported by river to a deep bay, could be converted slowly into *DDE* by bacteria, bioaccumulated, and prey birds would eat the fish. The *DDE* interfered with the egg-shell deposition mechanism, resulting in egg shells so thin the parents would crush the shells. So based on the scary stories, the U.S. government banned *DDT* use in the U.S. Had there been more time, alternatives could have been found (they have been found now, but it's a bit late to control the fire ants when they first entered the US) in pesticides like bifenthrin. And there is talk now about using *DDT* again, this time in a more controlled way (which is what should have happened back in the 1970s).



The herbicide 2,4-D suffered a similar fate, but some quick work by chemists showed that the "toxic" aspects of 2,4-D mixtures was the presence of a contaminant 2,4,5-T when 2,4-D was poorly synthesized. But that's another story.

No matter, for Rachel Carson the damage had been done, and the pesticide and herbicide industries had a lot of work getting back into the field and into the store. But the organic movement was created from this book, and the expenses. What the book really accomplished was to make the food more expensive for those who couldn't measure risk well.

The funny thing is that *Discover* magazine named it one of the top 25 science books, and it had no science in it!

Also see my blog post on the [Return of Natural Philosophy](#).

¹Bernard Goldstein, "Copernicus and the Origins of the Heliocentric System," *Journal for the History of Astronomy*, **2002**, 33:219–235. As Goldstein notes (p. 221), this motivation is consistent with Noel Swerdlow's classic mathematical account of Copernicus's derivation of the heliocentric model from the eccentric model of the second anomaly for the inferior planets found in book 12 of Regiomontanus's *Epitome of the Almagest*.

19 General Education

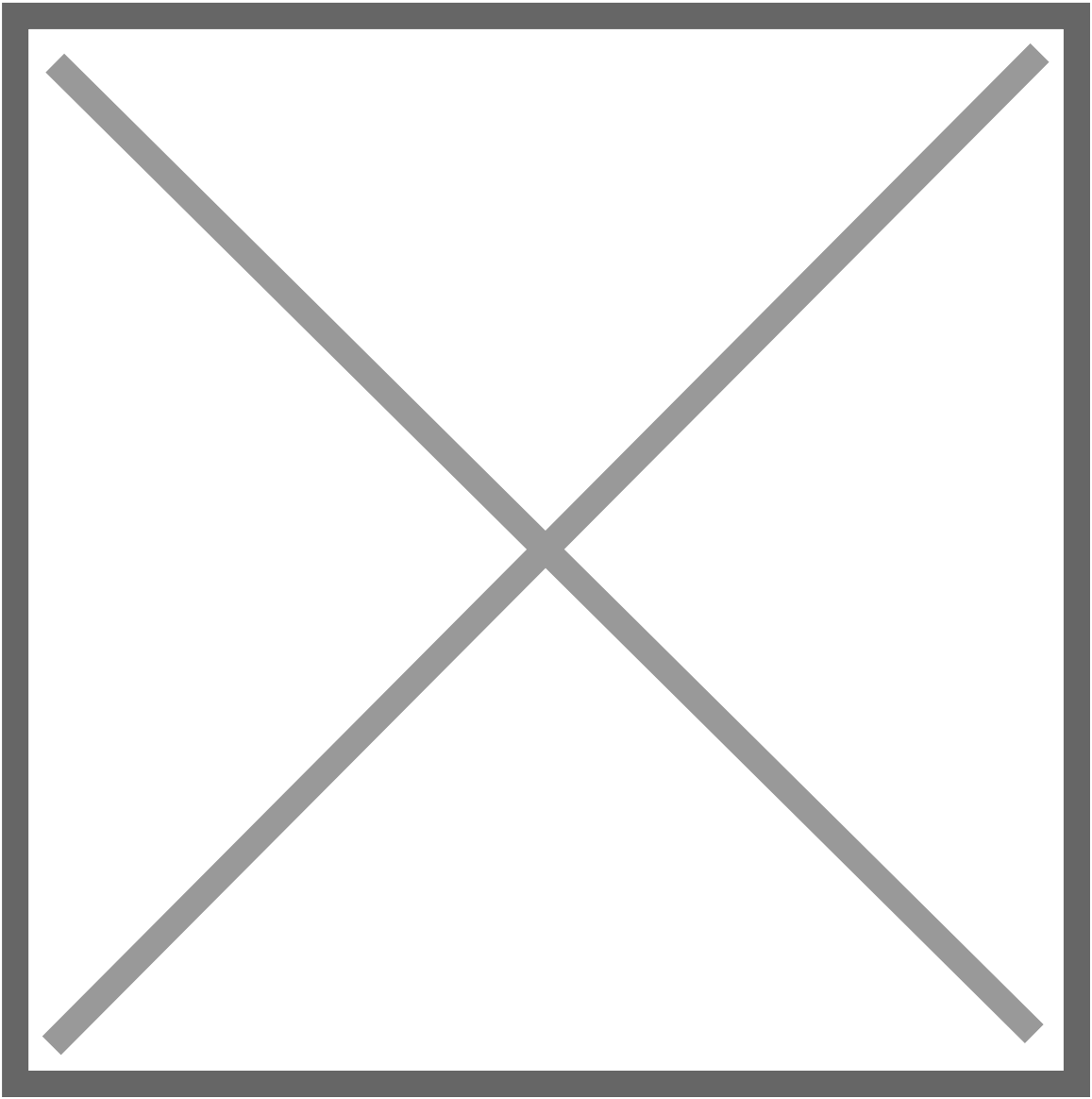
General education is having majors in one field take a smattering of freshman classes in other fields, beyond those which the professors in the major think are necessary.

I guess it's that last part that is so bothersome: students take an entire year of extra classes to fulfill the GE requirements. That means they are giving up a year's final salary for a "more rounded education." That's a heck of a cost, and one I suspect no thinking student would allow if they had an option. But we university folk don't give them an option.

I suspect the core reason isn't to benefit the students: it's a ploy to keep students around paying tuition an extra year, sucking up more dollars to support themselves and their salary increases.

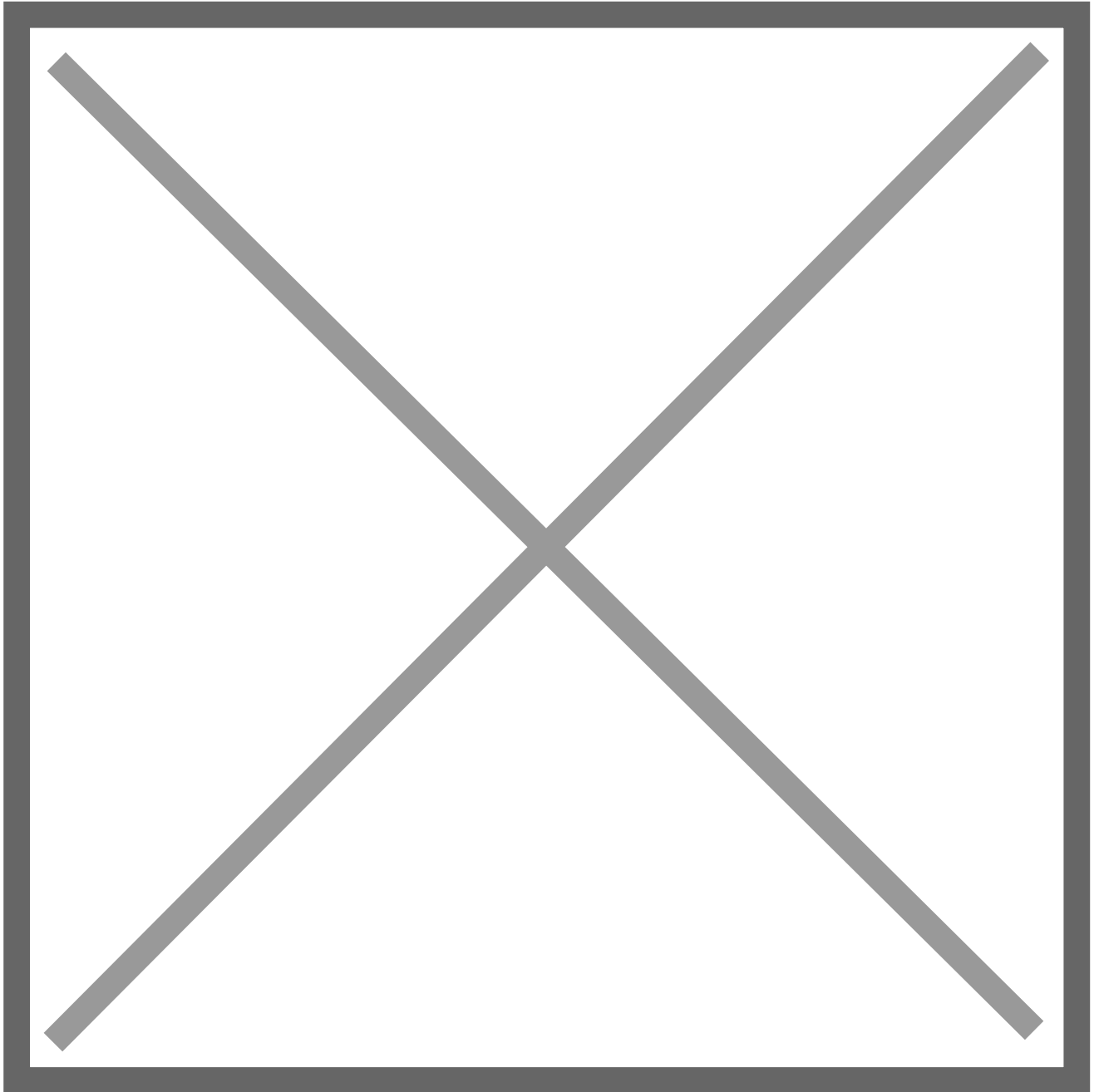
The ideas behind GE are from Aristotle, and they were no more proper when he proposed them than they are now. I'm a fan of Peter Rami (Ramus) and his simplified education. The Aristotelian "full slate education" was reformed by Rami, simplified, shortened, and students loved it. Educators hated it, because their salary depended on the lengthiness of the instruction. And as Rami put it back then (1532), *Everything Aristotle Said is False*.

Get rid of the Humanities. Get rid of the ethics. Get rid of the P.E. Let the major professors choose what's needed for their degrees, and shorten the programs and increase the graduation rates.



20 Google

A curious thing happened this weekend: my websites were listed by Google as being dangerous to visitors. A full red screen with warnings about my website, scaring all by the maniacs away.



I was able to recover from this by doing one thing then asking for a review. The one thing I did: get rid of the anti-bot code. I use Cloudflare as my DNS, and this site uses their proxy a service which monitors a lot of activity as the data moves through their servers between my servers and you. One thing it does is add a small bit of code that runs on your computer to see if you are a person or a program, called Picasso. Google invented it. When a client appears to be a computer (a bot),

Cloudflare stops returning data.

And Google took this to be an attempt to steal your data.

What they really did was force me to remove that code. Or my visitors could use another browser, but that's not likely as I can't communicate that to them, because of that big scary warning screen.

So now my websites are all available to bots like Google, and any other malefactor who is stealing my websites.

Google deserves to go.

UPDATE 28 NOV 2022: Google is doing it again, marking YunoHost login pages as dangerous. Idiots. Or very poor programmers who are clueless as to what the web is now, as if they haven't figured out that people log into web sites these days.

21 Opinion Dressed as News

- [Log off](#)

CATEGORY LIST

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- [__ autism \(7\)](#)
- [__ false self \(21\)](#)
- [history \(3\)](#)
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Things which should be cancelled 21: Opinion dressed as news

BY [WILSON](#) / OCT 19, 2022 / [NEWS CANCEL CULTURE](#)

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I've gotten into a habit while watching documentaries: if the first word is "I" I stop and delete the episode. PBS programs have gotten particularly bad at doing this, programs like Frontline and NOVA. This habit developed over the course of 20 years. It didn't matter what followed, nor how interesting the topic was to me, the "reporting" always devolved into opinion and I stopped before the end and deleted the episode. It's gotten quite common lately, as in every episode of Frontline and most episodes of NOVA.

[Gallup Polling](#) released a poll today on the trust Americans place in the news. It was not good news for the reporting industry. More Americans have no faith in the news than have complete faith in the news.



34 percent is all the news can muster who trust their reporting. It's not an accident that it's so poor, it's a consequence. Were I a journalism student I'd abandon the field. How messed up does reporting need to be to garner that amount of distrust, when all you need to do is be accurate and complete?

It's not the students, nor the individuals, it's the industry and what drives it. Advertising and political favors drive the industry. And editors who let reporters opinion into the story. It's the opinion that rankles me the most.

They are going to require a major fix if the news is ever going to gain back the cache of "trustworthy." Until then, editors can get rid of the opinion. It's too easy to put in a story, and slide past the gullible who share the opinion, rather than work to discover what's really going on.

At least get rid of every "I" that your reporter writes.

22 COVID Vaccines

"Level the curve" they said, by getting a vaccine. Well, this is the curve, in blue:



In orange are the vaccines administered. What's wrong with the data, from the CDC?

THE CURVE NEVER LEVELED! Deaths from COVID still rise at the same rate they did before the vaccines.

The COVID vaccines don't work.

Data straight from the [CDC COVID Data Tracker](#) today.

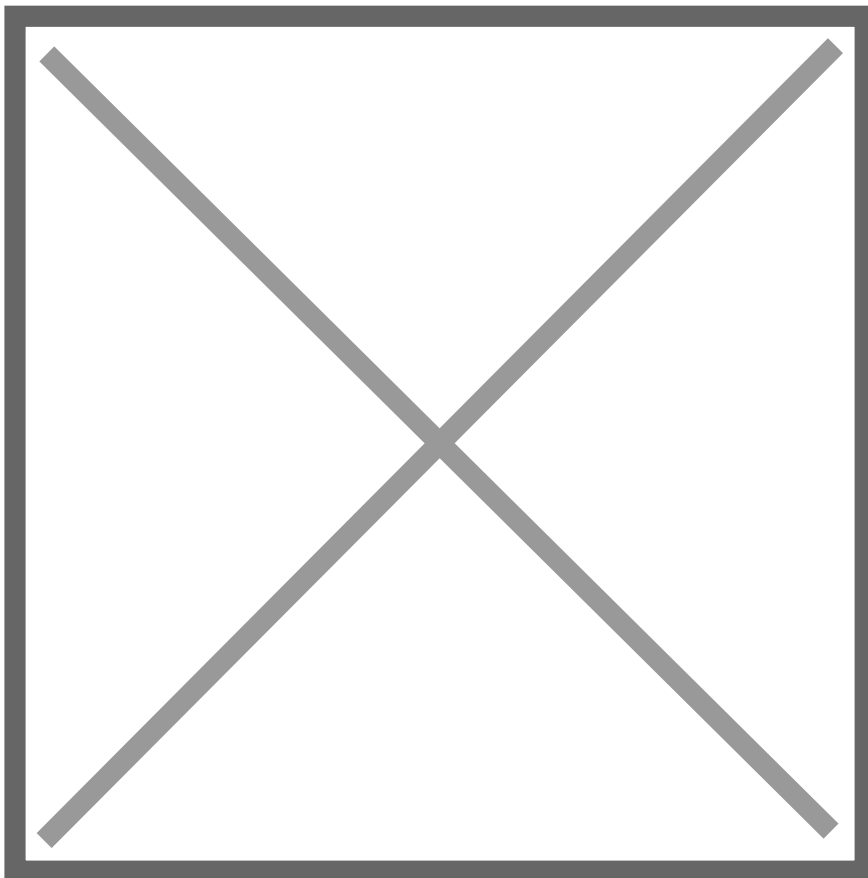
23 SSRI Antidepressants

"Our comprehensive review of the major strands of research on serotonin shows there is no convincing evidence that depression is associated with, or caused by, lower serotonin concentrations or activity."

<https://www.nature.com/articles/s41380-022-01661-0>

"The chemical imbalance theory of depression is still put forward by professionals, and the serotonin theory, in particular, has formed the basis of a considerable research effort over the last few decades. The general public widely believes that depression has been convincingly demonstrated to be the result of serotonin or other chemical abnormalities, and this belief shapes how people understand their moods, leading to a pessimistic outlook on the outcome of depression and negative expectancies about the possibility of self-regulation of mood. The idea that depression is the result of a chemical imbalance also influences decisions about whether to take or continue antidepressant medication and may discourage people from discontinuing treatment, potentially leading to lifelong dependence on these drugs."

"We suggest it is time to acknowledge that the serotonin theory of depression is not empirically substantiated."



24 Naming Things the Opposite of What They Are

Democrats are really socialists.

Antifa ("anti-fascists") are really fascists.

"Trust the science" is used to buttress an opinion.

"Green" is really high tech.

Recycling puts more plastic trash in the Pacific ocean than any other source.

George Orwell really got it right.

