

## Introduction

Michael Mann recently published a book named *The Hockey Stick and the Climate Wars*. It was generally well-received, quickly garnering many positive reviews. Even Henry Waxman, a sitting Congressman, and Bill Nye the Science Guy praised the book. Unfortunately, while many people liked the message of the book, it seems few read it carefully. The book contains many mistakes, contradictions, fabrications, nonsensical statements and even a libelous claim based on an obvious misrepresentation.

The last of those is obviously the most serious. Michael Mann began receiving a large amount of attention after he published two papers in the late nineties, creating his "hockey stick." A few years later, his work was criticized by the authors Stephen McIntyre and Ross McKittrick, leading to a controversy that would rage on for years. Eventually, two reports were commissioned by the United States Congress to study the controversy. The lead author of one of those reports was Edward Wegman, a distinguished statistician from George Mason University.

This report, commonly known as the Wegman Report, was highly critical of Mann's work. In turn, it was criticized by defenders of Mann. One such criticism involves how much "collaboration" there was between McIntyre, Wegman and Wegman's co-authors. The claim is basically that the Wegman Report repeats McIntyre's work and conclusions without due consideration. Mann doesn't spend much time on this criticism in his book, but what he says is very important:

*Not only had their apparently been<sup>64</sup> substantial undisclosed collaboration between the WR authors and Stephen McIntyre, as hinted at earlier<sup>65</sup>—something Wegman had denied in his testimony under oath in Congress<sup>66</sup>...*

Mann claims Wegman denied something, under oath, that was true. That is, he accuses Wegman of perjury. In what is almost a passing comment, Mann accuses Wegman of committing a felony that could land him in jail for years. Not only is this a serious accusation, but if untrue, it is libel. With that in mind, it's important to read Mann's note #66:

*66. See <http://ftp.resource.org/gpo.gov/hearings/109h/31362.txt>, specifically the following exchange between Rep. Stupak and Wegman:*

*Mr. Stupak: Did you or your co-authors contact Mr. McIntyre and get his help in replicating his work?*

*Dr. Wegman. Actually, no...*

This seems to give clear support to Mann's claim. However, given the seriousness of the

accusation, the ellipsis at the end should be investigated. Mann's link leads to the transcript of the testimony where Wegman's full answer is found:

*DR. WEGMAN. Actually, no. What I did do was I called Mr. McIntyre and said that when we downloaded his code we could not get it to work either, and it was unfortunate that he was criticizing Dr. Mann when in fact he was in exactly the same situation. Subsequently, he reposted his code to make it more user friendly and we did download it subsequently and verified that it would work.*

*MR. STUPAK. And then after you re-downloaded and verified it worked, did you have any further contact with Mr. McIntyre then?*

*DR. WEGMAN. Well, as I testified last week, Dr. Said and myself had gone to one of the meetings where he was talking, and we spoke with him but did not identify who we were at the time. This was early in the phase. Subsequently, I had had no contact with him until basically last week.*

*MR. STUPAK. Okay. Any of your co-authors that you know of, Dr. Said or any others, have contact with Mr. McIntyre other than that one time at this convention or wherever he was speaking?*

*DR. WEGMAN. One of my graduate students, John Rigsby, who did the code for us, worked the code for us, did have some interaction with him in order to verify some of the details of the code.*

*MR. STUPAK. So you, Dr. Said and this Mr. Rigsby would be the people who had contact with Mr. McIntyre then?*

*DR. WEGMAN. That is correct, yes.*

*MR. STUPAK. Thank you. Nothing further.*

Clearly, the quote Mann offers is deceptive. By only quoting two words from Wegman, Mann gives the impression Wegman answered no. Had he included only ten more words, anyone reading his book would have seen Wegman was not guilty of a felony. Instead, Mann removed almost all of a lengthy and detailed answer, giving readers the impression Wegman committed perjury.

To make the situation stranger, Mann was in the same room at the time this testimony was given, evidenced by the fact he answered questions in the same transcript just a few minutes earlier.

Having heard the full answer when it was given, and having the transcript in front of him, he still somehow managed to create the libelous representation he gave.

It is impossible to know whether Mann intentionally lied to his readers or, if some fit of extreme incompetence, inadvertently butchered a quote so much he confused himself. It is also impossible to know how a false accusation of a felony made it through the editing process without the slightest fact-checking. Whatever the explanations, one thing is clear:

Michael Mann's book should be read with a very skeptical frame of mind.

## Contradictions

*"If you don't know where you are going, you will wind up somewhere else."*

*-Yogi Berra*

As exemplified in the introduction, Mann's sources do not always agree with him. Sometimes they directly contradict him. Sometimes he even quotes where they do so.

Sometimes he even contradicts himself.

### Mann Contradicts His Sources

It makes sense to start with a simple example first. Fortunately, the first simple contradiction is found on page three:

*In February 1996, for example, S. Fred Singer, the founder of the Science and Environmental Projection Project and a recipient over the years of substantial fossil fuel funding,<sup>7</sup> published a letter attacking Santer in the journal Science.<sup>8</sup> Singer disputed the IPCC finding that model predictions matched the observed warming and claimed—wrongly—that the observations showed cooling.*

Singer criticized Ben Santer's article. He didn't "attack" Santer. That alone should raise eyebrows, but it hardly compares to the fact Mann misrepresented Singer's [letter](#). That letter said:

*The summary (correctly) reports that climate has warmed by 0.3° to 0.6°C in the last 100 years, but does not mention that there has been little warming if any (depending on whose compilation is used) in the last 50 years, during which time some 80% of greenhouse gases were added to the atmosphere.*

Singer clearly acknowledged warming had been observed. You would never have guessed this from Mann's description of his letter. How does Mann explain this discrepancy? Mann ignores that part of Singer's letter and acts as though another part is all that exists:

*The summary does not mention that the satellite data—the only true global measurements, available since 1979—show no warming at all, but actually a slight cooling, although this is compatible with a zero trend.*

Singer says one set of observations shows cooling (which he mentions is statistically insignificant). He mentions other observations show warming. Mann portrays this as him saying observations only show cooling. This is a tame example, but it is part of a far larger pattern of behavior, a pattern seen again on page 24, where Mann says:

*Spencer still contends, nonetheless, that humans are not to blame for the increase [in temperature],<sup>16</sup> while Christy accepts that there is a detectable human contribution to the warming, but argues that future warming will be less than standard climate models project.<sup>17</sup>*

Note #16 directs the reader to [this](#) page, a blog post by Roy Spencer. In it, Spencer says:

*This means that most ( $1.71/1.98 = 86\%$ ) of the upward trend in carbon dioxide since CO2 monitoring began at Mauna Loa 50 years ago could indeed be explained as a result of the warming, rather than the other way around.*

*So, there is at least empirical evidence that increasing temperatures are causing some portion of the recent rise in atmospheric CO2, in which case CO2 is not the only cause of the warming.*

Whether Spencer is right or wrong, the claim “CO2 is not the only cause of the warming” is different than, “humans are not to blame for the increase [in temperature].” Mann's portrayal is a clear exaggeration of what his source actually says.

The same thing happens with Mann's next source. [That](#) source says:

*In a phone interview, Christy said that while he supports the AGU declaration, and is convinced that human activities are the major cause of the global warming that has been measured, he is “still a strong critic of scientists who make catastrophic predictions of huge increases in global temperatures and tremendous rises in sea levels.”*

Standard climate models do not predict **catastrophic** increases in temperatures. They do not predict **tremendous** rises in sea levels. Those are exaggerations, and those are what Christy said he is a critic of. Mann claims Christy argued future warming will be less than climate models predict, but his source shows an argument perfectly in line with standard climate models.

Now then, Mann doesn't just exaggerate the claims of people he disagrees with, creating straw man arguments. He also exaggerates the claims he likes, making them seem more than they are. This can be seen on page 181, where he says:

*A study in 2003 by NOAA scientist Tom Peterson and collaborators indicated that the cool park effect largely mitigates any urban heat bias in the U.S. Measurements.*

The paper did nothing of the sort. In fact, the abstract of the [paper](#) states:

*It is postulated that this is due to micro- and local-scale impacts dominating over the mesoscale urban heat island.*

To postulate is basically to assume as true without proof. Despite that, Mann claims Peterson's study “indicated” something it merely postulated.

### Mann Contradicts Himself

While so far Mann has simply misrepresented his sources, he also contradicts himself. On page 138, Mann, brings up a paper by Eugene Wahl and Caspar Ammann, saying:

*They showed that, had McIntyre and McKittrick subjected their alternative reconstruction...*

No paper by McIntyre and McKittrick has ever claimed to make an “alternative reconstruction.” This should seem more like a fabrication than a contradiction until the reader reaches page 191. There, Mann quotes a description of McIntyre:

*Paleoclimatologist Tom Crowley perhaps summarized it best: “McIntyre ... never publishes an alternative reconstruction that he thinks is better ... because that involves taking a risk of him being criticized. He just nitpicks others. I don't know of anyone else in science who ... fails to do something constructive himself.”<sup>58</sup>*

Mann approvingly quotes Crowley criticizing McIntyre for not publishing an “alternative reconstruction” despite the fact 53 pages earlier, he claims McIntyre published an “alternative reconstruction.”

### Mann Contradicts His Sources and Himself

Mann contradicts his sources. Mann contradicts himself. It is hardly surprising he would do both at the same time. On page 123, he says:

*The central claim of the McIntyre and McKittrick paper, that the hockey stick was an artifact of bad data, was readily refuted.<sup>45</sup>*

To understand Mann's misrepresentation here, there is no need to understand any technical details. All you need to do is compare a few simple sentences. First, compare the above sentence with a quote from the abstract of the [paper](#) he discusses (emphasis added):

*The particular “hockey stick” shape derived in the MBH98 proxy construction – a temperature index that decreases slightly between the early 15th century and early 20th century and then increases dramatically up to 1980 — is primarily an artefact of poor data handling, obsolete data and **incorrect calculation of principal components.***

Even though McIntyre and McKittrick's conclusions refer to “poor data handling, obsolete data and incorrect calculation of principal components,” Mann claims their argument dealt solely with “bad data.” On its own, this would be bad, but it becomes silly when the reader looks at Mann's note #45. It says (in part):

*To be specific, they claimed that the hockey stick was an artifact of four supposed “categories of errors”: “collation errors,” “unjustified truncation and extrapolation,” “obsolete data,” and “calculation mistakes.”*

In the main text of his book, Mann portrays the paper's argument as solely referring to “bad data.” In the note he attaches as a reference, he lists as part of the paper's argument, “calculation mistakes.” This could be forgiven as a casual slip-up, save for one thing. Not long after this

misrepresentation, Mann goes on to discuss a later [work](#) by McIntyre and McKittrick, saying (on page 130):

*McIntyre and McKittrick had quietly dropped their erroneous original assertion (in their 2003 paper discussed in chapter 8 that the hockey stick was an artifact of bad data. Their new, albeit equally erroneous, assertion was that the hockey stick was an artifact of the conventions used in applying principal component analysis (PCA) to certain tree ring networks, which, they argued, “manufactured Hockey Sticks” even from pure noise.*

Mann clearly portrays the two papers as showing a change in argument. In reality, the assertion in their later paper was not “new.” It was the same as in their 2003 paper, a point evidenced by Mann's own note #45.

Having already reached the point of silliness, things become truly absurd later in the same paragraph when Mann says:

*For the time being, climate change deniers had everything they needed to do immediate damage. They had a published study purporting to call into question the basis of the scientific evidence for human-caused climate change...*

Nothing McIntyre has ever written purports “to call into question the basis of the scientific evidence for human-caused climate change.” Mann has pulled this claim out of thin air. It is a complete and total fabrication.

In another example, Mann claims (“also” added where it was missing):

*In November 2008 McIntyre filed a FOIA demand to NOAA requesting not only data used in a recent paper by Ben Santer and coauthors... but [also] all the e-mail correspondence between Santer and his coauthors.<sup>38</sup>*

This is directly contradicted by the actual FOIA request (not demand) which Mann quotes is his note #38:

*I request that a copy of the following NOAA records be provided to me: (1) any monthly time series of output from any of the 47 climate models sent by Santer and/or other coauthors of Santer et al 2008 to NOAA employees between 2006 and October 2008; (2) any correspondence concerning these monthly time series between Santer and/or other coauthors of Santer et al 2008 and NOAA employees between 2006 and October 2008...*

There is an obvious difference between “all the e-mail correspondence” and “any correspondence concerning these monthly time series.” Despite quoting the actual text of the FOIA request, Mann ignores this difference, allowing him to make a far stronger claim against McIntyre.

## Fabrications

*"If you tell a lie big enough and keep repeating it, people will eventually come to believe it."*

*-Joseph Goebbels, the Minister of Propaganda for the Nazi government*

While much of what Michael Mann says in his book is untrue, only a small amount of it is totally fabricated. This is good, as misrepresenting something is far more forgivable than just making something up.

Unfortunately, Mann does do both.

### The Spreadsheet

The most telling example is in Chapter 8's note #45, partially covered in the previous section:

*those claims were false, resulting from their misunderstanding of the format of a spreadsheet version of the dataset they had specifically requested from my associate, Scott Rutherford. None of the problems they cited were present in the raw, publicly available version of our dataset...*

This claim is absolutely untrue. Even worse, when the claim was first made, McIntyre and McKittrick responded by [posting](#) the correspondence between them and Mann (and co-authors), proving they never asked for a spreadsheet. Despite this, Mann has repeated the claim, both here in the book, and in his [testimony](#) for the Penn State inquiry looking into possible wrong-doing:

*The issue of an "incorrect version" of the data came about because Dr. McIntyre had requested the data (which were already available on the FTP site) in spreadsheet format, and Dr. Rutherford, early on, had unintentionally sent an incorrectly formatted spreadsheet.*

No effort was made to verify his claim by the inquiry, so while there is no reasonable explanation for why Mann would be make this claim, it seems one thing is clear: *If you tell a lie big enough and keep repeating it, people will eventually come to believe it.*

### Climategate and Time Travel

Mann begins his discussion of Climategate with a bang (page 207):

*The most malicious of the assaults on climate science would be timed for maximum impact: the run-up to the Copenhagen climate change summit of December 2009, a historic, much anticipated opportunity for a meaningful global climate change agreement.<sup>1</sup> The episode began with a crime committed by highly skilled computer hackers...*

No police investigation has ever determined how the e-mails were released, yet Mann says it was the work of "highly skilled computer hackers." Not just one hacker. Not even just one very skilled hacker. No, Mann claims to know there were multiple hackers with great skill. How he could

possibly know this when the police don't is a mystery as his note #1 doesn't address the issue. Instead, it offers yet another fabrication:

*The hackers had access to the materials in early October 2009, but held off releasing them until mid-November 2009, apparently to inflict maximum damage to the Copenhagen climate summit in early December 2009.*

In fairness to Mann, he does offer a [reference](#) for his claim. It's a newspaper article by Ben Webster that doesn't explain how it reached its conclusion. Another [article](#) by the same author, published a few days later, clarifies the conclusion by saying:

*Almost a month before they were posted on a website popular with climate-change sceptics, the hacked information was sent to a BBC weatherman who had expressed his doubts about climate science on his blog. The BBC has confirmed that Paul Hudson received some documents on October 12 but no story was broadcast or printed by Mr Hudson or the corporation.*

It turns out Webster had simply misunderstood Hudson. Hudson had not received any of the supposedly hacked e-mails. Instead, he [received](#) some of them when they were originally sent. This allowed him to confirm some of the released e-mails were authentic. This misunderstanding is what led Mann claiming the “hackers had access to the materials in early October 2009.”

If that is all there was to the story, there would be little reason for concern. Mann trusted a source that was wrong. No big deal. Only, it is a big deal. While Mann claimed the hackers had the material in October, the released e-mails contained e-mails from November. It doesn't matter how “highly skilled” computer hackers may be. They cannot steal e-mails before those e-mails are written.

Like the accusation against Wegman which opened this document, even the most basic of fact-checking should have caught this mistake. Instead, obvious nonsense got published.

## Nonsense

*“If I had a world of my own, everything would be nonsense. Nothing would be what it is, because everything would be what it isn't. And contrary wise, what is, it wouldn't be. And what it wouldn't be, it would. You see?”*

*-Lewis Carroll, Alice's Adventures in Wonderland & Through the Looking-Glass*

It can be hard to notice a source has been misrepresented. It can be hard to know an author has simply made things up. However, some things are not hard to notice. For example, if Mann says a doubling of CO<sub>2</sub> levels “would lead to an additional warming of anywhere between 1.5 and 4.5°C (roughly 3-8°F)”, it should be easy to notice something is wrong on page 18 when he says (“of” added where it was missing):

*There was increasing recognition by the mid-1990s that another 2°C (3.5°F) [of] warming beyond current levels (for a total of 3°C or 5°F warming relative to preindustrial times) could represent a serious threat to our welfare.<sup>4</sup> Precisely what limitations in global greenhouse gas emissions would be required to avoid that amount of warming remained uncertain, and still does, because of the spread of predictions among models. If we choose to take the midrange model estimates as a best guess, avoiding another 2°C of warming would require stabilizing atmospheric CO<sub>2</sub> concentrations at no higher than about 450 parts per million (ppm).*

*Preindustrial levels were about 280 ppm...*

The midrange of 1.5 and 4.5°C is 3°C. This means Mann said there would be a total increase of 3°C with CO<sub>2</sub> levels having only gone up by 60%. Something is obviously wrong.

It turns out Mann added an increase of 2°C to the already observed warming when he should have added it to the temperature of 200 years ago. Instead of “another 2°C” and “a total of 3°C,” Mann should have said “another 1°C” and “a total of 2°C.” This is confirmed on page 250 where Mann says:

*When we reach concentrations of 450 ppm (about 2030, extrapolating from current trends), we will likely have locked in at least 2°C (3.5°F) warming of the climate relative to preindustrial levels...*

That the first set of numbers was nonsense should be obvious. It contradicts a later statement by Mann, and it contradicts basic arithmetic. It's a mystery how such an obvious error could slip past an editor, but it's certainly something any reader should be able to spot.

## Mann Can't Make Up His Mind

On page 57, Mann makes a peculiar argument. He first says:

*Whether conditions in past centuries might have been warmer than today, then, would not have a scientific bearing on the case for the reality of human-caused climate change. That case, as we've seen, rests on multiple independent lines of evidence...*

After saying it wouldn't matter if a point in the past was warmer than the present, Mann almost immediately says:

*Our finding that recent warming was anomalous in a long-term (now, apparently, millennial) context was suggestive of the possibility that human activity was implicated in the warming.*

If the existence of warming would say nothing, the lack of warming cannot say something. It makes no sense to say the absence of an observation supports your position, but the inverse would say nothing about your position. Despite this, obviously contradictory positions are advanced on the same page. To add to the confusion, on page 34 Mann had said:

*[I]f warmth less than a thousand years ago rivaled modern warmth, it might seem to support a far larger role for natural climate variability, and the possibility that a large fraction of the current warming could itself be natural.*

### Mann Misses the Obvious

Earlier, a paper by Tom Peterson was mentioned. It sought to study whether or not urban areas cause a warming bias in the surface temperature record. Shortly after Mann misrepresented that study, he says:

*There were even more basic reasons for rejecting the claim that the surface temperature record was compromised by urban heat island effects. The global warming trend is seen not only in land measurements but also in ocean surface temperatures, where obviously no urbanization is occurring.<sup>12</sup> The ocean warming isn't as large as the observed land warming, but this is expected from basic physics and predicted by all climate models...*

Mann says people should believe there is no warming bias in the land record because warming is also observed in the oceans. This claim isn't based upon a comparison of the magnitude of trends. It just says both trends are positive, therefore there is no warming bias in the one. That makes no sense.

But it gets worse. After saying that, Mann observes that oceans are warming less than land is. If there was a warming bias in the land record, it would increase warming in the land record while not affecting the ocean record. This is exactly what Mann describes. He does say there is another reason for the discrepancy in the two trends, but that doesn't resolve anything. Because he doesn't discuss the magnitudes of the trends, his entire commentary is nonsensical.

Equally nonsensical, Mann responds to an accusation of plagiarism directed at his colleague, Eric Steig, by saying (chapter 13, note #61 - emphasis added):

*MuCulloch wrote to Nature alleging that Steig had plagiarized his work... MuCulloch "published" a piece*

*on the climateaudit blog criticizing the Steig et al. analysis—correctly, as it turned out... Once Steig was able to confirm that such an error had been made, he recalculated the trend significances correctly... When it was published in August 2009 (Nature, 457: 459-462), McCulloch contacted Nature. **MuCulloch complained that Steig had appropriated his own finding. Yet it is self-evident that Steig et al. were aware of the need for the autocorrelation correction**, since the paper explicitly stated (albeit, it turns out, in error) that it had been made.*

Steig and his co-authors were supposed to correct for something, but didn't. When they went back and made the correction, someone who had previously noticed the mistake raised an accusation of plagiarism. That much makes sense. What doesn't make sense is Mann's rebuttal. He implies that since the authors knew the correction was needed (even though they originally didn't implement it), they couldn't have plagiarized the idea of fixing the mistake.

The implication, inadvertent or otherwise, is the fact the authors knew they shouldn't make a mistake means they couldn't possibly find out they made a mistake from someone else. In the same way, Mann says:

*Had McCulloch notified Steig of the error when he first discovered it, or had he submitted a formal comment to Nature identifying the error, he would have received credit and acknowledgment. He chose, however, to do neither of these things. To suggest that Steig's correction of an error in his own work, using standard methods, could constitute plagiarism was simply absurd.*

The first sentence says McCulloch would have gotten credit for finding the error if he had notified the authors. The third sentence says it “was simply absurd” to suggest Steig's correction could be plagiarized. These two sentences make no sense together. If it was possible for McCulloch to get credit, then it was necessarily possible for plagiarism to happen.

Even worse for Mann, McCulloch actually did [notify](#) the authors of the error.

### Mann's Defensive Attempts Fail

As observed above, Mann's defenses must be carefully parsed. On page 210, he says (“climate” added where it was missing):

*The full quotation from Jones's e-mail was (emphasis added), “I've just completed Mike's Nature trick of adding in the real temps to each series for the last 20 years (i.e. from 1981 onwards) and from 1961 for Keith's to hide the decline.” Only by omitting the twenty-three words in between “trick” and “hide the decline” were [climate] change deniers able to fabricate the claim of a supposed “trick to hide the decline.”*

The 23 words Mann complains were omitted were five prepositional phrases and a parenthetical

comment. Those can clarify things, but their presence or absence does not alter the core meaning of the sentence. No meaning is changed by their omission.

He continues:

*No such phrase was used in the e-mail nor in any of the stolen e-mails for that matter. Indeed, “Mike’s Nature trick” and “hide the decline” had nothing to do with each other.*

Mann claims the two phrases “had nothing to do with each other” despite being directly connected in a sentence. He never says the author's word-choice was wrong. He simply claims the word-choice does not connect the two phrases. Shortly after, this nonsense is followed by Mann saying Jones:

*was referring, specifically, to an entirely legitimate plotting device for comparing two datasets on a single graph, as in our 1998 Nature article (MBH98)—hence “Mikes Nature trick.”*

Explaining:

*we supplemented our plot of reconstructed temperatures in MBH98 by additionally showing the instrumental temperatures, which extended through the 1990s. That allowed our reconstruction of past temperatures to be viewed in the context of the most recent warming. The separate curves for the proxy reconstruction and instrumental temperature data were clearly labeled...*

This is true. The two lines were plotted separately. However, that is not what the trick Jones referred to is. In fact, Mann doesn’t talk about the actual trick. The actual trick involves smoothing (mild technical details follow, be warned).

When you have noisy data, it can be useful to make a “smoothed” graph so a signal is easier to see. This basically involves averaging data with the data of the points near it (called a moving average). Of course, this means the points in the middle of the graph have to be treated differently than the points at the ends of the graph (since endpoints have less data on one side). There are various ways to handle this issue, and the way used by Mann is “Mike’s *Nature* trick.” This is what he did:

First, he appended the temperature record to the end of his reconstruction. This combined the two records into a single line. Next, he “smoothed” the record. Finally, he deleted all the data after 1980, when the reconstructed record originally ended. The net [effect](#) of this was to change the end of the graph from pointing down to pointing up.

This is not “an entirely legitimate plotting device.” It is not just a case of plotting two different lines on the same graph. It is using data from one line to manipulate the data from another line without any rational basis.

Mann then goes on to defend “hide the decline” by saying:

*These data show an enigmatic decline in their response to warming temperatures after roughly 1960, perhaps because of pollution<sup>21</sup>—that is the decline that Jones was referring to.*

*While “hide the decline” was poor—and unfortunate—wording on Jones’s part, he was simply referring to something Briffa and coauthors had themselves cautioned in their original 1998 publication: that their tree ring density should not be used to infer temperatures after 1960 because they were compromised by the divergence problem.*

This is pure post hoc reasoning. No explanation is offered as to how one can know the divergence means the proxies stopped tracking temperatures in the modern period yet still know they tracked temperatures in the past.

Mann then goes onto acknowledge:

*There was one thing Jones did in his WMO graph, however, that went beyond what we had done in our Nature article: He had seamlessly merged proxy and instrumental data into a single curve, without explaining which was which. That was potentially misleading, though not intentionally so; he was only seeking to simplify the picture for the largely nontechnical audience of the WMO report.*

Jones deleted the (decreasing) reconstructed data after 1960, appended (increasing) instrumental data to the record, offered it as a single continuous record, and Mann says this “was potentially misleading.” He's quick to assure the reader that wasn't the intention, but rather, Jones was just trying to make the picture simpler by deleting data then replacing it with data that went in the opposite direction without explaining what he did.

### Mann Defends Against an Accusation by... Admitting it's True

While nonsensical comments should no longer be surprising in Mann's book, it is unlikely anyone could anticipate him saying:

*Some critics also claimed that the e-mails revealed a culture of “gatekeeping,” that climate scientists, myself included, were unfairly preventing skeptics from publishing in the peer reviewed literature. So claimed Patrick Michaels<sup>25</sup> of the libertarian<sup>26</sup> Cato Institute roughly a month after the CRU hack in a December 17 Wall Street Journal op-ed.<sup>27</sup> Peer review, however, is by definition gatekeeping; it is intended to keep seriously deficient work from polluting the scientific literature.<sup>28</sup>*

In response to he and his peers being accused of gatekeeping, unfairly preventing skeptics from publishing, Mann responds by simply saying peer review is inherently gatekeeping. He doesn't dispute anything. He doesn't deny skeptics were unfairly prevented from publishing. He defends against the accusation by tacitly admitting it is true.

## Conclusion

*Finally, in conclusion, let me say just this...*

*-Peter Sellers*

There are many things in Michael Mann's book this document does not cover. Most involve technical issues. They could be explained simply enough for a reader to understand, but there is no need. The entire technical debate can be boiled down to a single issue.

Mann and his co-authors created a temperature reconstruction of the past 1,000 years (of the northern hemisphere) which had the shape of a “hockey stick.” It showed relatively flat temperatures for approximately 900 years followed by a sharp increase in temperatures over the last hundred. This gave the impression modern temperatures were unprecedented in the last millennium, strongly suggesting humans were the cause. Critics of the hockey stick say this shape, and thus the implication, can exist solely by giving undue weight to a small amount of data. For all the disagreements and technical issues which have arisen, that point is what everything comes down to.

Mann's original reconstruction was created in two parts. The first part went back to 1,400 AD, and it was published in 1998. In this paper, that central criticism was dismissed prior to ever being raised when the authors said:

*the long-term trend in NH is relatively robust to the inclusion of dendroclimatic indicators in the network, suggesting that potential tree growth trend biases are not influential in the multiproxy climate reconstructions.*

The next year, Mann and his co-authors published a second paper, extending their reconstruction back to 1,000 AD. Prior to this, Mann did an analysis, the results of which he describes on page 51 of his book:

*The tests revealed that not all of the records were playing an equal role in our reconstructions. Certain proxy data appeared to be of critical importance in establishing the reliability of the reconstruction—in particular, one set of tree ring records spanning the boreal tree line of North America published by dendroclimatologists Gordon Jacoby and Rosanne D'Arrigo.*

Amazingly enough, Mann now admits his original hockey stick existed solely because of “one set of tree ring records,” directly contradicting his 1998 paper which said the reconstruction was “relatively robust to the inclusion of dendroclimatic indicators” (dendroclimatic indicators are tree ring data). Despite admitting he knew this, he has never corrected his original paper. Instead, he built upon that paper and never told people his conclusions were based on only a tiny fraction of the data he used.