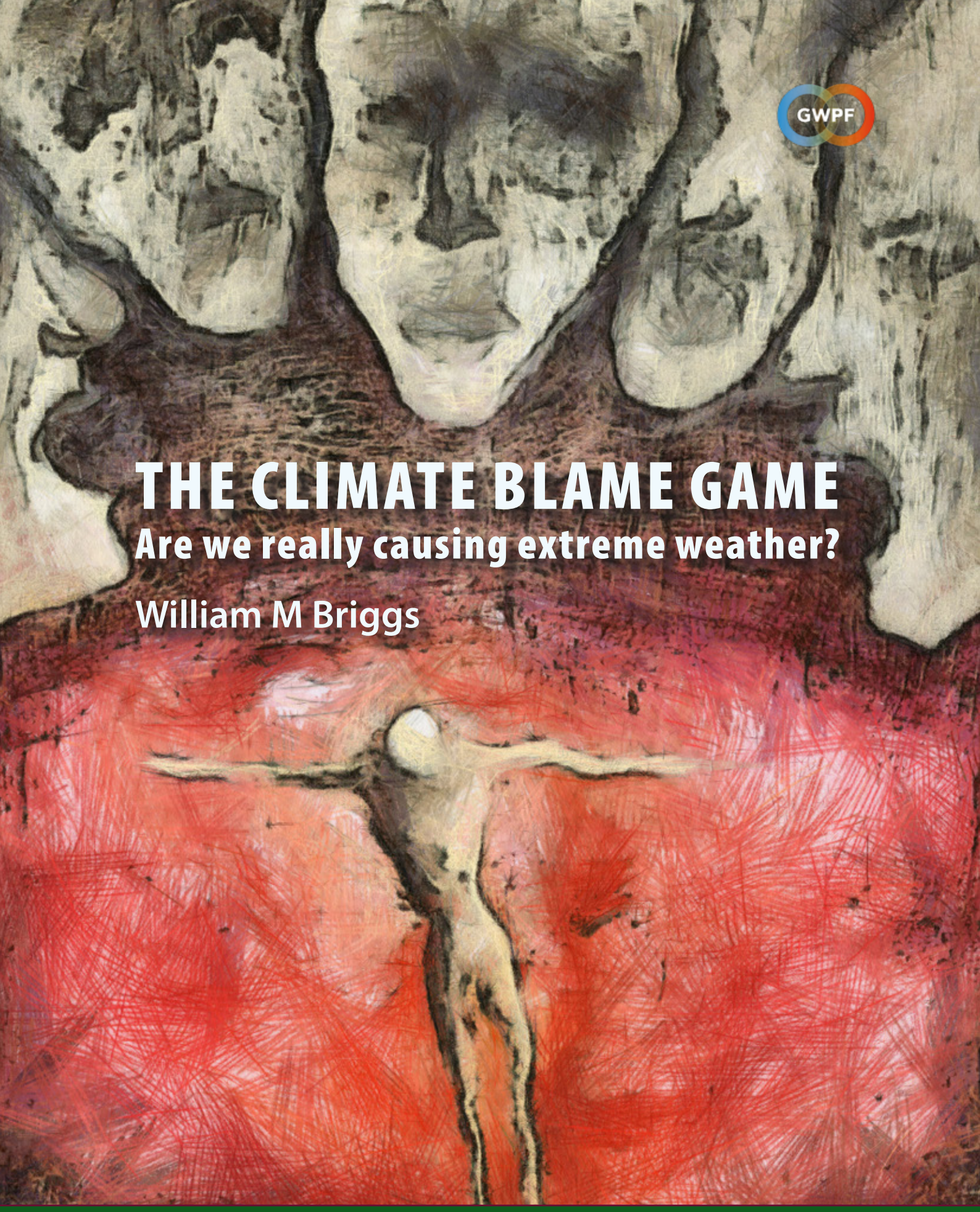

THE CLIMATE BLAME GAME

Are we really causing extreme weather?

William M Briggs

The Global Warming Policy Foundation
Note 25

The Climate Blame Game: Are We Really Causing Extreme Weather?

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Note 25, The Global Warming Policy Foundation

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About the author

William M Briggs is author of *Uncertainty: The Soul of Modeling, Probability & Statistics*, and co-author of *The Price of Panic: How the Tyranny of Experts Turned a Pandemic into a Catastrophe*. He earned his PhD in statistics and his Masters in atmospheric physics, both from Cornell University. He studies the philosophy of science and the use and misuses of scientific predictions.

Summary

Claims made in so-called climate change event attribution studies suffer from gross over-certainties and cannot be trusted. The techniques used in these studies are in their infancy and do not warrant the trust put into them. These studies assume either (a) perfect forecasting models, or (b) known, uncertainty-free causes of climate change. Neither condition holds. Because of this, attribution claims are far too certain or are wrong. They should not be used in any policy decisions.

Introduction

Time for a change

The weather this afternoon was particularly clement. Was this happy circumstance due to 'climate change', or was it natural? Some scientists say we can tell the difference, but I shall show any such claims are premature.

The word *natural* arises because some have the curious and false idea that earth's climate never changed before mankind began 'interfering' with it. This supposed interference, it is said, commenced in earnest about a hundred years ago with the advent of large-scale industrialisation.

Now it is true that man, like every other creature, influences the climate and the environment to some extent. It is impossible for any creature, man included, *not* to have an effect. After all, every living thing is *part* of the environment. There is therefore no 'natural' state of the climate, defined as one operating without man's influence.

We can, however, guess what the climate would look like without man's influence, but we'd never be able to independently check whether our guess is true. We can also model what the climate will look like under certain changes, but in order to trust these models they first have to demonstrate forecast skill. If they can't, or they are inaccurate, they can't be trusted, either. Lastly, we might pick a date and say all observations before it are 'natural' and all after are tainted by 'climate change'. But this is not proof man caused the differences. It is mere assumption.

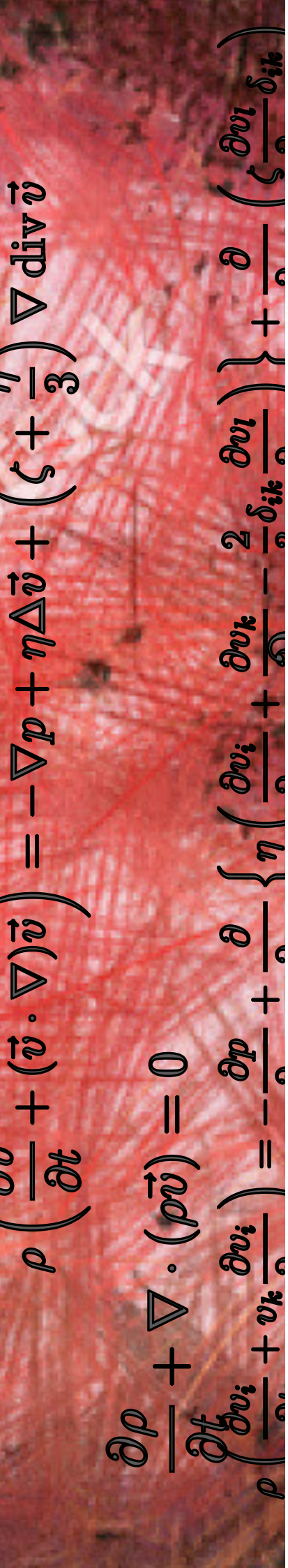
So-called climate-change event attribution studies rely on all these kinds of guesses and claims. As such, they are either incorrect or are far too certain, as will be demonstrated.

Attributions

Certain current weather events are said to be attributable to 'climate change'. These events, some say, would not have appeared or would have been markedly different if the climate was in its 'natural' state.

Curiously, events attributed to climate change are always 'extreme' or harmful; they are *never* beneficial. Nobody bothers to check whether in changed climates there will be an increase in pleasant summer afternoons, or better crop-growing weather. Researchers look only for the bad; it is therefore only the bad that will be reported. This demonstrates an irreparable confirmation bias in attribution studies.

Attribution claims have become a serious business. So much so that some insist they can identify the extent to which extreme weather events were *caused* by man.[1] These causal claims are then leveraged to place blame for events (such as particular storms) on certain persons – and blame leads to lawsuits.[2] One such suit has already been brought against an energy company, though it did not survive its first court appearance.[3] Others will surely appear if it is not understood how flawed these claims are.



No consistency

Below, we detail what attribution claims consist of and show how they fail. These criticisms join other sharp critiques, such as those made by Shannon Osaka and Rob Bellamy. In a 2020 paper,[4] they question the motivation of attribution studies, coming close to suggesting they are often performed for propagandist purposes.

Although some are enthusiastic about these studies,[5] the growing practice of attributing every bad weather event to 'climate change' has become a concern to other scientists. Warnings about going too far (*the sky is always falling*) and diluting the message are already appearing.[6]

Event attribution is far from a certain science. For instance, Osaka and Bellamy note that a California drought had *eleven* different attribution studies applied to it, and all 'came to varying conclusions', including one saying the drought was natural. '[I]t is not uncommon for multiple [attribution] studies on the same event', they say, 'to come to different conclusions, based on the nature of the question or the methods utilised'.

In 2012, the Intergovernmental Panel on Climate Change *Special Report on Extreme Weather* echoed the Hohenkammer Consensus, concluding that once you adjust for population growth and economic changes, there is no statistical connection between climate change and measures of weather-related damages'.[7] The Hohenkammer Consensus, given by a group of leading climate scientists, 'concluded that trends toward rising climate damages were mainly due to increased population and economic activity in the path of storms, that it was not currently possible to determine the portion of damages attributable to greenhouse gases'.[8]

This evidence has largely been ignored and practitioners of attribution studies plunge ahead.[9]

It's not that bad out

Attribution studies focus on bad or extreme events that global warming theory – now called climate change, and once called global cooling – insists will be more extreme or worse in a changed climate. Attribution claims appear to validate this theory and say extreme events are indeed more frequent.

Yet simple observations do not support this. For instance, some attribution studies say droughts are more frequent, but droughts have not in fact increased.[10] It's much the same with other events: hurricanes have not increased in number or intensity since 1851.[11]Taking into account observation method changes (such as the introduction of Doppler radar), tornado frequency has been static, or even decreased.[12] Many events were more frequent in historical eras, such as heat waves and floods.[13]

Some events have large measurement uncertainty, such that it cannot be claimed with any assurance whether they have

increased or decreased over long periods. Wildfires are a good example. The press often touts increases. Yet the National Interagency Fire Center, which maintains a database of wildfires says 'people should not "put any stock" in numbers prior to 1960 and that comparing the modern fire area to earlier estimates is "not accurate or appropriate"'.[14]

In general, any attribution claim should be compared against the actual records of the event in question, adding in the uncertainty inherent in measurements from historical times.

Attribution basics

Kinds of claims

There are two main kinds of attribution claim:

- comparing current observations with respect to past, and claiming there have been changes in frequencies and severity of certain events;
- examining models of so-called climate change and comparing them with models of so-called natural climates.[15]

In theory, the events studied can be anything. In practice, it is always 'bad' events. Some examples: heat waves[16] and cold snaps,[17] heavy rains[18] and missing rains.[19]

Again, it's odd and troubling that only bad events are discovered. It's both too hot and too cold, or too wet or too dry, too cloudy or too clear in the changed climate. It's *never* pleasanter. That climate change can only be unfortunate, and in contradictory ways, says more about the researchers than it does about the atmosphere.

Statements about what doesn't exist

The changed climate is said to be the climate we now live with, or will do sometime in the near future; a climate that has adjusted to man's activities (and only his), activities which are usually limited to atmospheric carbon dioxide production. The 'natural' climate is said to be the climate as it would have been had man not produced so many greenhouse gases, or as it was in the past.

It is possible to guess what a natural atmosphere would look like if man had not influenced the climate, but this guess can never be verified. This means any claim about this non-observable natural climate will therefore be uncertain to a high degree. This uncertainty turns out to be important, as we shall see.

Event probabilities

The simplest kind of attribution claim is made using probability statements. Two probabilities are calculated. First, the probability of a given event in the changed climate, and second, the same but for the natural climate; the climate that we don't live in and which cannot be observed. If the ratio of these two numbers is larger than 1, the event is said to be more frequent in

the changed climate, and if it is less than 1 it is said to be less frequent. If the event is more frequent, the argument is that man *caused* an increase in the frequency.

Figure 1 is a exaggerated example from leading proponents of event attribution, Stott and Walton.[20] In this cartoon, the arbitrary event (a climate variable such as maximum daily temperature) has a range of possible values. A threshold is taken such that beyond it the event is said to be 'extreme'. The probability of the extreme event given a changed climate, what they are calling the 'Actual world', is shaded red. The probability of the event given the 'Natural world', is shaded green. The red area is larger than the green, which implies the event is more likely under the changed climate. This is also indicated by the ratio $P_1/P_0 > 1$.

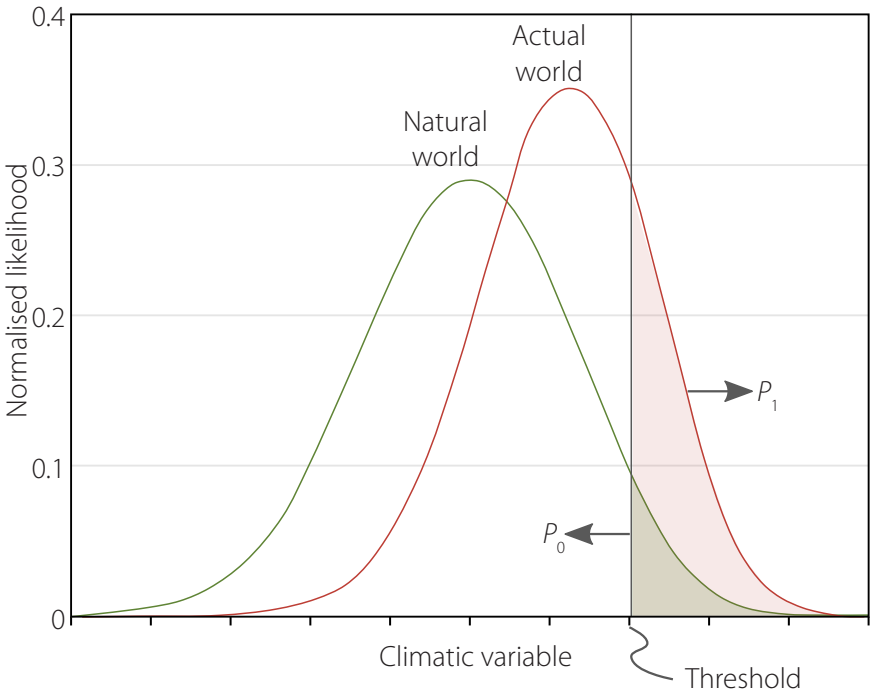
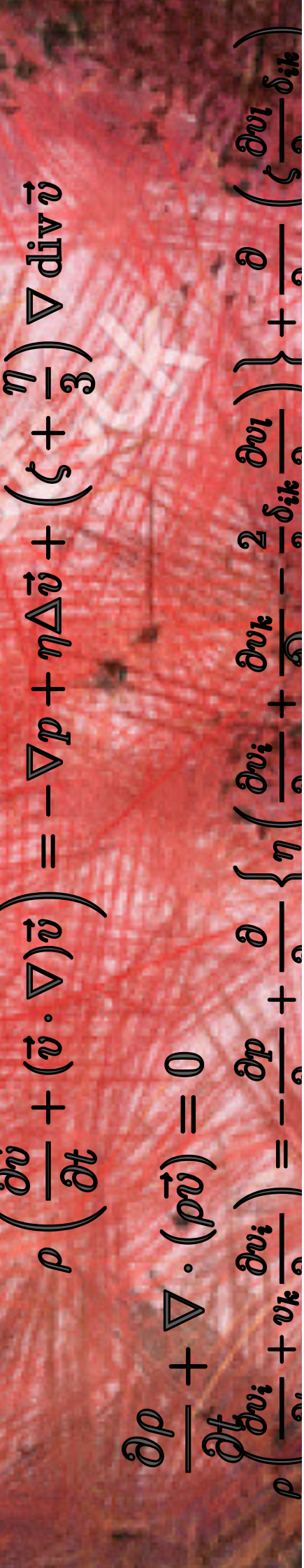


Figure 1: Cartoon from Stott and Walton.
Redrawn from the original.

This cartoon makes it appear attribution is easy, that separation between actual and natural worlds is marked and distinct. This is never the case. The curves in attribution studies are usually close to overlapping, and have to be processed statistically (a subject discussed below), which adds additional uncertainty. The climate models used in attribution studies are coarse, and meant to be global or large scale, yet they are always extrapolated to local events, a dicey move given that surface and other characteristics are dramatically different at small scales.[21]

Event sizes

Another way to phrase an attribution claim is to say that the observed event would have still appeared but been of a different magnitude in a natural climate. For instance, Reed and others,[22] speaking of Hurricane Florence in 2018, claimed overland rainfall totals increased by 5–6% 'due to climate change'. In other words, rainfall would have been less in a 'natural' world.



These kinds of statements are equivalent to the event probabilities method, since they effectively say a more extreme event was more likely in the changed climate.

Uncertainties

There are a large number of uncertainties and difficulties with all of these formulations, many of which are not readily apparent.

Our contention is that attribution studies are over-certain and should not be relied upon to make decisions. The uncertainty in attribution claims is just too great, and in ways not always recognised.

Model-based claims

Many models

Recall that the output of models of a changed climate and the natural climate are compared to compute probability ratios for a particular event. The use of physical climate models introduces immediate problems because there is not just one model of the climate; there are many. Each purports to well represent the climate as it is now, and as it was before the industrial age. But unless they are duplicates of each other, they can't all be right, and it remains a possibility none of them are. Attribution claims will change, as Osaka and Bellamy noted, depending on the model used.

Crucially, all claims are conditional on the quality of these models. If there is any uncertainty in a model's ability, it must be added to the uncertainty in the attribution claims themselves – which is never done.[23] In other words, model-based climate-attribution claims *assume perfect models* – which is absurd.

This criticism cannot be over-emphasised. All attribution claims assume model perfection. The models can't be 'good enough' – they have to be faultless for the attribution to have a definite meaning. Since models are imperfect, this is *never* the case.

Models of the present or future climate can in principle be verified predictively, but there is no reliable way to check the veracity of the pre-industrial or natural models. This makes all attribution claims that rely on natural climate models immediately suspect.

Note also that the climate models used must demonstrate skill in predicting the *kinds* of extremes studied. This is no simple task. Indeed, skill at predicting extremes is low or absent – models tend to exaggerate them.[24] Models don't even do that well at predicting means.[25] The global models have to also predict local events well, which they do not.[26]

All this necessarily implies actual or changed climate models exaggerate the frequencies of extreme events compared to natural models, meaning the probability ratios are too high, thus claims of attribution are too certain.

Event uncertainties

The events studied are usually those that have recently occurred and generated interest in some way. For example, one study asked whether a recent notable flood was caused by 'climate change'.[27] Being influenced by current events is unsystematic, which leads to bias in reporting. The temptation not to publish or pursue 'null' or beneficial attribution claims is a painful problem. The literature includes only those claims that are thought 'significant', leading to an over-estimate of the importance of climate change.

This is deeper criticism than it might seem. The actual or changed climate model used in an attribution study gives probabilities for an event. But it could have given probabilities of other events, or the same event at other times. The attribution claims thus represent forecasts in themselves, and they therefore can and should be used to verify model accuracy. As far as we can tell, this never happens. In other words, an attribution study says the event now has probability P_1. That is also a forecast, easily subject to verification. So why no verifications?

There is also the rank arbitrariness in choosing what precise measures represent an event. It is too easy to cherry pick. For instance, Vautard and others examined heat waves in Europe in June and July of 2019.[28] For one month they used 'highest 3-day averaged daily mean temperature', and then in another month they abruptly switched to 'all-year 3-day maximum'.

This random switch makes their results highly suspect. It's as if the authors were hunting for measures that would confirm their biases.

Which model?

The multiplicity of models represents a similar problem to the use of arbitrary and *ad hoc* measures to represent an event. Since any number of climate models (in pairs representing the actual and natural climates) may be referenced in any attribution study, the temptation to only report or emphasise the 'best' one may be irresistible.

A similar issue arises when, instead of just reporting on one model, the range of attributions is presented across a suite of models.[29] Rough agreement in the attributions across the models may be touted as strong evidence the attribution is real. Yet many climate models are built by the same groups of people, relying on the same research and with much copying. There is thus large overlap between models. In other words, the results from different models are not wholly independent. The independence, or lack of it, among a suite of models is a topic that needs investigation.

Model skill

Assessing model skill is not easy, either. Most models are combinations of dynamical and probabilistic equations, each having many tunable components. Scientists tweak these components so that the models better represent the actual or past climate. This tuning gives an unfair impression of the models' actual skill at predicting new events.

It is a well-known adage that any model can be made to fit old data perfectly. This is why only skill at predicting data *never before seen or used in any way* must be the only true judge of model performance.

Think of it this way: a model of the actual climate can be tuned so as to suggest that an event of interest is certain to occur. If the event does in fact occur, then the model will falsely 'confirm' the attribution. How often does this biasing occur in model tweaks?

Finally, the use of artificial performance measures to assess actual or changed climate models heightens the perception that natural climate models – those attempting to describe the climate without human influence – are equally skillful. But this can't be inferred; indeed, as mentioned, assessing performance of natural climate models will always carry a level of uncertainty that cannot be eliminated.

Calibration and accuracy of models

We at least require models to be both calibrated and accurate. By 'calibrated' we mean at least this: that the model faithfully reproduces the observed frequency of *all* events that might be studied. If not, then the model is not calibrated and is inadequate for attribution studies. No climate model does this.

Matching frequencies is not sufficient, though. Suppose we had a model of coin tosses, which every time predicted the opposite of the outcome: each time it forecast tails, heads appeared, and vice versa. The frequency of observed heads would match the frequency of forecast heads in the model, even though the model was always wrong. Calibration isn't enough; we also require accuracy.

Here it would be nice to give a concrete example from the literature of the effects of mis-calibration and inaccuracy of actual future forecasts on attribution studies, only we cannot find one. This absence is convincing evidence that attribution studies are over-certain and too experimental to trust.

A strict requirement

Models must be calibrated and accurate across *every* event *and* spatial scale for which an attribution study is done. This criterion makes model goodness even more

difficult to prove than it sounds, because models are usually tuned to 'mean' or average large-scale behaviour, which of course makes eminent sense, for this provides the best understanding of what is happening worldwide.

But, again, the events picked for attribution studies are usually extremes; they are not global or average *by design*. It is difficult enough to estimate extremes for current events, let alone modelled ones, especially in pre-industrial models with scarce observations.

This sort of model validation is, as far as we can tell, entirely missing from attribution claims.

Statistical difficulties

Since the events chosen for analysis are rare or infrequent, estimates of their probabilities are naturally small. Small probabilities, estimated from rare frequencies, are well known to be more variable and are much harder to estimate reliably. They are prone to larger swings in the estimation process.[30]

This is critical, because even small changes to estimated probabilities of extreme events in the actual and natural climates can lead to wild swings in attribution claims. Indeed, the more extreme the event is, the wilder these swings are.

History-based comparisons

No model needed

Climate modeling isn't necessary to make attribution claims, as noted above. Another way to make a claim is to show that events were less frequent historically and are more frequent now, judged by observations made before and after an arbitrary date. The flexibility in the date makes it easy to move to give the 'best' results, another point of entry for bias.

The difficulty is that measurements of the past, come with more uncertainty than measurements of the present, and often substantially more. This uncertainty must be carried through all levels of an attribution analysis, but isn't. The greater the uncertainty in the measure, the more difficult it is to make an attribution claim.

For example, events from the past almost always have a 'plus-or-minus' attached to them. We can account for these mathematically, but this never happens. The critique about statistical estimates of extremes applies here as well.

Conclusion

The desire to say that current notable, harmful or extreme events are caused by man's activities is strong. Strangely, this is accompanied by a *lack* of desire to claim man's activities produce any beneficial effects. All events investigated are 'bad' events, so these are all that will be reported.

This introduces a strong bias in attribution reports, one that is likely tied to a desire to blame every untoward weather event on global warming. The journal *Climate Change* even boasted as much in a call for papers on attributions.[31] They said pushing attributions in the press can produce 'teachable moments within a short time after an event', and 'can bring clarity to a complex question'. It is true enough that claims of attribution are clear, but they are also wrong or misleading, as we have seen.

Unfortunately, the clarity that direct observation shows things just aren't that bad outside, and that harmful events have not been increasing, or have even been decreasing, has not penetrated the climate attribution studies community.

Climate change event attribution studies rely on one of two assumptions, both of which are false or unproven. Model-based studies assume models are perfect and represent the atmosphere with no or trivial error. All observations prove this assumption wrong. Models have too much mean prediction error, and unknown but presumably large prediction error of extreme events. The are thus not trustworthy.[32] Again, models must demonstrate skill at *all* frequencies and scales of events for which attributions are claimed. Plus, models of the past, or so-called 'natural' climate, can never be independently confirmed, leaving us with doubt about their usefulness. If the models are wrong or uncertain, then so are claims of attributions.

Observation-based attribution studies assume that man is the sole or most important *cause* of the changes in observations from before and after an *ad hoc* date. Claims that this is so are unproven because the actual or changed climate models used to make them are imperfect. Also, the uncertainty in measurements of past events, which can be substantial, is never accounted for, rendering these studies meaningless.

It is not that attribution studies are impossible; it is just that they are poor, or worse. They should therefore not be used for decision making in any public way.

Notes

1. See 'Inferring causation from time series in Earth system sciences' by Runge et al., 2019, *Nature Communications*, https://doi.org/10.1038/s41467-019-10105-3.

2. G Lusk, 'The social utility of event attribution: liability, adaptation, and justice-based loss and damage', *Climatic Change* 2017, 143: 201–212.

3. B Jarvis, 'Climate change could destroy his home in Peru. So he sued an energy company in Germany', *New York Times*, 9 April 2019. https://www.nytimes.com/interactive/2019/04/09/magazine/climate-change-peru-law.html.

4. S Osaka and R Bellamy, 'Weather in the Anthropocene: Extreme event attribution and a modelled nature-culture divide', *Transactions of the Institute of British Geographers* 2020; 45: 906–920, https://doi:org/10:1111/tran:12390.

5. RA Betts, 'Heed blame for extreme weather', *Nature World View*, 26 January 2021, https://www:-nature:com/articles/d41586-021-00185-x.

6. DR Durran, 'Can the issuance of hazardous-weather warnings inform the attribution of extreme events to climate change?', *Bulletin of the American Meteorological Society* 2020, 101, E1452–E1463.

7. R McKitrick, 'This scientist proved climate change isn't causing extreme weather so politicians attacked', *Financial Post*, 7 June 2019. https://financialpost:com/opinion/ross-mckitrick-this-scientist-proved-climate-change-isnt-causing-extreme-weather-so-politicians-attacked.

8. http://sciencepolicy.colorado.edu/research_areas/sparc/research/projects/extreme_events/munich_workshop/ccdl_workshop_brochure.pdf.

9. See for example the American Meteorological Society's 2019 *Explaining Extreme Events from a Climate Perspective*, https://www:ametsoc:org/ams/index:cfm/publications/bulletin-of-the-american-meteorological-society-bams/explaining-extreme-events-from-a-climate-perspective/.

10. F Kogan, W Guo and W Yang, 'Near 40-year drought trend during 1981–2019 earth warming and food security', *Geomatics, Natural Hazards and Risk* 2020; 11(1): 469–490. doi:10.1080/19475705.2020.1730452.

11. http://www.drroyspencer.com/2020/08/even-with-laura-louisiana-hurricanes-have-not-increased-since-1851/.

12. VA Gensini and HE Brooks, 'Spatial trends in United States tornado frequency'. *Climate and Atmospheric Science* 2018; 1: Article number: 38.

13. I Goklany, *Impacts of Climate Change: Perception and reality*. Report no. 46, The Global Warming Policy Foundation, 2021.

14. https://www.carbonbrief.org/factcheck-how-global-warming-has-increased-uswildfires.

15. See for example P Stott et al., 'Detection and attribution of climate change: a regional perspective', *Climate Change* 2010, 1: 192–211.

16. O Angelil, D Stone, M Wehner, et al., 'An independent assessment of anthropogenic attribution statements for recent extreme temperature and rainfall events'. *Journal of Climate,* 2017; 30: 5–16.

17. NS Diffenbaugh, D Singh, JS Mankin, 'Unprecedented climate events: Historical changes, aspirational targets, and national commitments'. *Science Advances* 2018; 4: eaao3354.

18. K van der Wiel, SB Kapnick, GJ van Oldenborgh, et al., 'Rapid attribution of the August 2016 flood-inducing extreme precipitation in south Louisiana to climate change'. *Hydrology and Earth System Sciences* 2017: 21: 897–921.

19. NS Diffenbaugh, DL Swain, D Touma, 'Anthropogenic warming has increased drought risk in California'. *Proceedings of the National Academy of Sciences* 2015; 112: 3931–3936.

20. P Stott and P Walton, 'Attribution of climate-related events: understanding stakeholder needs', *Weather* 2013; 68: 274–279; their Figure 3.

21. Thanks to Ross McKitrick for pointing this out.

22. KA Reed et al., 'Forecasted attribution of the human influence on Hurricane Florence', *Science Advances* 2020; 6: eaaw9253.

23. Assume the model-based probability ratio is $P_1 = P_0 = p$. In effect, as model quality decreases, p tends to 1, making it harder to claim the attribution.

24. EJ Becker, H van den Dool, M Pena, 'Short-term climate extremes: Prediction skill and predictability', *Journal of Climate* 2013; 26: 512–531. C Park, et al., 'Evaluation of multiple regional climate models for summer climate extremes over East Asia', *Climate Dynamics* 2016; 46: 2469–2486.

25. See for example KL Swanson, 'Emerging selection bias in large-scale climate change simulations'. *Geophysical Research Letters* 2013; 40, doi:10.1002/grl.50562. D Koutsoyiannis, A Efstratiadis, N Mamassis, A Christodes, 'On the credibility of climate predictions' *Hydrological Sciences* 2008; 53(4). For showing global models do poorly at local levels, GG Anagnostopoulos, D Koutsoyiannis, A Christodes, A Efstratiadis, N Mamassis, 'A comparison of local and aggregated climate model outputs with observed data'. *Hydrological Sciences Journal* 2010; 55(7). Finally, R Knutti and J Sedlacek, 'Robustness and uncertainties in the new CMIP5 climate model projections', *Nature Climate Change* 2012; 3: 369–373, admit to poor model performance, but remarkably conclude 'The uncertainties should not stop decisions being made'. Yet uncertainties in model performance also mean decisions should be less certain.

26. Simple models of changes in socioeconomic variables do a better job explaining spatial patterns of temperature trends over land. See R McKitrick and L Tole, 'Evaluating explanatory models of the spatial pattern of surface climate trends using model selection and Bayesian averaging methods'. *Climate Dynamics* 2012. doi:10.1007/s00382-012-1418-9.

27. K van der Wiel et al. op. cit.

28. R Vautard et al. 'Human contribution to the record-breaking June and July 2019 heatwaves in Western Europe', *Environmental Research Letters* 2020, doi:10.1088/17489326/aba3d4.

29. Though I have not yet seen this in the literature.

30. A common technique is generalised extreme value (GEV) analysis. For instance, Vautard et al., op. cit., use it.

31. Call for paper: https://www.springer.com/journal/10584/updates/17773280.

32. Even the IPCC admits shortcomings in models. See *AR5 Synthesis Report: Climate Change 2014*, Chapter 9, p. 75., in which they say many 'studies have failed to find strong relationships between observables and projections', https://www.ipcc.ch/report/ar5/syr/.

Review process

GWPF publishes papers in a number of different formats, with a different review process pertaining to each.

- Our flagship long-form GWPF Reports, are all reviewed by our Academic Advisory Panel.
- GWPF Briefings and Notes are shorter documents and are reviewed internally and/or externally as required.

In addition, for most publications, we invite external reviews from a parties who we would expect be critical. If these critics have substantive comments, we offer to publish these alongside the main paper. In this way, we hope to encourage open debate on the important areas in which we work.

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- More potential reviewers are involved
- The number of substantive comments typically exceeds journal peer review
- The identity of the author is known to the potential reviewers.

As an organisation that is subject to sometimes very hostile criticism, our review process has to be very careful. All parties involved therefore treat the reviews with the utmost seriousness.

Final responsibility for publication rests with the Chairman of the Trustees, Terence Mordaunt, and the GWPF Director, Dr Benny Peiser. But In every case, the views expressed are those of the author. GWPF has never had any corporate position.

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The Global Warming Policy Foundation is an all-party and non-party think tank and a registered educational charity which, while openminded on the contested science of global warming, is deeply concerned about the costs and other implications of many of the policies currently being advocated.

Our main focus is to analyse global warming policies and their economic and other implications. Our aim is to provide the most robust and reliable economic analysis and advice. Above all we seek to inform the media, politicians and the public, in a newsworthy way, on the subject in general and on the misinformation to which they are all too frequently being subjected at the present time.

The key to the success of the GWPF is the trust and credibility that we have earned in the eyes of a growing number of policy makers, journalists and the interested public. The GWPF is funded overwhelmingly by voluntary donations from a number of private individuals and charitable trusts. In order to make clear its complete independence, it does not accept gifts from either energy companies or anyone with a significant interest in an energy company.

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