University of Oregon School of Journalism and Communication

ATTRIBUTING CLIMATE CHANGE TO EXTREME WEATHER EVENTS

Developing a Code of Best Practices for Media Producers

UNIVERSITY OF OREGON
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PRIMARY RESEARCH GOAL

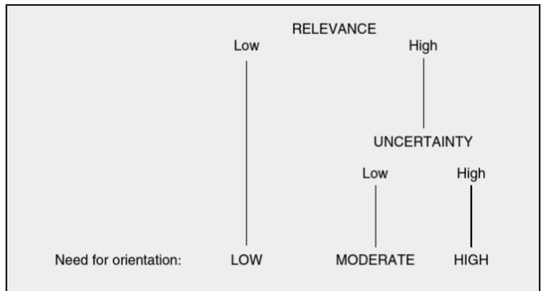
Through my research, I seek to develop a code of best practices for media producers to use when referencing events of extreme weather, so that they accurately and effectively attribute climate change to the factors that led up to the event. This code of best practices will be supported through climate and communication science, and will be applicable to a wide range of media.

EXTREME WEATHER EVENTS AND CLIMATE CHANGE

Extreme weather events are defined as any occurrences of weather that lie outside the range of normal weather patterns for a specific geographic region. Using recent meteorological data, scientists have found that both the intensity and frequency of specific categories of extreme weather events are on the rise. As a result of the limitations of historical meteorological data , predictive models that expand on the weather event data from the last century are much more effective in showing the future potential of meteorological trends: One model, which considers the effects of greenhouse gases on hydrologic cycle, shows that increased air temperatures and evaporation lead to "increased precipitation rates and enhanced storm intensity," and are only bound to worsen (Easterling et.al., 2000). These models represent the alarming truth of the future of extreme weather events, and demonstrate how the frequency and intensity of these events will only increase if no changes are made to the trajectory of our climate.

EVENT ATTRIBUTION

The field of study that seeks to establish the connection between events of extreme weather and climate change is referred to as *event attribution. Attribution* can be more formally defined as "the process of evaluating the relative contributions of multiple causal factors to a change or event with an assignment of statistical confidence" (Stott et. al., 2016), which in this case, is applied to the confidence of an event of extreme weather being influenced by climate change. As a result of the increasing dedication to this area of study and research, it is continuously becoming easier for scientists to clearly pronounce the degree to which the effects of anthropogenic climate change have impacted the magnitude or probability of a specific type of extreme weather event.



*Source: David Weaver, 'Political issues and voter need for orientation', in *The Emergence of American Political Issues*, ed. Donald Shaw and Maxwell McCombs (St Paul, MN: West, 1977), pp. 107–19.

COMMUNICATION THEORY AND RISK

One of the first steps in media consumption is determining one's *need for orientation.* The process of orientation consists of an individual determining the relationship between the issue they are considering, and its relationship to their already-existing set of personal and political beliefs and values. This need for orientation can be driven by two factors: relevance and uncertainty. The figure to the left displays the relationship between these two factors, and how a combination of high relevance and uncertainty can lead to a higher desire for orientation (McCombs, 2014). A determination of the individual or community risk plays a large role in one's desire to educate themselves on a particular environmental science issue. This is why it becomes essential that issues surrounding climate change are communicated properly, primarily when communicating the true potential for risk an issue may have on an individual.

THE OPPORTUNITY

After an occurrence of an event of extreme weather, a measured natural peak in audience curiosity as to what caused the event can be observed, showing that concerned audience members will often continue to seek out information on the issue even after viewing the original media that concerned them (Stott et.al., 2016). This peak in engagement with content surrounding environmental issues becomes an essential opportunity for explaining the connection between extreme weather events and climate change, and must be effectively communicated in order for it to be successful.

CLIMATE CHANGE COMMUNICATION CHALLENGES SOLVED BY PROPER EVENT ATTRIBUTION

1. Climate change is perceived to be a complex and abstract scientific issue.

Extreme weather events are an expression of climate change that is tangible and observable in daily life.

If an individual doesn't currently feel affected by climate change, being impacted by an event of extreme weather has been proven to make them believe otherwise (Konisky, Hughes, & Kaylor, 2015). Though not everyone experiences (or believes to have experienced) events of extreme weather firsthand, the representation in the media of climate change exacerbating extreme weather may encourage an individual to consider the saliency of the effects of climate change on their own life.

2. Climate change is not frequently discussed in daily conversation.

Attributing climate change to events of extreme weather provides more accessible opportunities for climate change discussion.

Because of the proven increase in media coverage of extreme weather events (Ungar, 1999), media consumers are being presented with more opportunities to understand the tangible effects of climate change, in a context that is much easier to mention in conversation – the weather. Making climate change more accessible in a conversation can lead, in the long-term, to an increase in political engagement surrounding the issue.

3. The future risks of extreme weather events are not salient.

Proper attribution will allow audiences to better understand their proximity to the effects of anthropogenic climate change.

Events of extreme weather are an opportunity to show an individual how they can be affected by climate change. Even if the event of extreme weather that they are viewing is not occurring geographically close to them, showing how the event had affected other communities could allow them to see the potential for damage of an extreme weather event, especially when exacerbated by the effects of climate change.

4. Climate change is a topic that is debated as a two-sided issue.

Attribution of climate change to events of extreme weather bring forward an opportunity to confirm the existence of climate change.

Though the political division of the "belief" of climate change is an unfortunate truth, appearances of events of extreme weather in media would provide opportunities to discuss the undeniable, tangible effects of climate change. Providing more opportunities to connect climate change to its tangible expressions would help individuals, specifically those who are more neutral on the issue, to question their existing views of climate change.

5. Communities are not prepared for the effects of climate change.

Proper attribution would encourage the public to place pressure on policymakers to account for the effects of extreme weather events.

Our government is responsible for making the decisions that will affect how well a community may be prepared for an event of extreme weather, and these preparations must take the imminent changes of our climate into consideration in order to be fully effective. If the connection is made between climate change and its future impact on events of extreme weather, voters will see this and be encouraged to take action and make informed decisions when considering how their communities could change as the climate does.

REGULATING EVENT ATTRIBUTION IN MEDIA

Content referencing events of extreme weather can be regulated using a voluntary "Code of Best Practices," which provides media producers with the tools and information they need to ensure that all content referencing extreme weather events is...

INFORMATIVE

Content should include the basic information regarding an event of extreme weather, such as where and when it occurred, and what the geographical reach of the event was, or could be. Providing a full scope of information to an audience makes the event more tangible, providing context for an event that they may potentially never see themselves.

ACCURATE

All representations of extreme weather events, specifically when climate change is attributed to them, must be supported purely by factual evidence and not subjective methods of interpretation. Additionally, events of extreme weather must be attributed to climate change accurately, in a way that reflects the body of scientific research that can support it.

INSPIRING

An important component to include in event attribution-related media is the tangible and accessible climate change solutions. Additionally, the use of storytelling and showing human experiences can have a profound impact on a person who seeks to take action. Especially since most Americans do not believe that climate change has impacted them directly, showing the stories of people who have been affected could help these Americans understand the perspectives of someone who has been more clearly impacted.

EXPANSION

Properly attributing climate change to events of extreme weather will allow the general public to have a clearer understanding of not only the cause of the factors leading up to events of extreme weather, but also their potential for impact.

As extreme weather events are more consistently attributed to climate change in media, awareness the field of study will increase, allowing event attribution to gain traction within the climate science community as a whole.

As one of the only categories of journalism that truly applies to the entire world, the standards of climate reporting demonstrate the epitome of journalistic standards. Though proper attribution of climate change to events of extreme weather may only be a small piece of a much larger picture, it is essential that every media producer participates in any way that they are able to the improvement of climate communications, which seek to encourage actions towards solutions of our changing climate.

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