

On Fallacies In Climate Change Discourse:

A Resource For Rhetorical Pedagogy

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### **An Introduction of Denialistic Proportions**

The topic of climate change (or “global warming”) has become one of the most controversial modern issues in United States politics, likely because the science behind climate change isn’t 100% settled. As someone who’s grown up in the southeastern United States, I’ve actually seen the winters get colder and the summers stay about the same temperature — and the globe is supposed to be warming? Remember, “scientists” also said that we would be experiencing an ice age in the 1970’s, but now we are expected to believe from these same scientists that the globe is warming and that this spike in temperature is solely because we like to drive around in cars and eat beef. Any student of history would know that humans have the uncanny ability to quickly find solutions in the face of overwhelming problems. Take the moon landing for instance: the United States was able to put a man on the moon only a decade after claiming they would despite overwhelming odds and a series of problems. So, on the topic of climate change, there is no need to worry or do anything about it right now. If it is actually of grave concern, humans will develop a solution to problems as they arise.

If you’ve read this far, you probably sensed that something seemed “off” about the previous paragraph. Yes, the language is abrasive and absent of substantiating evidence, but the argumentation structure itself could seem oddly convincing or familiar if you live in the United States. Perhaps at a Thanksgiving dinner table a few years ago your great-uncle described his experience growing up in hot southern summers without air conditioning as definitive proof that climate change has always existed. Or, maybe you were flipping through cable news programs in 2010 only to stumble upon someone you’ve never heard of debating Bill Nye the Science Guy, probably about an unusually cold winter that couldn’t possibly indicate the globe is warming. But there is also another possibility, one where you may have believed that the predictions of an

apocalyptic global warming weren't 100% true. You were hoping — much like I did — that these provocative claims would dissipate as slowly as they had arrived and the Earth would live happily ever after.

Unfortunately, contemporary evidence seems to suggest the opposite of that romanticized and optimistic future: climate change is very real and happening faster than expected. According to an official report released by the U.S. Global Change Research Program (2018), “Earth’s climate is now changing faster than at any point in the history of modern civilization, primarily as a result of human activities” (p. 34). This same report, made public by the Trump administration the day after Thanksgiving, predicted that most “high risk” coastal regions of the United States would experience severe and irreversible flooding directly connected to increasing global temperatures before 2050 (p. 42). These discoveries come only months after bombshell findings about climate change were presented by the United Nations Intergovernmental Panel on Climate Change. The findings from the panel explicitly warned that if global warming wasn’t quickly stabilized at its current metric of 1.5°C above average expected global temperature, or if this metric increases beyond 2°C the average expected global average, then the chances of permanent and irreversible climate change damage to human society are significantly high (Intergovernmental Panel on Climate Change, 2018, p. 7). And so, it appears that there is no way to ignore the reality of science in this case. The United Nations and the United States climatology reports have both proven, with certainty, that humans are causing and expediting climate change at an unprecedented rate — so how could anyone possibly believe anything else?

### **Pro-Science vs. Denialism**

A unique feature of climate change discourse in the United States, especially when compared to other dichotomous political debates, is that it exhibits two diametrically opposed ideologies. First let us focus on the ideology that has become a guiding force in contemporary global warming discourse: climate change **denialism**. As demonstrated quite explicitly in the opening paragraph, this particular outlook on the topic of climate change has built a staunch resistance to the notion that human contribution is central to global warming or that anything of significance is changing in the Earth's climate system. Their purpose is not immediately clear, but denialism's rhetorical exigence captures a base of loyal advocates primarily through the use of propagated rhetorical fallacies. Denialists specifically focus on fallacious reasoning that guides an audience away from the underlying logical and scientific structure of climate change and towards anything and everything outside of scientific reality.

On the other hand, **pro-science** climate change advocates argue the opposite: human activity is adding unprecedented amounts of carbon to the atmosphere that has resulted in an unusual warming of the Earth. Their purpose is simple — raise public awareness of science and find solutions for global warming. Yet, despite using quantitative logic as a guiding ploy for argumentation, pro-science discourse leaders are often unintentionally drawn in to the fallacious rhetorical environment crafted by denialists in 21<sup>st</sup> century media. This has resulted in more recent pro-science discourse focusing its limited public platforms on resolving or exposing denialism fallacies rather than re-centering the discourse on the logical foundations guiding their ideology (Mann & Toles, 2016, pp. 74-84).

The intention of this paper is quite simple: to organize and detail the most common rhetorical fallacies implemented by climate change denialists and highlight the persuasive power

of fallacious reasoning in this particular discourse context for pedagogical purposes. Though detailing this information may seem trivial, the analysis of fallacy persuasiveness in climate change discourse will not just expose or categorize fallacies in climate change rhetoric; it will also prove invaluable to instructors of rhetoric who wish to understand and teach why particular fallacies have become rhetorically persuasive elements of 21<sup>st</sup> century discourse.

### **Some Common Climate Change Fallacies**

For true climate change denialists, the logical claims of pro-science advocates are not as convincing as the fallacies that distract from the science itself. It appears that those who choose to willfully ignore the factuality of climate change science by propagating highly persuasive rhetorical fallacies have successfully captured a loyal base of denialists and a sizeable discourse space in 21<sup>st</sup> century media (Mann & Toles, 2016, pp. 53-67). However, regardless of their widespread rhetorical success, denialists fail to heed rhetorician Scott G. Shreiber's (2003) warning that "false reasoning, simply because it is false, can never entirely relieve the mind's puzzlement or perplexity about the conclusion," or in this case, the reality of an already existing planet-wide climate crisis (p. 98).

The following sub-sections will detail a few of the most commonly utilized and persuasive denialist fallacies while highlighting how they seem to operate in 21<sup>st</sup> century discourse.

#### **Ignoratio Elenchi**

When presented with an overwhelming majority of valid refutation, a rhetor has one of two options: (1) the rhetor could concede their argument is invalid, or (2) the rhetor could implement an ignoratio elenchi fallacy, translated from Latin to English as "ignoring the issue" (Hamblin, 1970, p. 31). This particular fallacy is actually an umbrella term that encapsulates

other fallacies like red herring straw man, both of which distract an audience from the issue at hand by guiding them towards an unrelated issue, person or conclusion (Tindale, 2007, p. 34). For the purposes of this subsection, however, *ignoratio elanchi* can be defined as an irrelevant conclusion, or a conclusion that is drastically different from an argument's premise. The use of this logical fallacy to avoid logical confrontation and concession of faulty reasoning has been a notably successful rhetorical maneuver.

As early as 2012, a particularly famous United States politician has used *ignoratio elenchi* fallacies on Twitter to persuade his audience into believing his denialist agenda. Consider, as an example, the following tweet from President Donald Trump:

The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive. (2012, November 6)

In this specific claim, you can see how Trump attempts to redirect the “concept of global warming” to being “created by and for the Chinese,” suggesting that China directly affected “U.S. manufacturing” rather than global warming. Donald Trump used an *ignoratio elenchi* fallacy (specifically *straw man*) to guide and persuade his audience away from the underlying concept of climate change and towards a conclusion concerning U.S. manufacturing. For the audience successfully captured by this rhetorical message it “prove[s] the thing that shouldn't have been proved in the first place,” China's desire to overtake the U.S. manufacturing (Tindale, 2007, p. 34).

Despite rebuttals from pro-science advocates that could expose logical holes in *ignoratio elanchi* fallacies, this fairly recent tweet from Donald Trump demonstrates how a fallacy like straw man could successfully distract and capture audiences in denialist discourse spaces — at the time of this composition the previously mentioned tweet holds 100-thousand re-tweets and

66-thousand likes. Interestingly described by C.L. Hamblin (1970), *ignoratio elenchi* convinces an audience that “the journey has been safely preformed” despite “[getting] in to the wrong train” (p. 31). This false argumentative closure has significant rhetorical power in climate change discourse, especially if one considers the doom, gloom, and uncertainty propagated from pro-science advocates.

### **Post Hoc Ergo Propter Hoc**

One of the more prominent fallacies in persuasive denialist rhetoric comes in the form of the post hoc ergo propter hoc fallacy, or more informally stated, the ‘after this therefore because of this’ fallacy (Tindale, 2007, p. 174). Aristotle, even in his introductory work *Sophistical Refutations*, was particularly fond of logically deconstructing this fault in reasoning. In *Rhetoric* he observes that politicians are especially fond utilizing post hoc ergo propter hoc because they lead their audience to “assume that, because B happened after A, it happens *because of A*” (Schreiber, 2003, p. 116). According to Hamblin (1970), post hoc ergo propter hoc has not lost its political popularity in the two thousand years since Aristotle’s writing of *Rhetoric* (pp. 152-3). Specifically in the realm of climate change discourse, we can observe this fallacy to be an effective strategy amongst contemporary political leaders guiding denialist argumentation. Take, for example, denialist Sen. James Inhofe (R-OK), who famously spoke on the senate floor in 2015 holding a freshly made snowball:

In case we keep forgetting, we keep hearing that 2014 has been the warmest year on record, but now the script has flipped. I ask the chair, you know what this is? It’s a snowball, from outside here. It’s very very cold out, very unseasonal. (C-Span, 2015)

Here, Sen. Inhofe is following Aristotle’s methodical breakdown of post hoc ergo propter hoc to a tee. His claim, that the weather was “very very cold out, very unseasonal” on this

particular day, painted a seemingly valid argument to observing senators: because it was unusually cold out, global warming (in the literal sense of the word) couldn't possibly be happening. Despite the fault in logical reasoning happening throughout the speech in the form of *post hoc ergo propter hoc*, Sen. Inhofe remained the acting chair of the Environmental and Public Works Committee throughout the entirety of the 2015 calendar year.

The persuasiveness of this specific fallacious argumentation strategy is likely because the fallacy itself creates confusion about what exactly is not credible in the arguments structure (Schreiber, p. 82). The rebuttal from pro-science advocates, especially when responding to denialists like Sen. James Inhofe, is often to offer resolutions to the fault in reasoning that revolve around the person creating the argument rather than the argument itself (i.e., that Inhofe himself is responsible for fallaciously framing the argument rather than the argument itself being fallacious). In fallacious arguments that revolve around false premises, Aristotle suggested in *Topics VIII, 10*, that the opposite strategy must be taken, "one must resolve [such an argument] by destroying the false premise due to which the false conclusion arrives" to stay grounded in logic and truth (p. 83).

### **Argumentum Ad Ignorantium**

In *Fallacies and Argument Appraisal* (2007), Christopher W. Tindale defines *argumentum ad ignorantium* as "drawing a conclusion on the basis of the absence of evidence against that conclusion" (p.117). He later inculcates this fallacy into a much more clearly defined three step process, where "[1] [the audience] are interested in conclusions that are drawn on the absence of evidence; [2] confusing absence of evidence with negative evidence; and [3] judging others with a failure to meet standards of evidence they were never equipped to meet" (p.119). Essentially, argumentum ad ignorantium is a close relative of the burden of proof fallacy and



operates similarly in theory, but this fallacy revolves entirely around a definable metric of proof — an 100% consensus.

Interestingly, *argumentum ad ignorantium* was one of many additions to the *ad hominum* category by John Locke in the 17<sup>th</sup> century, noted well after Aristotle's breakdown of fallacies in *Sophistical Refutations* (Hamblin, 1970, p.162). The fallacy, at least temporarily, operates as a false logical justification that seems to validate a lack of complete evidence. Take for example Republican strategist and pollster Frank Luntz, who accidentally leaked a private 2002 memo meant to be shared strictly amongst fellow Republicans:

“Voters believe that there is no consensus about global warming within the scientific community. Should the public come to believe that the scientific issues are settled, their views about global warming will change accordingly.” (Nuccitelli, 2017)

Notice in this quote how the fallacy revolves around the issues not being “settled” through a complete “consensus” as the primary driver of discourse. This rhetorical device has become so persuasive in public debates that pro-science platforms, such as *theconsensus.com*, have dedicated a vast majority of resources towards explaining why “closing the [97.1%] consensus gap in the public perception of a scientific is an important step towards meaningful climate action” (The Consensus Gap, 2013).

This particular fallacy doesn't get much academic attention amongst prominent rhetoricians, unfortunately; it is usually overshadowed by more popularly studied counterparts like *post hoc ergo propter hoc* or *ad hominem* in rhetorical pedagogy. However, *argumentum ad ignorantium* is likely the most persuasive of all the previously mentioned denialist fallacies because of its ability to totally shape a discourse. For instructors of rhetoric, this particular

fallacy should be a highlighted feature of fallacy pedagogy, especially if one considers using climate change discourse as a teaching model.

### **Conclusion and Recommendations**

Despite some of the observed faults in reasoning occurring in denialist discourse, fallacies like *argumentum ad ignorantium*, *post hoc propter hoc*, and *ignoratio elanchi* continue to capture significant and captive rhetorical audiences. The persuasiveness of such fallacies in human-caused climate change discourse is especially troubling, not only because the argument's conclusion becomes different from its premises but also because it is likely postponing any real, rational, or timely response to the underlying issues climate change is causing (Mann & Toles, 2016, p. 89).

But the actual persuasive power of fallacious reasoning, demonstrated throughout this paper, lacks any real or substantive accreditation or analysis. In *Rhetoric and Sophistical Refutations*, Aristotle details the behavior and solutions of rhetorical fallacies but never acknowledges how faults in reasoning could become persuasive rhetorical ploys in and of themselves. Similarly, C.L. Hamblin and Christopher W. Tindale only explain how fallacies originate and operate — never crediting specific fallacies like *ignoratio elanchi* or *post hoc ergo propter hoc* as being legitimately persuasive rhetorical appeals.

Because of this gap in rhetorical pedagogy, teachers of rhetoric should recognize and begin analyzing how rhetorical fallacies in 21<sup>st</sup> century discourse have become successful elements of persuasion as common as ethos, pathos or logos. In *The Essential Guide to Rhetoric*, my own personal preface to the world of rhetoric many years ago, William M. Keith and Christian O. Lundberg (2008) define fallacies as “mistakes and errors in argumentation and reasoning,” warning its readers that “if an audience notices your fallacies, you will lose

credibility and fail to persuade them” (p. 48). As an introductory student of rhetoric, I heeded that warning often to avoid structuring my arguments around recognizable logical fallacies like slippery slope, red herring, or ad populum.

In retrospect, though definitely seeing the ethical obligation to remain truthful, I fail to recognize how even observable fallacies could alter an audience’s willingness to be persuaded — a concept that underestimates the persuasive power of fallacious propaganda such as the denialist examples analyzed previously in the paper. Earlier in *The Essential Guide to Rhetoric*, even before the authors begin deconstruction and categorizing formal fallacies, the text defines rhetoric to its audience as “the faculty of observing in any given case the available means of persuasion,” a definition popularly coined by Aristotle himself (Roberts, p. 10). In order to prevent fallacious rhetoric from dominating discourse, instructors of rhetoric must observe and recognize fallacies as the persuasive devices they can become. Doing so will help expose why, how, and where these specific fallacies usually propagate and operate in the 21<sup>st</sup> century.

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# The Broken Radiator

By: Kelley Bostian

Three fourth graders — Jimmy, Edward, and Samantha — arrive to school on Monday morning only to receive news from their teacher, Ms. Mabel, that the school board has voted in a new principal to replace the old one. Teachers had previously complained that the old principal hadn't really done his job, but the students had been pretty happy with him and hadn't really ever noticed anything wrong with the school besides the increasingly noticeable temperature increase coming from a suspected broken radiator. The new principal, John Baron, is a local businessman who has business ties all throughout the town, and he begins his inaugural shift with an announcement over the P.A. during the morning announcements that he plans to “make Midwest Elementary School like it was when he was growing up, a great place where people could speak their mind and not have to worry about the corrupt school board controlling everything.” This morning announcement from John Baron goes on for quite some time, almost improvisational at some points, but it never breaks the attention of the fourth grade teacher Ms. Mabel as she stands in front of her utterly confused classroom...

### **Monday Morning, 8am:**

Jimmy and Edward looked at each other in confusion while their teacher, Ms. Mabel, stared at a PA box positioned above the classroom door, grinning widely with a smile they had never seen before. Jimmy leaned over to Edward and whispered, “What is a school board?”

“I don’t really know...” Edward replied, “but I guess it made Ms. Mabel mad that the old principal wouldn’t really listen to her complaints about money and stuff? Maybe this new one will bring new ideas to the school, he is an outsider you know.”

“I guess,” said Jimmy, beginning to take off his jacket while the announcements of John Baron filled the silent confusion of his classmates; he locked eyes with Samantha as she slowly snuck away from her desk, unnoticed by Ms. Mabel, to come sit crouched and hidden between the two boys desk.

“Do you think this new principal, John Baron or whatever his name is, will fix the radiator problem?” Samantha whispered, her eyes bouncing back and forth between Jimmy, Edward, and Ms. Mabel. “I’m tired of it getting hotter and hotter every day in this school, like, I’m already sweating and it’s only 8am! But it doesn’t ever seem like the teachers care or notice, right?”

“Maybe,” Edward replied, “The old principal probably could’ve found money in this years budget if he was principal for just a little bit longer, but John Baron seems to be focused only on stuff the teachers care about. It’s really annoying, like I wish...”

“Kids!” Ms. Mable screamed from the front of the class, “Stop talking during morning announcements! That is so disrespectful to our new principal; he’s just trying to do his job! Go sit down in your seat Samantha, I’ve told you too many times before to stay seated, you’re walking on thin ice...”

“Yes man...” said Samantha in an almost soft whimper, “let me just give this notebook back to Jimmy he let me borrow a few weeks ago.”

Samantha stood up, plopped a brand new orange notebook on Jimmy's desk, and walked back to her seat while a sea of eyeballs bounced between Ms. Mabel and Samantha's believably sad face. Ms. Mabel turned around and started writing the lesson plan for Monday on the board while the new principal continued to make announcements to a mostly silent classroom about budget cuts and things he especially didn't like about the old principal.

Jimmy, however, never let Samantha borrow an orange notebook. In fact, orange was his least favorite color (it reminded him of oranges, which make him throw up sometimes). He picked the notebook up and flipped to the first page, where a message in freshly sharpened pencil read:

*Meet me in the radiator room at recess. We're going to get to the bottom of this school's heat problem. Also, bring Edward, he's smart and stuff so maybe he can figure out what's going on. P.S., I need this notebook back. –Samantha*



### Later That Day, During Recess:

“It’s, like, umm, over here, I think...” said Samantha, guiding Jimmy and Edward through the dimly lit hallways of Midwest Elementary. The two boys were somewhat paranoid, constantly looking over their shoulder and checking each and every classroom window to make sure any lingering teachers couldn’t spot them, but Samantha remained lost in her unofficial job as the radiator locator — unaware of the Jimmy and Edward’s skittish behavior behind her.

“I thought you said it was near the cafeteria, Samantha?” said Edward, glancing over his shoulder halfway through whispering the sentence. “We can’t get caught inside the school during recess, I don’t want to, ugh, get sent to the principal’s office his first day on the job! What a bad impression!”

“Stop being such a baby, Edward.” Samantha said with monotone sass. “You can’t just, you know, always think about what happens when we get caught, especially when we’re trying to do something that will help all of the students and teachers here. I mean what if — oh wait. Do ya’ll feel that?”

The hall that the students had turned down when Samantha was speaking had grown significantly warmer with each step. At the end of the hallway, a large collection of wet floor signs stood propped in the way of a windowless door. As they got closer, the clues began to feed their suspicions.

“That has to be the radiator room,” said Jimmy, who had been quiet during the entirety of Samantha and Edward’s conversation. Standing in front of the door, he noticed he had broken into a sweat worse than the time he accidentally ate oranges at soccer practice, and he looked at Samantha and Edward noticing that the other children had uncomfortable looking red faces and large sweat stains under their armpits.

“Guess I’ll be the first to open it, excuse me...” Jimmy whispered confidently, moving past the other two children. He was determined to get to the bottom of this heat problem one way or the other, mainly because he hated to be reminded of how sick oranges made him. With a light push, the door began swinging open. In the center of the room a large and dated looking radiator faced the doorframe from the opposite wall; steam rose from its crevasses and a small grinding noise emanated from its depths.

“So, we brought you here for a reason smarty, do you think that this radiator thingy is the source of the annoying heat problem?” said Samantha, wiping her brow and glancing over at Edward who refused to go past the entrance of the doorframe. He stood for a moment, glancing between the radiator, Jimmy, and Samantha.

“I’m no mechanic,” he said, releasing a sigh “but I’d say that there is a bad carbonator or trans pan clogging up the boilermaker shaft up on the shift valve. The noise is a telltale sign, but I’m just basing that off of a book I read over the summer about general mechanical issues with old radiators — it was the only thing my grandma had at her house when my parents made me stay there, don’t judge me! Maybe we can explain to John Baron that all three of us have seen this with our own eyes, ugh, then teachers might...”

“Students!” said a deep voice in the distance, “aren’t you supposed to be doing kid stuff at recess with your friends? What are you doing in this part of Midwest, this room is for adults!” In the dimly lit hallway, a tall man in an expensive suit emerged with a confident smile, “I’m your new principal, Mr. Baron, and I think we need to have a little chat about what you’ve seen this afternoon. Come with me to my new office!”

### **The Students Share Their Consensus with the New Principal**

The students all sat facing John Baron's desk. Pictures of the old principal's family still pointed outward towards their seats, waiting solemnly to soon be removed and replaced by new ones. Mr. Baron, with his back towards the students, was changing out a painting of a butterfly the old principal had hanging on the wall with a portrait of Andrew Jackson.

"I think Mr. Jackson looks good right here... what do you kids think?" He turned around to face the students, a smile seemed almost painted on his face.

"I think it looks good!" said Edward, sitting between Samantha and Jimmy and nervously laughing while locking eyes with John Baron, "He's got to be my favorite president, always did, uh, good stuff in the senate! Right?"

"Indeed! A man that got things done when they needed to get done, regardless of what people think. I always respect great and strong leaders..." said John Baron, now sitting down and propping his legs up on the desk between him and the students.

"So, sorry to interrupt your conversation about Andrew Jackson," said Samantha, cocking her head towards Edward with raised eyebrows and quickly back at John Baron, "but, like, why did you want us to come to your office? Couldn't you just, you know, send us to detention like a normal principal would?"

"Ah, I could!" said John Baron, now pulling out a bag of unsalted pretzels from under his desk and opening them slowly as he continued his monologue, "but where is the life-lesson in that? First, like any good uhh, principal, I want to give you a chance to explain yourselves. Edward, no, wait, Jimmy! That's your name, right? You've been quiet. Tell me what you kids were doing wandering around the hallways during recess,"

The room fell to a silence, and John Baron and the kids looked over at Jimmy, who had been hunched in his seat covering his face with his palms during the previous conversation. He glanced up at the sound of John Baron crunching a fresh pretzel in between his teeth, “what did you say Mr. Baron? I’m sorry, I don’t feel good”

“Oh please, call me Mr. B from now on, all of you! It sounds hip, I like it! What’s wrong kid?”

“I, well, I have this feeling in my stomach, like I ate oranges, which I’m allergic to by the way, and it started getting worse the closer we got to the radiator room,” Jimmy said miserably, his face sweating profusely.

“Oh no, sorry to hear that kid!” Said John Baron, plopping the bag of pretzels down on his desk and clapping his hands together to dust the salt off of his fingertips, “but, obvious question here, why would you go closer to the radiator if it was making you feel sick?”

“Well, I, I mean we, were trying to figure out why every day at school it feels a little hotter than the last. Samantha thought that it might be the radiator, because that’s what the old principal said it could be too, so we went to investigate, and Edward thought that...”

“Hold up just a minute!” said John Baron very loudly, his face now noticeably angry, “the old principal said that the temperature increase is because of that old radiator? Did he not know that it *always* gets warmer this time of year? In fact, when I was your age we didn’t always have radiators. You should be grateful!”

“Mr. B,” said Edward, glancing over in pity at Jimmy, “I know we were supposed to be at recess like the teachers want, and I know that it does get warmer every year around this time. But, when we looked into the radiator room, it definitely seemed like something was wrong because the heat that was coming off of that thing wasn’t, like, normal you know?”

“No, I don’t, like, know Edward.” yelled John Baron snapped very sternly, “I went to this school 40 years ago and my generation never complained about the heat or skipped recess to see if it was coming from the radiator. This old principal has filled your heads with liberal educations and disrespect for authority, and I can’t have that in this school anymore, I —”

“But Mr. Baron! Jimmy and I saw the same thing Edward did!” Samantha said, cutting off John Baron in the middle of his conversation, “All three of us looked at the radiator, and you know, felt the heat coming off of it, it only makes sense that the radiator itself is the reason behind the temperature problem. We aren’t lying, I promise!”

“And what do you expect me to do about it then?” said John Baron without flinching.

Samantha gulped, John Baron was staring at her with intensity she had never seen in another person, but she began her speech with the prospect of helping Jimmy in mind, which made her more confident than she expected: “What the old principal was doing, Mr. B, you should be able to save enough money in this years budget to get a new one, I think the old principal was going to hold off on teacher’s raises or something to pull the money together — but I could be wrong. Otherwise, like, the temperature is going to get so bad that people like Jimmy won’t even be able to be here...”

“Enough,” John Baron said under his breath, now twirling his office chair around to face the portrait of Andrew Jackson, “The problem is, fixing this damn thing is going to cost too much money, take too much time, and really put me in a bind with the teachers who voted me in. I looked at the old principals records, and one of the mechanics that came in to do yearly maintenance on the radiator a few decades ago said the heat might not be because of the radiator. I ought to give that mechanic a call for a second opinion, maybe he can keep the teachers at bay.”

“But sir!” said Edward, “not to be disrespectful, but I read a book about radiator mechanical issues this summer. I’m pretty, uhm, confident that the radiator is why the school keeps getting hotter every year, I mean it only makes sense that...”

“Silence!” yelled John Baron, this time louder than before, “All three of you, you’re suspended for the rest of the day! Don’t go around spreading fake news that the radiator is broken or that you skipped recess. I don’t care what you think, my job is to make teachers happy and I’ll prove to the school that the radiator has nothing to do with the heat increase — it’s the change in seasons, like it’s always been since I was a kid!”

**To be continued...**

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### Final Project Reflection

As far as topic choice, research, and overall cohesiveness went, both the academic portion and creative short story were some of the most rewarding and fun writing projects I've yet to undertake as an aspiring writing professional. However, for the academic portion (what we'll call it right now), the most challenging obstacle I faced during the entirety of the writing process revolved around specifying my target audience. This reflection paper will not only focus on the rhetorical and stylistic choices made to contrast the two pieces, it will also highlight some different moves made to target specific audiences in both rhetorical contexts. Still, writing this reflection only a few days after finishing the polished drafts, it seems like both pieces have room to grow in substantial and different ways. The current restrictions of this project (25-page maximum) have proved invaluable in controlling but also exposing the many possible directions that each work of writing could take.

First, I want to explain why I thought the academic piece lacked a definitive audience throughout the writing process. The paper, titled *On Fallacies in Climate Change Discourse: A Resource For Rhetorical Pedagogy*, attempts at its core to expose the persuasiveness of three rhetorical fallacies in the context of climate change discourse. This topic seemed at first to be geared simultaneously toward climatologist, rhetoricians, or even instructors of rhetoric. When first researching fallacies and climate change argumentation, the scope of the project seemed to demand satisfaction from all three possible audiences that admittedly had me worried about how I was going to preface and conclude the core analysis of fallacies. After some serious substantiation of research and a few revisions in preliminary drafts, the topic of my academic piece seemed to gravitate towards audience of college-level instructors of rhetoric with its limit of roughly 10 pages.

And so, this hybrid literature review/call to action/pro-science advocacy paper was able to experiment with informal and formal structures to create what I like to call the "pedagogical primer" genre. This self-proclaimed genre is intended in this specific analysis to inform rhetoric and composition instructors about a discovered gap in fallacy research by raising awareness (in the most effective way

possible) of fallacy persuasiveness in the context of climate change discourse. I achieved this in two ways on the academic side: by [1] opening my paper with an anecdotal denialist intro that subtly mocked the denialists I would later be chastising, a move that I believe helped naturally transition into a more informal and connotative introduction before the completely formal *pro-science vs. denialism* section and following fallacy subsections (Bostian, 2018a, p. 2); and also, [2] I concluded the paper with a direct call to action, warning instructors “in order to prevent fallacious reasoning from dominating discourse, instructors of rhetoric must observe and recognize fallacies as the persuasive devices they can become” (p. 11). This call to action seemed most appropriate for an audience of teachers because it allowed me to seem transparent by admitting my research was far from answerable and needed more exposure in pedagogical settings. There are several other nods to rhetoric and composition pedagogy throughout the piece, most notably the purpose statement located in the *pro-science vs. denialism section* that explicitly stated that “the intention of this paper is quite simple: to organize and detail the most common rhetorical fallacies implemented by climate change denialists and highlight the persuasive power of fallacious reasoning in this particular discourse context for pedagogical purposes” (pp. 3-4).

In the opposite spectrum, my creative short story also had problems with audience early on. *The Broken Radiator* is primarily geared towards an audience of children ranging from ages 8-13, but it correlates directly with my pedagogical primer paper in its intention and theoretical framework: to raise awareness of fallacy persuasiveness in climate change discourse. The story fit the genre conventions of creative flash fiction with short, digestible paragraphs and natural prosaic dialogue that guided the narrative. Because of the correlation in theoretical underpinnings with *On Fallacies in Climate Change Discourse*, the story initially was filled with climate change jargon and complicated fallacy anecdotes that seemed over the head of children. The short story now avoids this problem through the use of literary devices such as overarching metaphors and analogies, making inconspicuous references to prominent climate change denialists (like principal “John Baron” being a reference to Donald Trump) and implementing fallacies that were analyzed in the academic paper (like “post hoc ergo propter hoc” being John Baron’s defense “the school *always* gets warmer this time of year”) (Bostian, 2018b, p. 7).



Unlike the pedagogical primer paper, however, *The Broken Radiator* had to be left on a cliffhanger with no sense of closure or call to action. Being the perfectionist that I am, I felt that forcing closure after so much build up would result in either a rushed conclusion or a page count well over the 25-page maximum. I do intend to finish this specific story (with illustrations and in-design aesthetic modifications) outside the context of this classroom, but the current state of the story should be enough to demonstrate its correlation with *On Fallacies in Climate Change Discourse*.

To help further differentiate the contrasting audiences of the two pieces, I introduced the contrasting ideologies and exigence of pro-science vs. denialism in each piece with entirely different methods. In *On Fallacies in Climate Change Discourse*, I implemented suggestions from the introductory chapter of *They Say, I Say* to frame denialism and pro-science voices as two competing ideologies using the “on the one hand, \_\_\_\_\_. On the other hand, \_\_\_\_\_.” template (Graff & Birkenstein, 2018, p. 2). *They Say, I Say* also helped me frame the exigence of fallacy persuasiveness through a template I found in chapter seven (p. 97), which served to preface the underlying importance of my purpose statement by exposing that “detailing this information may seem trivial” before establishing the topic’s exigence (Bostian, 2018a, p. 5). Additionally, I implemented independent stylistic strategies such as bolding the first introduction of pro-science and denialism to highlight the two ideologies and help readers easily identify their contrasting rhetorical strategies (Bostian, 2018a, p. 4). Some of my independent stylistic strategies, such as the previously mentioned bolded text and informal anecdotal intro, may have undermined the expectations of APA style I used to organize and cite sources. I believe that these decisions also serve the rhetorical purpose of making my argument more digestible for composition instructors and possibly their students.

In *The Broken Radiator*, I prefaced the short story with a brief plot overview to explicitly signal the contrasting pro-science and denialism ideologies for an audience of children — analogizing features of democratic society and prominent denialist figures of 21<sup>st</sup> century climate change discourse in the lines “the school board [American voting system] has voted in a new principal [Donald Trump] to replace the old one [Barack Obama]. Teachers [Baby Boomers] had previously complained [Republican propaganda]

that the old principal hadn't really done his job [served the Baby Boomer demographic], but the students [Millennials] had been pretty happy with him and hadn't really noticed anything wrong with the school [America] besides [...] a suspected broken radiator [global warming]" (Bostian, 2018b, p. 1). Here, you can see how this information could be vaguely familiar to children, but still not obvious enough to hint towards a political agenda. Between the two pieces, I hope that the different methods utilized in both contexts achieve the same goal of highlighting the contrast of pro-science and denialism and reinforcing the exigence of exposing persuasive denialist fallacies in climate change discourse.

On a stylistic level, both papers were crafted with specific strategies taken from *Rhetorical Grammar*. In some instances, stylistic devices such as transitional phrases and em dashes were utilized in both contexts because of their universal applications (Kolln & Gray, 2017, p. 165, p. 235). However, despite being a great way to halt readers in the creative piece, transitional phrases tended to make an appearance more frequently in on the academic side to help pause the expected flow of long academic sentence structures. This can be observed in the sentence "For the purposes of this subsection, however, ignoratio elanchi can be defined as an irrelevant conclusion, or a conclusion that is drastically different from an argument's premise" (Bostian, 2018a, p. 6).

It seemed that the real contrast in stylistic measure came in the form of commas — where *On Fallacies in Climate Change Discourse* tended to use commas mainly to split independent clauses, bracket appositives, and help pause introductory phrases to match prescriptive grammatical expectations in academic contexts, *The Broken Radiator* used commas specifically to make dialogues seem more improvisational. Notice the unusual comma usage in an excerpt from John Baron's response to the children's radiator findings, where he yelled "No, I don't, like, know Edward" (Bostian, 2018b, p. 8). Throughout the creative piece, the use of commas added realism to dialogue despite breaking the "punctuation pitfalls" I carefully heeded in my academic piece from *Rhetorical Grammar* (Kolln & Gray, 2017, pp. 62-64).

Lastly, I want to mention a fairly obvious but still crucial writing strategy that helped define and differentiate my audiences: diction. *On Fallacies in Climate Change Discourse* uses language and phrases

like inculcate, diametrically opposed, and average expected global temperature to set a formal academic tone and meet certain expectations of the intended pedagogical demographic, completely avoiding informal language choices (at least in the central body, not the intro or conclusion) like contractions and idioms.

Overall, I believe that the rhetorical choices demonstrated in both pieces reflected identifiable audience expectations and the genre conventions in both academic (APA) and creative writing (flash fiction). This semester has challenged, in a spectacular way, my understanding of rhetoric and genre applications. I hope to eventually expand both of these pieces into different dimensions. For the pedagogical primer paper, I will move the academic piece toward an audience of rhetoricians that could help answer some of the questions posed within the analysis. I also hope to expand the creative work to add more depth to the narrative, bolstering the overarching metaphors and analogies. In their current state, they should serve as templates to demonstrate my competence in genre expectations, and the analysis presented in this paper hopefully revealed what specific choices were made to satisfy those genres.

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