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RESEARCH ARTICLE



## "The Most Challenging Argument to Make": Feelings of Safety in Dark Sky Advocacy

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### ABSTRACT

This essay presents dark sky advocacy as an ideal subject for communication scholars, and it also extends research on the role of feeling in the practice and study of environmental communication. Light has long been equated with safety and darkness with danger, and these deep connections – and even deeper feelings – pose a challenge to advocates working to reduce light pollution. Drawing on twenty semi-structured interviews with dark sky advocates across ten countries, this essay analyzes their communication strategies and focuses on how they work with and alongside their audience's visceral feelings.

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Light pollution, the astronomer and dark sky advocate John Barentine argues, "is one of the most significant environmental problems of our time that almost nobody knows about" (Karlamanoglou, 2023). Although light pollution often goes unnoticed as an environmental problem, at least 80% of the world's population – and 99% of North Americans and Europeans – live under the "luminous fog" of polluted night skies (Falchi et al., 2016). According to Dark Sky International (DSI), the largest light pollution advocacy organization in the world, light pollution is defined as the "human-made alteration of outdoor light levels from those occurring naturally," including phenomena such as glare, skyglow, light trespass, and clutter (DSI, 2025).

Light pollution is understudied in environmental communication scholarship. However, interest in the topic has been growing in adjacent fields, such as environmental history and science and technology studies (see, for example, the excellent 2019 special issue of *Energy History* on the topic). Media attention is also increasing, with outlets from popular science magazines to national newspapers spotlighting the problem (e.g. Cokinos, 2024; Gopnik, 2023; Karlamanoglou, 2023). Light pollution is an environmental *problem* on the verge of becoming an environmental *issue* – that is, something that "generates demands for democratic engagement" (Barry, 2021, p. 96) – and this shift is due almost entirely to the efforts of people who have volunteered their time, energy, and money to fight light pollution and preserve dark skies around the world. Because lighting policy is handled at the local level, democratic engagement takes the form of direct communication with residents and officials, who decide whether to support or oppose lighting practices that affect their homes and communities. As such, this advocacy work involves more than raising awareness by writing stories or giving interviews; it also involves tabling at local fairs, discussions with local officials, participation in community meetings, in-person and online talks, social media engagement, one-to-one conversations with neighbors, and other forms of public outreach.

To better understand these aspects of dark sky advocacy, in this essay I draw on twenty semi-structured interviews with advocates across ten different countries: Aruba, Brazil, Canada, France, India, Iran, Mexico, New Zealand, Pakistan, and the United States. Interviewing is an ideal method

for analyzing environmental advocacy, as it allows communication scholars to explore how environmental issues are constituted, negotiated, and contested by various actors and stakeholders (Pezzullo & Cox, 2021; Thatcher, 2016). Like other rhetorical field methods, interviews surface “a variety of rhetorical forms (affective, sensorial, emplaced, embodied) that can be difficult to capture” in texts alone, providing rich objects of analysis (Middleton et al., 2015, p. xvi). Even further, by introducing questions that participants “may never have … considered,” and topics that researchers may not have been aware of, interviews may also “open up spaces for critical reflection” for both researchers and participants (Middleton et al., 2015, p. 133).

Potential participants were identified through the DSI website, which lists the contact information of regional dark sky advocates. I also employed a snowball sampling technique: at the close of each conversation, participants were asked to refer other individuals who met the study’s inclusion criteria (over eighteen, involved in light pollution advocacy, speak English).<sup>1</sup> Twelve participants identified as men; eight as women, and the age of participants ranged from 22 to 68. The Institutional Review Board at the University of Wisconsin–Madison reviewed and approved the study (#2004-002). In addition to giving consent before the interviews, each participant quoted in this essay provided written consent for the publication of their name and other details; they also had the opportunity to read the final manuscript and offer corrections and/or feedback. All but two interviews were conducted using a video conferencing application; one interview took place in person, and one via email.

To give participants a sense of what the interview would cover, they were given a list of questions about their backgrounds, advocacy experiences, and communication strategies ahead of time. However, I also told them that my goal was an organic conversation rather than a rote Q&A session. This approach allowed participants to bring in additional topics I could not anticipate and offered a “thicker” description of their work (Thatcher, 2016, p. 120; citing Geertz, 1973). Interviews averaged 60–90 minutes. After transcribing the recordings, I analyzed them following Braun and Clarke’s (2006) approach to thematic analysis, which directs researchers to familiarize themselves with the data, develop initial codes (i.e. “communication challenges”), search for themes (i.e. “darkness as heritage”) review them, define and name them, and write up the results. The analysis of advocates’ communication challenges revealed a clear theme: for nearly all participants, the principal obstacle was a deeply felt concern that reducing outdoor lighting would endanger personal or public safety.

This worry is as unsurprising as it is daunting. Throughout history and across many cultures, darkness has been associated with danger, and safety with light. The fear of darkness, writes Yi-Fu Tuan (2013), is “world-wide,” and so is its association with real and imagined evils (p. 107). As Michael Osborn (2018) argues, the dark night brings “fear of the unknown,” and makes one “ignorant” of both the benefits and dangers of one’s environment. In “utter contrast” to the “warmth and the engendering power of the sun,” he describes the “cold” darkness as reducing us “to a helpless state, no longer able to control the world about us,” and ultimately confronting us with “thoughts of the grave” (p. 63). While not universal, these meanings of light and darkness are so widespread, and the feelings associated with them so deeply ingrained, that they appear to be common sense.

In what follows, I first outline the problems associated with light pollution, describe the communication strategies dark sky advocates use in their work, and then examine how they address the tricky issue of safety by working with their audience’s emotions. To conclude, I suggest that one powerful approach advocates take is *rhetorical inversion*, which shifts the connotations of diametrically opposed terms and the feelings associated with them. The strategy I am naming is not new, especially within the practice of environmental communication – consider, for example, how Emerson and Muir inverted the meaning of wilderness from *godless* to *holy* (e.g. Cronon, 1996), or Carson’s (1962) inversion of chemicals from *progress* to *peril*. Rhetorical inversion is more than just an attempt to change the meaning of a term. Instead, drawing on the rhetorical force of both terms, it seeks to transform a “god” term to a “devil” term (Weaver, 1995) and vice

versa. Light and darkness have a deep, complex relationship – both in terms of their physical properties and their rhetorical ones – to the point where they might be seen as two “aspects of the same phenomenon” (Le Gallic & Pritchard, 2019, p. 2). Heroes and villains only emerge within the discourses of praise and blame that create them; the meanings of even gods and devils are more slippery, and more intertwined, than they may first appear.

Most scholarship on emotion in environmental communication has focused on the strategic use of emotion in environmental messages (e.g. Oravec, 1981; Wong-Parodi & Feygina, 2021) or feelings such as care, concern, and grief about the natural world and threats to it (e.g. Barnett, 2022, 2025; Iqani & Judge, 2025; Lockwood, 2016). This essay extends this literature by exploring how rhetors work with the feelings audiences carry with them – in this case fear, a classic “visceral” emotion.<sup>2</sup> Visceral feelings like fear, anger, or shame are often treated as the absence of reason. However, they also present as what Berlant (1999) describes as “hard-wired truth[s] … beyond ideology, beyond mediation, beyond contestation” making them especially tricky for rhetors to negotiate (p. 58). Following Ahmed (2013), however, we might understand fear not as an inherent property of an object but as the effect of circulation, as emotions “stick” to signs, people, and objects as they move across time and discourse. But if emotions can stick, they can also be unstuck: even the deepest feelings can be changed or redirected with rhetorical intervention (Johnson, 2016, p. 15). Dark sky advocates do not simply counter their audience’s feelings with facts or explain that their assumptions or perceptions are unfounded. Instead, they work *with* and *alongside* their audience’s affective attachments, unsticking and repositioning them. And in so doing, they also have the potential to transform our understanding of outdoor lighting from a public good to a public harm.

## The problem of light

For many years, public spaces were lit by lamps fueled by whale oil, which had catastrophic effects on baleen and sperm whale populations around the world. Oil lamps were eventually replaced by gas lamps, which were somewhat brighter and more efficient, but still posed fire hazards and required considerable maintenance. The invention of the electric light in the late nineteenth century would change public lighting forever. According to one rapturous visitor to the 1881 Paris Electrical Exhibition, “[a]s gracious Electricity rises up over our planet, much of that which we lament as ignorance, darkness, labor, and sorrow will fade away” (Bolton, 1881, p. 3). Over the next few decades, towns and cities began stringing lights along roads and other public spaces, justifying the expense by touting the economic and leisure activities bright lighting enabled and predicting a reduction in the crime it was thought to deter. Minneapolis, for example, boasted that they had installed the tallest light mast in “the most dangerous portion of the city, and anywhere within a radius of one mile diffuses light enough to enable one to tell the time of night by his watch” (The Electrical World, 1883, p. 214). However, because early electric lights were powered by generators (often fed by coal), they were expensive to run. To save money, many cities shut off the lights at a certain time – usually midnight, when “respectable” citizens were asleep in their beds (Nye, 2019).

In our current era of artificially cheap and seemingly abundant electricity, such restraint has vanished. One of the major problems with anthropogenic outdoor light is that much of it is unnecessary. An insurance sign blazing at three in the morning or floodlights shining straight up the side of a building serve no practical purpose. The electricity they consume has effects on the electrical grid and climate, of course, but also inflates municipal and corporate budgets. Nighttime exposure to such light harms human health as well. Anyone who has tried to sleep in a bedroom invaded by a streetlight knows the negative effect light can have, and several studies bear this out: exposure to untimely light disrupts circadian rhythms, degrades sleep quality, undermines mental health, and may increase the risk of breast and other endocrine-related cancers (e.g. Megdal et al., 2005; Thurairajah et al., 2021).

Light pollution also affects humans in a more diffuse way: it blocks access to a “natural” night sky, a term often used by advocates (for a critique of this term, see Pritchard 2017). Just over one hundred and fifty years ago, most people could walk out of their homes and behold a breathtaking blanket of stars, planets, and galaxies. These celestial objects were deeply meaningful to our ancestors, and found their way into stories, myths, and even the language we use. As Marcelo (Brazil) put it, when looking up at the night sky, “you are seeing the past of the last generations.” If you are sighted and have looked at the night sky, you’ve seen part of the galaxy that English speakers call the “Milky Way.” But have you ever seen the cloudy bands and streaks of stars that led the ancient Greeks to describe our home galaxy as a “milk circle”? The fluid image “milk” evokes is echoed in other names for our galaxy across the globe: in Kauna, the term is *wodliparri* (“House River”), in Chinese, *Yinhé* (“Silver River”). Other names evoke the image of a path: “Straw Way” (Pakistan, Turkey), or the Swedish *Vintergatan*, “Winter Street.” Although the peoples who named this object had different perspectives due to geography and culture, they had similar names for it because they were all looking at the same thing. However, in the twenty-first century, more Americans and Europeans have likely seen a Milky Way candy bar wrapper than have seen the galaxy – *our* galaxy, our place in the cosmos – after which it was named. As Don (US) put it, looking at the Milky Way is “like looking at a city, [and] we belong to that city … Everything up there is part of our home.”

While research on the effects of light pollution on human health, psychology, and culture is still emerging, there is no question that anthropogenic outdoor light harms the biology and ecology of wildlife (e.g. Longcore & Rich, 2004; Höller et al., 2010). For example, the disorienting effects of light on sea turtle reproduction have been well documented (e.g. Salmon, 2003). Other species, like birds and insects, are attracted to – or repelled by – artificial light, which in turn reshapes their migration, foraging, reproduction, and predation behaviors and, through the nightlight niches it creates, creates evolutionary pressures that favor some species and disadvantage others.

Like other forms of pollution, the harms of anthropogenic outdoor light are not distributed equally. Nocturnal creatures suffer more than diurnal ones. And while light pollution also affects diurnal creatures like humans, we do not experience harms in the same way or in the same degree. For many Indigenous peoples, for example, the sun, moon, planets, and stars are sacred beings – the home of ancestors and source of origin stories, regulators of time, and guides for navigation. Reverence for the sky and its inhabitants also extends to discourse about them: some Indigenous stories about the stars, for example, may only be told at certain times of the year (e.g. Lee, 2023; Lee et al., 2015).

Combating light pollution is not difficult, particularly when compared with the remediation of other forms of pollution. For individuals, shielding, redirecting, and reducing levels of outdoor light can make a palpable difference in the light pollution levels in one’s neighborhood. Obtaining certification as a dark sky place with DSI, however, is more involved: it requires public outreach, adjustments to municipal lighting codes, replacing light fixtures, encouraging residents and businesses to adopt best-practice lighting on private property, and monitoring levels of light in the community after dark. But as Fernando (Mexico) put it, the “solution” to light pollution is “not the technical part … it’s the communication part.” As with other environmental issues, the first task for advocates is thus to raise public awareness.

Because the problem of light pollution is not well known, John (US) explained that he first aims to “educate people at a fundamental level.” This educational work provided him with “lots of opportunities in the last decade to learn something about communication … with the goal of making it more effective.” Like John, each advocate I interviewed had a sophisticated understanding of their communication practices, which guided their conversations with neighbors, community members, and businesses, their public presentations, and their appeals to officials and policy makers. For example, many advocates talked explicitly about shaping their messages to fit the audience. As Hamed (Iran) explained, “when speaking with environmentalists and children, I focus on how light affects animals and plants. When speaking with doctors, I discuss the impact of light on human health, and with architects, poets, and writers, I discuss the loss of night.” Kevin (US)

employs what he calls “question enticers … say some incomplete statement. If they nibble, then talk a little more.” Kyra (New Zealand) also approached public engagement in this way, particularly with those resistant to her message: “You cannot argue with those entrenched in dogma. So, I ask questions.”

Some advocates pointed out that even people who are aware that light pollution is a problem may not have a sense of its seriousness. Their approach thus involves creating what rhetoricians would call magnitude; that is, making a “small” problem into a “big” one (Farrell, 2008). Many people in Nancy’s (US) community, she explained, were busy with other things, “and [light pollution] seems stupid. This seems little and stupid, like changing light bulbs. It’s like, *Why could that be important? Here comes another person talking to me about insects. Go away. I’m busy. I’m dealing with things that are important. And this is not important.*” Advocates’ communication strategies therefore go beyond raising awareness; they must also convey both the scale of the problem and its significance, shaping what public-opinion researchers call issue salience.

Personal relevance is a key factor in the salience of environmental issues, which can seem abstract and distant for people who do not see themselves as affected by them (e.g. Bromley-Trujillo & Poe, 2020; Howarth & Anderson, 2019). In other words, while residents of Illinois might empathize with the plight of sea turtle hatchlings across the ocean, they may not recognize (or care about) the connection to the lights on their front porch. As such, John told me, his approach is to situate light pollution “in the tangible day-to-day experience of people.” Uthayan (Canada) described this strategy well: “When I talk to people, I don’t just talk about lighting levels. I connect it to their health, their sleep, their sense of peace. That’s what convinces people.” Personal salience is crucial in motivating both individual action and policy support, since issues people regard as relevant to their own lives are also the most likely to spur political engagement (Boninger et al., 2014). However, when advocates attempt to make light pollution salient for their audiences, they run into what Don (US) called the “boulder” in their communication efforts: safety, which is *already* a highly salient issue for most people.

## Safety, two ways

As Hamed put it, “safety is the most challenging argument to make,” a problem, he added, that worries “both the public and officials.” Adam (US) echoed this sentiment, noting that “the general consensus has been that we’re more safe when we have more light. It’s hard to overcome that.” Marcelo observed, “Everybody is concerned about the safety, they say,” while Don described the “perception” that “more lights is more safety” as “a hard one to beat.” One group in Texas, for example, faced this problem from the outset. When they set up a booth at a local fair and introduced themselves as advocates for dark skies, most visitors quickly dismissed the idea, telling the volunteers: “Oh, I don’t want that. It’s not safe.” Safety can be broken down into two related aspects: visibility and crime, which can themselves be broken down into two aspects. “Visibility” concerns the capacity for objects in the environment to be seen, but it also involves visual acuity, or the capacity to see. “Crime” concerns the actual risk of crime but also the *perception* that one is at risk.

To show how these concerns about safety weave together, consider a small controversy that erupted in Madison, Wisconsin, when city officials proposed lighting a portion of a well-traveled bike path. Proponents of the plan argued that the lights would allow cyclists to see objects on the path and would reduce collisions with pedestrians and other cyclists. However, although their stated concern was to protect nesting owls in the area, opponents to the plan *also* made arguments about visibility, visual acuity in particular. One “devoted biker” complained that “when I walk down a street and someone’s lights go on … it temporarily blinds me” (M.L., Letter to the Common Council, Madison, WI, 2012, November 26). If you are sighted, you’ve likely experienced this phenomenon: once your pupils dilate and the rods in your retinas activate, it’s remarkable how well you can see after just fifteen minutes or so. Once your eyes have adjusted to the dark, however, a sudden bright light immediately reduces your visual acuity, just as the cyclist above describes.

A second safety concern raised in the debate was crime, violent crime in particular. This worry drove the initial lighting plan and quickly became a flashpoint in the controversy that followed. According to the City Engineer, these complaints were specifically gendered: “What we’ve heard from some women is that the Southwest Bike Path, after dark, is intimidating.” The President of the City Council added, “the bottom line for me is that a large segment of the population feels more secure when there are lights” (Ivey, 2012). Like visibility, reducing crime also functioned as a *topos* for both sides of the debate. Opponents argued that the increased polarity of light and shadow, coupled with the reduction in visibility from intermittent bright lights, would create shadowy places where people who wish to do harm might hide. In the next two sections, I examine these concerns in more detail, focusing on how light pollution advocates negotiate them in their work.

### **Visibility**

Although some aspects of light pollution are difficult to make salient, glare tends to be an easy problem for most people to grasp. Adam heightens his audience’s awareness of glare by reminding them that they’ve likely experienced it: “Whenever I tell [people] about glare, I tell them about the headlamps [of cars]. They all acknowledge that as an issue because of course that light is constricting your pupils.” Glare’s impact on visual acuity is especially persuasive for older people, John pointed out, and it often is the thing that encourages them to take action: “For them, it is about their continued independence and their ability to get around at night.”

Don, who leads monthly stargazing events as a form of public outreach for his group, addresses glare in a different way. The events are held monthly and coincide with the new moon for optimal viewing. However, sometimes when the moon is bright, Don leads “full moon walks” instead, which offer an embodied demonstration of visibility:

I’ve awakened a number of people to the surprising realization that they can see really well just in the moonlight, even better than if they use their flashlight. *Here, turn on your flashlight and walk down this path. You’ll notice how because your pupils are closed, now you don’t have any peripheral vision of the woods on the side. Now, turn off your light and walk down this path. Notice how suddenly you can see every tree in the woods here.*

While this portion of the event does not address safety *per se*, Don’s demonstration seeks to “awaken” his participants to the relationship between darkness, glare, and visibility.

Other advocates take a different approach. Several reported that images were a helpful tool to communicate how glare, not darkness, reduces visibility. DSI provides several materials for public outreach that advocates can use to raise awareness, shift attitudes, and counter objections. One fact sheet, which aims to “bust the myth” of the connection between bright lights and safety, focuses on three scenarios: “at home,” “in town,” and “on the road.” In line with John’s point above, the sheet explains that glare on roadways can cause accidents, a situation that “especially affects older individuals” (DSI, n.d.).

However, the handout’s focus is less about navigating objects in the environment, and more about the potential danger that some of those unseen objects – specifically, people – pose. In town, it notes, “poorly aimed and inadequate lighting can attract criminals.” And at home, “poorly designed outdoor lighting can backfire on safety. Bright and misdirected lights create shadows for criminals to hide, and some crimes, like vandalism, thrive in well-lit areas. Floodlights, for example, may highlight potential targets.” To illustrate this scenario, the handout provides a before-and-after visual demonstration of the effect of glare in which a shadowy figure becomes visible only after the floodlight is shielded by a person’s hand.

Other images used by dark sky advocates follow a similar strategy, featuring images of bright lights in front of garages and alleyways. These images have an unsettling air of menace, particularly when the audience has been primed to view them through the lens of safety. For example, one photograph of a parking garage on the “Light Pollution, Safety, and Security” portion of Big Bend Dark Sky Reserve’s website is uncaptioned, which invites viewers to imagine any number of unseen dangers hiding in the shadows. “While light may make you feel safer,” the main text

explains, “the reality is that criminals can often benefit more from bright lighting than you do.” These statements highlight the most common *topos* in dark sky advocacy where personal and public safety is concerned: the contrast between *feeling* safe and *being* safe, and it is an issue that my participants spoke to directly, often at length.

### Crime

Let’s return to the controversy about the bike path. Remember that the impetus for the proposal was not that people had *experienced* crime; instead, “some women” found the path “intimidating.” Lights would not make people safer; rather, “a large segment of the population *feels* more secure when there are lights.” This language was not lost on opponents. Wrote one incensed resident:

[A] goal of increasing the “perception” of safety without actually demonstrating a need for, or the actual ability to increase safety is frankly pathetic. Given the only impetus appears to be some people think they would feel safer on the path with lighting there is no need to rush through this proposal prior to the end of the year. (M.L., Letter to the Common Council, Madison, WI, 2012, November 26)

These remarks highlight a key aspect of public lighting’s role in safety: the gap between a person’s *actual* risk of crime and their *perceived* risk, characterized by feelings of vulnerability and a sense of danger. This gap aligns with a large body of research on the powerful role that feelings play in decision making and risk communication under conditions of uncertainty (e.g. Peterson & Thompson, 2010; Slovic et al., 2007). As the bike path example illustrates, fear is not simply a personal issue. Feelings of fear, insecurity, and vulnerability long have shaped public policy, and they are often mobilized by politicians who push for “law and order” platforms during election season (Warr, 1985). Sociologist Kenneth Ferraro (1995) defines the fear of crime as “an emotional response of dread or anxiety to crime or *symbols that a person associates with crime*” (p. xiii, my emphasis). As such, many public safety efforts do not just aim to reduce crime in practice. They also serve to shift public beliefs about safety and danger through acts of “symbolic reassurance,” which includes brightly lighting public spaces (e.g. Henig & Maxfield, 1978).

Research on the empirical connection between lighting and public safety, however, yields conflicting results. Two meta-analyses (Welsh & Farrington, 2002; Welsh & Farrington, 2008) in the United Kingdom, for example, found a correlation between increased lighting and decreased crime, one of which (2008) calculated the decrease at twenty percent. However, studies frequently cited by dark sky advocates have found no strong evidence that light acts as a criminal deterrent (Marchant, 2004; Steinbach et al., 2015). Several advocates spoke to this point in our conversations, explaining that they tell audiences that bright outdoor lighting not only does not reduce crime, but may provide them with a false sense of security. Hamed, for instance, tells his audiences that “feeling secure in a well-lit street might make you let your guard down, with danger lurking nearby.”

While most advocates’ approach to safety aligned with the studies that suggested that the connection between bright light and safety was simply a matter of perception, Fernando offered a more nuanced perspective:

For a lot of people in Europe [and] in the US … people with money have the luxury to have darker places. And that luxury comes from being in safer areas. You [speaking to me] can do without much lighting, because your perception is different. But over here, when we are dealing with so many issues, people really crave for even a small light on the street to feel safe. So, in that sense for us, here in the underdeveloped countries, we have it more difficult. … That’s the tricky thing: people have the luxury to stay dark because they don’t have problems.

However, it’s “not the lack of light” that leads to crime, he added, “it’s the general lack of city services” such as garbage collection, drinking water, sewage, and “most importantly, efficient and trusted police coverage, which has a stronger impact on safety perception.” Like other advocates, Fernando noted that crime rates did not rise when light levels were reduced; however, his comment underscores that feelings of safety and fears of crime must be understood in a broader socioeconomic and cultural context.

For example, one study has found that Black drivers experienced more racial profiling in brighter conditions than dark ones (Horrace & Rohlin, 2016). Visibility, in other words, does not simply refer to the environmental conditions that allow objects and people to be seen. The symbols and practices associated with light and darkness, crime and safety – and practices of symbolic reassurance, such as increasing police patrols – also have a violent history intertwined with racism and colonialism (e.g. Pritchard, 2017). And fear, which sticks to some bodies and objects more than others, has a history, too (Ahmed, 2013). For some, light represents and enables safety; for others, it represents and enables surveillance and control (Bell, 2017; Hall et al., 1978; Browne, 2015). And for those living in neighborhoods designated as areas of higher crime, “preemptive” deterrence through increased lighting (e.g. Chalfin et al., 2022) exposes residents to more light pollution and its harmful effects than those living in the suburbs. Lighting may or may not decrease crime rates. However, one thing is clear: for many people, lighting creates a *feeling* of safety and a *sense* of security, which even if “false,” is nonetheless a powerful motivator of public opinion about outdoor lighting.

## Working with feeling

When our conversations turned to safety, many participants described fear as the central emotion with which they had to contend. “Quite a few people in the world are just fundamentally afraid of the dark,” John emphasized. “They don’t like the nighttime … They have a fear at a visceral level.” Don echoed this idea:

We’ve had a fear of the dark for I don’t know how long, ever since we were able to push it back to the edges … I can’t account for that [feeling], but I know it’s in there and I know it’s pretty deeply entrenched, that notion that suddenly everything’s going to be unsafe.

Armed with the data I described above, it might seem tempting for advocates to simply counter their audience’s fear with data. However, many advocates argued that this was precisely the wrong approach. As John put it:

One thing that I have learned in talking about communication is to never, ever downplay their fear or tell them that they’re wrong. … As one of my friends who works elsewhere in nonprofits told me once, *John, this is all great. But data don’t vote. People vote.* What motivates them is a lot of things, and data may be one of them, but it’s usually not the deciding factor.

Fernando explained the matter simply: when confronted with his audience’s concerns about safety, “you don’t invalidate their feelings.” Instead, many advocates described nuanced approaches that acknowledged, rather than challenged, people’s feelings, and working with, rather than against, them.

Kevin operates an astro-tourism business near Bryce Canyon in Utah, a certified Dark Sky Park. During the tours, audiences are treated to presentations about scientific and cultural astronomy and given the chance to observe celestial bodies using half a dozen powerful telescopes. One reason Kevin started the business, he recounted, was to “finance my light pollution advocacy,” which began three decades earlier during his work as a ranger with the National Parks Service. This commitment is obvious in his presentations. Even though visitors come for the telescopes, the conclusion of each tour also offers facts about light pollution, why it matters, and encouragement for audience members to get involved. In these presentations, Kevin does not use data to correct his audience’s “mistaken” feelings, but to offer a moment of critical reflection in which “the feeling of fear versus the knowledge of fear can shift.” “We always,” he added, “try to have an intellectual and an emotional opportunity for connecting to a certain subject matter.”

Abhishek (India) relies on a different approach when it comes to data. At twenty-two, Abhishek was the youngest advocate I interviewed and one of the most passionate. He first became interested in the issue at the age of sixteen after his father bought him his first camera. Fascinated by astronomy and inspired by images from the Hubble Telescope, Abhishek was keen to take some pictures himself. However, his initial attempts at astrophotography in the city were disappointing. All the

images were “pretty washed out” by light pollution in his home city of Nagpur, which has a population of over two million people. Abhishek asked his father to take him to the Pench Tiger Reserve, a park about two hours away. It was a powerful experience:

It was the first time when I actually saw a whole star-filled sky [which] I had just seen in the images. And I was, like, awestruck, you know? ... I actually cried looking at how beautiful the night sky is.

After his visit to Pench, Abhishek recounted, “the fire ignited in me.” After doing some research, he found DSI and he became India’s first dark sky advocate. In 2019, he became the driving force behind the effort to certify the Pench Tiger Reserve as India’s first Dark Sky Park, where he now manages the observatory, teaches astronomy to visitors, and raises awareness about wildlife and dark sky preservation.

In addition to his work at Pench, Abhishek also has worked to decrease light pollution in villages that border the park, as well as in Nagpur, whose skyglow had frustrated his initial attempts at astrophotography. The public officials and security officers he worked with in Nagpur spoke of their worries about reducing light in areas with high rates of crime. Like Kevin, Abishek’s approach was not to correct their feelings; rather he recommended adjusting the remediation strategy in response to them. “I said, *that’s okay, I understand that concern. Let’s start with an area which already has a very low crime rate.*” Not only was there no increase in crime, Abishek explained, but the officers told him that “dimming the lights is actually helping us because we are able to see things clearly now.” For Abhishek, addressing safety was less about persuading officers with generalized, abstract data and statistics from elsewhere and more about taking a gradual approach that began with their feelings and allowed them to make new connections between light, visibility, and safety for themselves.

Although advocates spoke of not wishing to “correct” their audience’s feelings, many described efforts to clear up one misperception: the assumption that reducing light pollution or becoming a Dark Sky Community requires removing or shutting off all outdoor lights. This misunderstanding of dark sky advocacy is so persistent, John told me, that DSI even briefly considered replacing the words “dark” and “sky” in its mission with “artificial lighting at night.” Marcelo emphasized that he tells audiences that “we are not asking to turn off the lights ... but to use [them in] the right way.” As they encourage their audiences to shield or dim light fixtures or use bulbs lower on the Kelvin scale, many advocates explained that they emphasize terms like “informed,” “responsible,” or “efficient” to describe best lighting practices.

John explained how feeling is also central to this framing:

You don’t have to go overboard to give people a feeling of reassurance. I think it is a paradigm shift compared to the perspective of the past, where it was more on the side of *let’s make these outdoor spaces at night more like the daytime.*

To support this point, he cited a recent study that measured the relationship between lighting levels and feelings of reassurance, which might be seen in a pedestrian’s confidence to walk alone after dark (Portnov et al., 2024, p. 260). Studies like this suggest that there is a point at which reassurance plateaus, a point lighting researchers describe as “optimal illumination.” If we “apply only the minimum light needed,” Uthayan explained, “we can preserve the night and still protect people.” Lighting for reassurance is one way advocates work with their audience’s emotions. But, as Fernando suggested, it also might be possible to *transform* one feeling into another: “you have to shift this perception from something that scares them to something that ... triggers a different kind of feeling.” But what might replace a visceral feeling like fear?

## Inverting feeling

I ended each interview by inviting participants to tell me about a time when they had experienced a truly dark sky. Their responses were moving. Hamed told me that “whenever I looked up at the sky, something strange would happen within me. It’s as if my soul wanted to leave my body and ascend

toward the stars." Kyra (New Zealand) echoed this idea, describing the feeling as "just being connected with the expanse." Marcelo reported a strong sense that "everything is associated ... astronomy, animals, the flora – it's all connected." Peggy (US) said that her experience under dark skies made her feel "a relationship to the universe, to eternity. You sit in awe." "You experience the infinite universe around yourself," Rayan (Pakistan) recounted with a smile. "You're able to hear yourself, your breath, your thoughts ... and feel it – how big this universe is, and how small you are." The experience "makes us humble," Uthayan explained, and makes one consider that "every moment of this life on Earth is an unbelievable experience."

These transcendent, almost overwhelming, feelings of connection evoke what historian Frank White (1998) has called the "Overview Effect": a profound sense of connection, responsibility, and care for the Earth after seeing it from space. Yaden et al. (2016) describe these powerful feelings as "among the deepest and most powerful aspects of the human experience" (p. 8). It's not surprising, then, that dark sky advocates seek to evoke such feelings in their audiences, but from the ground up. Following White, we might call this feeling the *Underview Effect*, a sublime embodied experience of space from Earth which, of course, is only possible under a dark sky. While the notion of a sublime nature has been the subject of considerable critique by environmental scholars (e.g. Cronon, 1996), an experience of the sublime, even a mediated one, can play a powerful role in environmental advocacy, as Christine Oravec (1981) illustrates in her study of John Muir. In many of his arguments to preserve the Yosemite region, Muir sought to elicit a sublime response in his readers through ekphrastic descriptions of valleys, forests, and glaciers. However, he did not stop there: "by the conclusion of his description, Muir had *converted* his reader's apprehension of the sublime into a feeling of impending deprivation and loss" that also may have fueled a sense of responsibility (pp. 254–256, my emphasis). In this case, the felt certainty of visceral feelings was not an obstacle, something to work against, but a power to work with: as Oravec argues, Muir's essays "appeared to circumvent the rational processes and institute a knowledge more fundamental than rationality could supply" (p. 249).

Advocates attempt to stimulate the Underview Effect in a variety of ways: illustrating their presentations with Van Gogh's Starry Night, asking audiences to contemplate the mind-boggling age or size of the universe, inviting them to connect with their own ancient ancestors or the whole of human history, or letting them view the moon or Saturn through a telescope – an experience many people find profoundly moving. Abhishek, if you recall, wept during his first experience of Pench's dark sky. Marcelo reported that many people in his audiences are brought to tears when viewing Saturn for the first time. I witnessed several such reactions during one of Kevin's telescope tours. "Oh, wow," one woman exclaimed, tears streaming down her face. "Oh my god. It's really Saturn. It's the real thing." While these powerful feelings are not *about* safety per se, they imbue dark sky advocates' efforts with a kind of cosmic significance. But this is not a distant cosmos, nor the idea of stars or planets in the abstract. It is a cosmos that we can touch – that literally touches us, as ancient photons emitted or reflected by celestial bodies travel through space to hit our retinas.<sup>3</sup>

As I walked around Kevin's telescopes on a chilly Utah October night, talking with people and taking notes, I frequently stopped to marvel at the bright smear of the Milky Way overhead. I still find it difficult to put the experience into words. What I felt in the darkness was not fear, but an emotion for which I still have no name. I cried when I saw Saturn for the first time, too. As I drove back to my hotel that night, I found myself glaring at the illuminated slice its floodlights carved into the night sky. I never thought a parking lot could make me so angry. Perhaps powerful feelings act as a kind of rhetorical catalyst. As Kevin put it: "these emotions make the experience stick. That's the goal."

Perhaps the most poetic illustration of this idea came from Nancy, an artist who paints large, detailed portraits of the ocean near her home on the coast of California. When we first exchanged emails, Nancy was unsure whether she fit the study criteria because she hadn't been involved in dark sky advocacy for long. Yet in many ways, her experience is an ideal example of what the dark sky advocates hope to accomplish with their work. Nancy had no prior experience with astronomy and

little knowledge of light pollution until she began attending Don's stargazing events regularly. As a speaker and storyteller, she told me, Don was "astonishing," and stargazing with others in her community "literally changed my life."

After getting involved with Don's group, Nancy took action to reduce the light pollution from her home, shielding her lights and often leaving them off to assist the migrating birds in the area. She began encouraging her county officials to work toward dark sky community certification. But for me, the most striking thing in Nancy's account of her transformation was how her feelings about safety had shifted. When she first started attending the stargazing events, she remembered, it was a little strange:

Essentially, you're sitting in the dark with people you don't know, which is kind of scary. So, an hour later, you feel like you're in this ancient memory where you've sat down with these people you don't know for an hour, and you've heard the stories going back 3,000 years ... And there's something ... empowering about that, that it makes you feel strong, makes you feel like, *I'm okay here. I'm safe.*

"What do you mean by 'here'?" I asked her. "In that particular experience?" "No," she responded, thinking for a bit.

In the world. It's something you take away from the experience: feeling safe. Because connection to other forms of life does make you feel safe ... I think there's something to be said for a general sense of safety in the world that you carry with you that that is more important than a municipality providing you with a sense of safety.

Nancy's stargazing experiences did more than simply instill an appreciation for a dark sky, in other words: they also fundamentally shifted her feelings about darkness. Now, if she awakes in the middle of the night, she told me, instead of reaching for a book or her phone, "it's very likely that I might just go outside and just look at the night sky and not do anything ... And the beauty is amazing. It connects you more to the night – that there's life out there, animals and owls." Fear closes us up and shuts us off. As Sara Ahmed (2013) writes, in fear "openness itself is read as a site of potential danger ... in fear, the world presses against the body; the body shrinks back from the world in the desire to avoid the object of fear" (p. 69). It's not that Nancy's fear simply disappeared. Rather, through her experiences with stargazing and dark sky advocacy, the object of safe feeling shifted from light to darkness, where Nancy found community with the other creatures of the night.

## Conclusion

Michael Osborn (2018) uses light and darkness to illustrate his concept of "archetypal" metaphors, or metaphors with an especially suasive force. However, as I suggested earlier, the links between light and safety, darkness and danger, are so deep that metaphors of light and darkness seem to have lost their quality as figurative language and have settled into "dead" metaphors (e.g. Black, 1993). And yet, as Cornelia Müller (2017) argues, if we locate the "vitality" of metaphors not within the terms themselves, but within language in use, we may see metaphors not as dead or alive but "asleep" and "awake." In other words, with engagement and curiosity, even the deadliest metaphor can be aroused. In so doing, we may come to see the meaning of archetypal metaphors like light and darkness not as singular and static but multiple and dynamic: that is, as "lights" and "darknesses" (Le Gallic & Pritchard, 2019). Changing public attitudes about light and darkness requires more than just presenting scientific facts or policy proposals. It also means waking up two of the oldest metaphors in human language and inverting the feelings associated with them. This process is a challenge, to be sure, but also a source of considerable rhetorical power.

In making the case for changing policy, advocates also have the complex task of inverting attitudes about outdoor lighting from a public good to a public harm. Indeed, streetlights are *literally* the textbook example of a public good (e.g. Ihori, 2017, p. 295). But like light and darkness, the public good is neither singular nor static. As Robert Asen (2017) argues, public goods are "dynamic and mobile, operating at different levels of society, and open to contestation and reformulation" (p. 332). The

idea that different notions of the public good might be in competition comes as no surprise to environmental advocates: the economy against the environment, jobs against spotted owls, a livable climate against the standards of living of the Global North. Instead of treating these issues, and the feelings associated with them, as mutually exclusive, environmental advocates might consider leaning even harder on rhetorical inversion and its doubled affective power: identifying deserts as sources of life and abundance rather than death and scarcity; reframing “weeds” from ugly and unwanted to things of beauty and utility; presenting powerful LED streetlights as relics of a bygone era rather than markers of progress – a god term par excellence (Weaver, 1995, p. 214).

While their communication task may be difficult, the solution that dark sky advocates offer is not. It is common to say that we now live in a “dark” time. But it’s not a *dark* time, at least not yet. Perhaps darkness, then, might serve not as a source or symbol of fear, but hope. On this point, I give the final word to John:

The world needs a win. If we could show that in the span of a decade we could significantly reverse this environmental problem ... When you've got that win, what that might do to encourage people to take on the next toughest problem, and say *hey, if we can keep lining these dominoes up, eventually they're all going to fall*. We started off toward the beginning of this conversation talking about what really motivates people to get involved and demand change from their elected officials. Let's tackle the easy stuff first. I don't know if it gets easier than tackling light pollution.

## Notes

1. The exclusion of non-English speakers reflects the author’s own linguistic limits as well as a limitation of this study. Further research might profitably extend the findings of this essay, particularly regarding the cultural assumptions about light and darkness that may be found in languages other than English.
2. I use the terms “feeling” and “emotion” rather than “affect” in this essay for two reasons. First, “feeling” was the term most frequently used by my participants. Second, unlike “affect,” which is usually theorized as a bodily intensity (Massumi, 1995), emotions are especially amenable to the study and practice of communication (Hawhee, 2015; Johnson, 2016).
3. This is a point that Kevin offers about the value of his tours. Unlike a book or screen, telescopes and naked-eye stargazing allow one to physically interact with the universe.

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