

## An Element-ary Education

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In the introduction to an obscure text from 1856, *The Philosophy of the Weather*, Thomas Beldon Butler wrote, “The atmospheric conditions and phenomena which constitute ‘The Weather’ are of surpassing interest. . . . Normal conditions, and varied changes, and violent extremes, potent for good or evil, are continually alternating above and around us. . . . None can prudently disregard them; few can withhold from them a constant attention.”<sup>1</sup> While Butler’s philosophic work went largely unrecognized,<sup>2</sup> his message of the unceasing presence and impact of the weather on fundamental human existence is a familiar thought. There are many names for the things outside our windows: environment, climate, ecology, atmosphere, bios, or nature (a concept rife with philosophical controversy<sup>3</sup>). But *weather* — the day-to-day movements like rain, sun, humidity, or sleet — is a boldly apparent elemental force. Even in a complicated “natural environment” like the modern metropolis, weather is with us. More than plants, animals, or even other humans, we can rely on its changeable yet constant presence.

Despite its importance, the current American educational norm resists exposure to weather, limiting the extent to which we can call our lessons *experiential*. Children recite weather words in kindergarten, but mostly from their seats indoors. Except for a few consistently sunny and slightly breezy locales like California, where a handful of school buildings might be “open-air,”<sup>4</sup> American students are sealed off from weather in “air-controlled,” four-walled classrooms. The science of weather becomes a field trip or project day only, sending the message to students that weather, while important content, is only to be “visited” on sunny days. Moreover, the resistance to weather exposure has a second profound consequence. I argue that contact with pervasive elements like the weather, more so even than experiential learning in human contexts, has the power to provoke transformational learning. But without experience *in* these elements, without *exposure*, students lack the necessary conditions for such moments.

Philosophers of education have been quite keen on environmental education. They have initiated immensely valuable conversations about outdoor places and the classroom environment; for example, Ruyu Hung elucidates the concept of “placefulness,” reinvigorating a language of nature as a unique learning environment.<sup>5</sup> Chris Moffett addresses how urban areas fit into a body of literature that predominantly highlights “wild” places.<sup>6</sup> Another chief issue in environmental education today is the preservation or deconstruction of the human/nature divide. Michael Bonnett has summoned Maurice Merleau-Ponty to challenge what he calls the “corrosive separation of humankind and nature” in order to make way for more holistic life-world views.<sup>7</sup> Other Merleau-Pontian responses to this particular dichotomy have appeared by Hung and Robbie Nicol, endeavoring to bridge the issues of place and human/nature dualism.<sup>8</sup>

Important as the issues of physical environment composition and human/nature dualism are to the project of environmental education and ethics on the whole, this essay will draw from the spirit of these conversations but not address them directly. Instead, I highlight a single, elementary educational choice. I show in this essay that learning spaces that separate humans from *weather* in particular are educationally misguided. I organize what follows into three key sections. The first section discusses how educational norms take fear and safety to the extreme, openly avoiding the distraction and discomfort of weather by sequestering students indoors. This practice signals to students of all ages that it is acceptable to avoid physical discomfort in education. By revisiting Plato's *Phaedrus* in the second section, I reveal an effect of experiencing and embracing discomfort in a weather-rich learning space, while in the third section I explain that this transformational moment cannot occur unless students are primed for it. Thus, a modern educator's choice of physical learning space(s) is pivotal. Ultimately, this essay aspires to paint a picture of a new direction we might take to resituate human bodies and minds *in* the natural environment, starting with an element-ary education.

#### FEAR AND SAFETY, TO THE EXTREME

As an outdoor educator<sup>9</sup> and distance hiker who has lived many months outdoors, I am no stranger to the strongest argument against student contact with natural elements: safety concerns. Weather is one of the greatest uncontrollable forces affecting our bodies. Dehydration takes lives on sunny days, and snowstorms kill even the most well equipped adventurers. The threat of weather assaulting and overtaking us is very real, and, even when indoors, we do not forget it. There is the fear that if we bring ourselves to commune more closely with natural elements, we will lower our guard and be consumed by the next violent weather spell. Still, we can recognize that there is a range of conditions that make weather safe or unsafe. A rainy day in the woods alone without proper clothing could make for a miserable hike but still be safe if dry socks waited at the end, while three weeks in those conditions without shelter could be catastrophic. A clear morning in the park with forty-mile-per-hour gusts is quite unwieldy for any sort of lesson, especially one involving sheets of paper. We must admit, however, that there are many more perfect or even sufficiently fine weather days to conduct lessons outside, or to learn *while* outdoors, than the majority of Americans take advantage of.

Why not take advantage of the "sufficiently fine" days to take our lessons outdoors? First, established American educational norms often prohibit the teacher from seeing a weather-rich space as accessible for learning. For example, when teachers must obtain permission from principals to take students outside for a project day, when blinds are added to classroom windows to help ward off excessive daydreaming, or when windows are bolted shut to monitor building temperature. Weather, instead, is a *subject* to be taught and a subject relegated to the science curriculum, if that. However, we know, as Butler did, that the elements are much more than a single object of study. Weather affects or relates to religion (for example, Native American Sun Dances), psychology (for example, moodiness when it rains), math (for example, calculating the seconds after lightning bolts), geology (for example, erosion), and pedagogy and philosophy, as evinced by this very discussion.

Second, there are practical matters of concern: no bathrooms or running water, difficult acoustics, no storage for materials, no chairs, limited technology, and so on, issues to which there are several possible responses: (1) These are the same difficulties that educators might encounter in classroom buildings with limited resources, as many of our schools suffer today.<sup>10</sup> However, not all schools lack resources, so it is not informative in a normative sense. (2) Although teachers face challenges attempting to artificially teach weather indoors, we prefer to accept the challenge of reconstructing our curriculum and subject matter to the logistical challenge of facing the elements. But this assumes that the issues are entirely teacher-related rather than an overall educational norm that dictates classroom choice and accessibility more broadly. Moreover, the act of teaching outdoors requires pedagogical thought, just as indoor teaching requires logistical maneuvers. (3) Teachers simply wish to avoid distraction. In the elements, there is motion, sound, color, stimulation of all shapes and kinds. Teachers must already fight technological distractions like iPods and cell phones, but imagine being outdoors in the cold or sunshine, *in weather*, and a vision of total chaos appears. The default assumption seems to be that outside stimulation, the kind that comes from weather, negatively affects learning. But where is the evidence for this assumption? On the whole, American classes are not held in weather with enough fidelity to either prove or disprove this assumption.

There is an even stronger underlying message in our complaints about distraction outdoors. By avoiding the elements, we are conveying to students that it is acceptable to migrate away from physical *discomfort* in education. Biologically speaking, some desire for comfort is instinctual to want to be more comfortable (even orangutans cover their faces with leaves during a heavy rain), but we should not send the message that all bodily discomfort, especially the generally healthy exposure to fresh air, detracts from mental improvement. Teaching weather in a weather-less classroom makes the assumption that *aporia* — being uncomfortable, at a loss, or perplexed, a blank realization that resists but is usually accompanied by discovery<sup>11</sup> — can only be initiated in the mind, not the body.

It is impossible to separate discomfort in the mind from discomfort in the body. When we are nervous about a presentation, beads of sweat will form or our heart rate will rise. Mental discomfort is inextricably linked to physical discomfort, and the same is true in reverse. Physical discomfort begins by clouding our mind and frustrating our mental capacities as we struggle to maintain clarity and keep hold of our concentration. Then the discomfort, at times, overwhelms our thoughts and leads us to a breaking point — a bodily-induced *aporia*. We are forced to the realization that, although uncomfortable, we are in a new mental state. Disclosing the educative potential of uncertainty is valuable, particularly when the goal of educational reform today seems to be a quest for certainty. Avi Mintz points out that inadequate research attention is given to the “pains of learning,” not as obstacles, but wholly necessary aspects of learning.<sup>12</sup> Mark Jonas adds that educators must reflect on whether helping students avoid discomfort is truly a compassionate goal.<sup>13</sup> It is worth considering the power of an experience of *aporia*. In an “aporetic” article in its own right, Nicholas Burbules demonstrates the dancing, web-like, circular, or directional passages that a learner can take from *aporia*.<sup>14</sup> Using the example of

the World Wide Web, he explains how, from being lost, we recognize “the feeling of rightness”<sup>15</sup> about a new direction. He poses a critical challenge for educational philosophy: From what standpoint is getting lost (*aporia*) a problem? When can it be seen instead as a journey of serendipity?

The surprising displacement of *aporia* is what makes way for something new — perhaps *better* — to emerge. But even if improvement does not come from the experience of *aporia*, it is the “ongoing engagement with difficulty”<sup>16</sup> that keeps the destination fresh and educational. Overcoming the discomfort of the natural elements, a constituent aim of an element-ary education, we rediscover our rational faculty and proceed renewed by our strength and the power of the surroundings that led us to that blank slate of possibilities.

#### SOCRATES’ MIND AND BODY ENCOUNTER THE ELEMENTS

Socrates, the prototypical Athenian city-dweller,<sup>17</sup> is an example of this “turning of the soul”<sup>18</sup> that the elements can induce. In the dialogue the *Phaedrus*, we see the familiar face of Socrates in an utterly unfamiliar place. His friend and interlocutor Phaedrus lures Socrates away from the city streets to the “more refreshing” countryside by a glistening body of water, the folkloric river Ilisus (227a–b). On this hot morning, Socrates collapses under a plane tree. Interestingly, Socrates takes special care to note this new setting, especially the weather, and how it positively affects him, calling Phaedrus a “most marvelous guide” for leading him there (230b–c). His senses are awakened by the bucolic surroundings: the sights and smells and feel of the water. The morning air is fresh, and the cicadas are singing. Even a grassy bed awaits the weight of their speech-filled heads. G.R. Carone argues that this ornamental description is, at the very least, evidence for Plato appreciating the natural environment.<sup>19</sup> I think, however, that there is an even deeper transformation that Plato draws our attention to in this text.

Although the weather is pleasant and he sings the praises of the delightful location, Socrates remains convinced that the space he is in means very little. He declares that “landscapes and trees have nothing to teach. . . . only the people in the city can do that” (230d). Like most modern city-dwellers, Socrates appreciates sunny skies and pretty places but finds no epistemic value in them. He prefers his small gatherings of friends (usually in lavish households), insisting that only they have anything to teach him. Yet, the weather is not done working its “charm” on Socrates. Amidst the telling of speeches, he goes on to say:

SOCRATES: There, Phaedrus my friend, don’t you think, as I do, that I’m in the grip of something divine?

PHAEDRUS: This is certainly an unusual flow of words for you, Socrates.

SOCRATES: Then be quiet and listen. There’s something really divine about this place, so don’t be surprised if I’m quite taken by the Nymphs’ madness as I go on with the speech. I’m on the edge of speaking in dithyrambs as it is. (238c–d)

Socrates has identified the place as “divine,” inspirational to his speaking and madness-instilling. He is quite swept up by the sounds of the cicadas, telling Phaedrus to “be quiet and listen.” Listen to what: the speech, or the inspiration of the noises

around them? The “Nymphs” of the place, the outside spirits of the water, he postulates, must be taking hold of him (241e). It is as if Socrates himself does not understand what is happening to him in this environment, so in need of a guide as he is in this rural locale.

As their speeches extend into the afternoon, the overhead sun beats down (242a2–4), and the once comfortable, barefooted Socrates with a covering over his face (237a3), really starts to sweat. What Socrates does not recognize in a literal way is that it is not the surrounding spirits, but, rather, the *weather* that is driving his “divine madness.” At one point, looking out over the water, Socrates realizes how dishonorable the speech he has just offered is to the gods, and from his state of *aporia*, he comes to a new conclusion: “I will try to offer my Palinode to Love before I am punished for speaking ill of him — with my head bare, no longer covered in shame” (243b3–5). And with that declaration we can imagine Socrates peeling back the cloth or his hands from his face, exposing his skin to the hot air, the light flooding into his eyes. Socrates’s discomfort induces a feverish speech, and when the fever breaks into *aporia*, his sight is regained and he welcomes the discomfort of the environment (now transformed to an unexpected euphoria) to compose something yet more beautiful and good than he has already uttered. Safety and comfort are admirable goals for humans, but Socrates’ encounter with the midday heat reminds us that there is indeed value in physical exposure to the elements. Socrates *does* learn something from the landscape and the trees, but most especially he learns from the invisible powers at play when the afternoon sun rises. He gains tolerance for discomfort and the creative reawakening that extends from embracing the mental distraction or the divine madness of the elements.

Instead of dwelling in stubbornness and dismissing experience of the unknown, the discomfort compels Socrates to reject the assumption that something different is incapable of teaching us. In fact, learning, as Socrates knows, is quite the opposite. Learning comes from confronting that which makes us uncomfortable, welcoming inspirational distraction, and setting our minds on something new and different from our prior experiences, as Socrates did when he ventured outside Athens with Phaedrus. And, for the full effect, a learning experience must activate both the mind *and the body* (403d) Educators practice the craft of appropriately redirecting the eye of the scholar (518d) so that it can see that humans are in, of, and by nature.<sup>20</sup> Could this lesson be possible indoors? Of course, *aporia* is possible without weather (many of Plato’s dialogues occurred indoors), but a complete mind/body experience is not. The reason is that, as Immanuel Kant discovered with the “sublime,”<sup>21</sup> there is something clearly unique about an experience in the elements. Weather is uncluttered by manmade purposes; it is pure and independent of us. The fact that humans can deeply connect with something so manifestly out of human control like weather in sublime experience is a testament to its important relationship to us. Moreover, the *Phaedrus* marks a unique deviation from the traditional Platonic dialogue. We can see in Socrates’s fiery musings in the *Phaedrus* a reflection of the different weather that he has encountered. The ideas are themselves sweltering and impassioned — the creation of Socrates, yet mysteriously new matter. Whether a bodily-induced

*aporia* leads to positive or negative transformation perhaps cannot be calculated in advance, but, at the least, a bodily experience in the elements is an opportunity for fresh thought.

#### LEARNING IN VERSUS LEARNING ABOUT

If we believe in the remarkable learning power of an experience like Socrates, then frequent and varied exposure to weather is essential for providing the conditions with which it can be undergone. Let us consider here how this might inform current educational norms.

It is usually a mark of a good classroom today to be a safe space: quiet, nurturing, free from distractions, and comfortable. Yet, with the popularity of David Kolb's experiential learning stages in psychology and the Progressivists' influential quip "learning by doing," ask a teacher, and most would vehemently argue for first-hand learning experiences *when possible* over second-hand retellings or lectures. Although not truly dichotomous, this presents a contradiction in many classrooms between the ideal of safety, control, and comfort, and the ideal of experiential learning. Educational norms dictate to today's teachers that this contradiction can be resolved with creative lesson planning, and the pressure is enormous to make experiential learning an indoor event. Experiential learning is infinitely more accessible if teachers are similarly, if not more encouraged, to take their class outdoors.

In *Emile*, Rousseau writes at length about the need for childhood exposure to weather in a natural context.<sup>22</sup> He takes his young protégé for walks to witness the sunset and sunrise, noting how, in the process of seeing the "fiery arrows" spreading across the sky, "man recognizes his habitat and finds it embellished."<sup>23</sup> He romantically describes with beautiful language the dew and the birds singing in unison, the bewitching effect. Although Rousseau knows this space well, can anticipate its risks for his student, and can move to recognize its beauty and interconnectivity, aesthetic appreciation and lessons about the environment itself are not necessarily taught directly; they arise from *Emile's* repeated encounters. The daily walks come to inculcate matured awareness of *Emile's* natural environment.

Rousseau talks in the muddy terms of "environment" and "nature" but goes on to explain the value of time outdoors in many different settings and weather conditions. Although he makes some audacious and scientifically incorrect claims elsewhere about climate,<sup>24</sup> here Rousseau is on target:

Full of the enthusiasm he feels, the master wants to communicate it to the child. He believes he moves the child by making him attentive to the sensations by which he, the master, is himself moved. Pure stupidity! It is in man's heart that the life of nature's spectacle exists. To see it, one must feel it. The child perceives the objects, but he cannot perceive the relations linking them; he cannot hear the sweet harmony of their concord. For that is needed experience he has not acquired; in order to sense the complex impression that results all at once from all these sensations, he needs sentiments he has not had. If he has not long roamed arid plains, if burning sands have not scorched his feet, if the suffocating reflections of stones struck by the sun have never oppressed him, how will he enjoy the cool air of a fine morning?<sup>25</sup>

Setting aside Rousseau's seeming description of nature as an outer-object to investigate, from his words we can tease out references to this essay's focal element. Rousseau is suggesting that educators cannot presume to choose *the one* most valuable type

of weather to expose students to. Weather of all sorts, not just the clear days that furnish sunsets and sunrises, will affect students in their lifetime.

But Rousseau is also speaking of something broader than curricular choice or teaching specific subjects. He is saying that educators cannot isolate and teach a part of nature detached from all other natural contexts. Each natural element builds upon another to contribute to a student's understanding of each new experience outside. Dry land, hot sand, oppressive light — these are all inseparable from appreciation and identification of what a truly fine day is. This is the case for weather. There is no true understanding of rain without first sensing the humidity thick in the air, the air pressure changing so suddenly as to take your breath away, the birds falling mysteriously silent and disappearing to the nooks and joints of tree branches, the leaves tilting ever so slightly up, up, trying to position themselves best to catch the droplets, and then the crashing sound of the rain finally meeting those leaves and the relief the forest seems to feel being refreshed by a shower. Furthermore, for Rousseau, lessons of most any subject matter are more clearly *felt* when they are not extracted from pure contextual experience. Added to the distinct possibility of transformational learning and new ideas produced via exposure to the elements evidenced by Socrates in the *Phaedrus*, it is, at a minimum, prudent to follow Rousseau's example.

We might argue that Rousseau did not follow his own theory. After all, *Emile* is merely a thought experiment. The fact that it is pure theory does not, however, negate its importance. But perhaps Thoreau is a better example of theory in practice, as he takes up Rousseau's call to walk outdoors and experience even the icy days by Walden Pond or the hot, dry days working the soil. Thoreau is able to string thoughts together on economy, finances, and all varieties of subjects by "de-subjectifying" weather. The elements simply become entwined in his philosophical thought.

#### CONCLUSION: AN INTELLIGENT ELEMENT-ARY EDUCATION

Just as John Dewey cautions teachers in *Democracy and Education* that all engaging lessons must be those intelligently devised, I offer the same caution before my final notes. This essay by no means implies that all educators should suddenly drop their indoor lessons and take children outside, in any weather, regardless of their readiness level. There are students with disabilities to consider, parents to contend with, classroom budgets to meet, and serious pedagogical questions to ask. Preparation, knowledge or expertise, risk management, and adult or educator experience in weather is needed first. Just as Socrates did not go to the river alone, and Rousseau knew the location where he walked with Emile, and Henry David Thoreau knew Walden Pond, a serious guide with experience in weather is a necessary companion.

It is also impossible to forget the distinctly American perspective from which this essay is written. Many other countries and places are forced to conduct classes outdoors. They battle the challenges that make weather a hindrance to learning. The argument for exposure to weather, like my previous point on the need for a guide, requires thought and care and pedagogical balance. A complete lack of infrastructure might be a student's curse, rather than the invitation to bodily-induced *aporia* I describe. Clearly extremes alone do not make for a holistic education.



Humanity has succeeded in making indoor lives comfortable, safe, clean, and well-controlled. Umbrellas are cheap and widely distributed. For two dollars one can buy an iced tea and camp out inside an air-conditioned café on an oppressively hot day. However, it is also more comfortable, safe, and predictable than ever to be outside. Parkas are now made with thick but lightweight synthetic materials to keep us cozy when the temperature dips, and “bath tubs” on ultralight tent floors can handle almost any deluge. But now that we have tipped the scales toward innocuity, a better balance must be struck. It is possible for us to venture out again. With a revitalized connection to weather, exposure to the elements from a young age through adulthood, students and educators have the chance to become reaccustomed to discomfort and bodily-induced *aporia*, embracing change and unpredictability, divine madness, and a greater harmony between the elements of nature like weather and what is elemental within us.

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1. Thomas Beldon Butler, *The Philosophy of the Weather: And a Guide to Its Changes* (New York: D. Appleton, 1856), iii.
  2. Butler was a politician and Chief Justice of the Connecticut Supreme Court from 1870–1873. For a politician, not a philosopher, to write the first and only book of its kind on the topic of weather, is notable. In a 2011 *New York Times* opinion article, “On Being and Weather,” philosopher Justin E.H. Smith wrote that philosophy has a general disregard for weather, calling it a “banal” topic, something for “small talk” rather than deep philosophical pondering. Justin E. H. Smith, “On Being and Weather,” *New York Times*, August 29, 2011, [http://opinionator.blogs.nytimes.com/2011/08/29/being-and-weather/?\\_r=0](http://opinionator.blogs.nytimes.com/2011/08/29/being-and-weather/?_r=0), accessed November 5, 2015.
  3. See Kate Soper, *What is Nature?* (Oxford: Blackwell, 1995).
  4. But even then, this is only possible because the weather has been deemed tolerably pleasant when compared to the rest of the United States, implying that exposure is unsuitable in geographic areas with fickle weather.
  5. Ruyu Hung, “In Search of Ecopedagogy: Emplacing Nature In the Light of Proust and Thoreau,” *Educational Philosophy and Theory* 46, no. 13 (2014): 1387–1401.
  6. Chris Moffett, “A Flower in the Grim City: Urban Environmental Education, Anti-Urban Philosophy, and Trips to the Field,” *Philosophy of Education 2006*, ed. Daniel Vokey (Urbana, IL: Philosophy of Education Society, 2006): 130–137.
  7. Michael Bonnett, “Systemic Wisdom, The ‘Selving’ of Nature, and Knowledge Transformation: Education for the ‘Greater Whole,’” *Studies in Philosophy and Education* 28, no. 1 (2009): 39–49.
  8. Ruyu Hung, “Educating for and Through Nature: A Merleau-Pontian Approach,” *Studies in Philosophy and Education* 27, no. 5 (2008): 355–367. Robbie Nicol, “Entering the Fray: The Role of Outdoor Education in Providing Nature-Based Experiences that Matter,” *Educational Philosophy and Theory* 46, no. 5 (2014): 449–461.
  9. The role of an outdoor educator varies but often involves taking children or adults to nonmanufactured places to teach survival skills, environmental conservation, biology, ecology, meteorology, or natural history.
  10. I realize this is the situation for many countries around the world *without* classroom buildings at all to work with. My argument is focused at the state of many *American* classrooms today, which at least have the privilege of buildings. It should be noted that my argument is not for complete exposure without protection, nor complete protection without exposure. The key is recognizing that humans, while in need of some shelter, do naturally belong in the fresh air too.
  11. I am influenced by Anne Carson’s reading of Platonic *aporia* as instrumental for learning, because it instills desire for further inquiry. Anne Carson, “The Idea of a University (After John Henry Newman),” *The Threepenny Review*, no. 78 (Summer 1999): 7.
  12. Avi Mintz, “The Labor of Learning: A Study of the Role of Pain in Education” (PhD diss., Columbia University, 2008).



13. Mark E. Jonas, "When Teachers Must Let Education Hurt: Rousseau and Nietzsche on Compassion and the Educational Value of Suffering," *Journal of Philosophy of Education* 44, no. 1 (2010): 45–59.
14. Nicholas C. Burbules, "Aporia: Webs, Passages, Getting Lost, and Learning to Go On," *Philosophy of Education* 1997, ed. Susan Laird (Urbana IL: Philosophy of Education Society 1997): 33–43.
15. *Ibid.*, 37, 39.
16. *Ibid.*, 43.
17. Plato, "Phaedrus" in *Plato: The Complete Works*, ed. John M. Cooper, trans. Alexander Nehamas and Paul Woodruff (Indianapolis: Hackett Publishing, 1997), 230d.
18. Plato, *Republic*, trans. G.M.A. Grube (Indianapolis: Hackett Publishing, 1992), 518d.
19. Gabriela Roxana Carone, "Plato and the Environment," *Environmental Ethics* 20 (Summer 1998): 119.
20. I hint toward the important project of deconstructing the human/nature dualism that many scholars have undertaken, such as Merleau-Ponty.
23. My interpretation of the Kantian sublime as pertaining principally to nature comes from Uygur Abaci, "Kant's Justified Dismissal of Artistic Sublimity," *Journal of Aesthetics and Art Criticism* 66, no. 3 (Summer 2008): 237–251.
22. Jean-Jacques Rousseau, *Émile: or On Education*, trans. Allan Bloom (New York: Basic Books, 1979), 99–100.
23. *Ibid.*, 168.
24. *Ibid.*, 52, 128, 215.
25. *Ibid.*, 168–169.