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Sensation and the Sublime: Revisiting the Physiological Basis of Aesthetic Encounter

ABSTRACT

The aesthetic concept of the sublime has long been a part of Western landscape architectural discourse and design. Both the sublime and this distinct practice of landscape design and planning emerged as entwined forms of experimentation with the world in 18th- and 19th-century Europe. The sublime came to be understood as an encounter that produced a pleasurable yet intense sense of disturbance, terror, or difference. It made clear how we, as living beings, are connected to something greater than ourselves. Alongside the beautiful and later the picturesque, the sublime was a central topic of societal discussion within a landscape context and beyond. Many designers in the 18th- and 19th-centuries took up the challenge of designing with and for the sublime, seeing it as a definitively practical challenge. Since then, it has fallen by the wayside within landscape discourse due to philosophical arguments over its definition and operation and now tends to be used as a descriptor for scale, magnitude, and rugged form. This paper argues that the sublime is worth returning to as a designerly concept for landscape architecture due to its ability to reveal our interconnectedness to the world. The sublime is reconceptualized here as being a physiological event that occurs between one's body and the landscape, as opposed to the commonly held psychological or subjective understanding. By returning to the work of Edmund Burke, Thomas Whately, Uvedale Price, and Frederick Law Olmsted we can see that the original thinkers considered the sublime to be remarkably concrete.

KEYWORDS Landscape aesthetics, Edmund Burke, Neuroaesthetics, Emotion

Introduction

This paper argues that the concept of the sublime is central to landscape architectural design practice and worth revisiting in a contemporary context. The sublime as an aesthetic experience can generally be described as an encounter with a landscape, artwork, object, event, or oration that elicits a sense of "intense satisfaction, uplift, or elevation" (Clewis, 2018, p. 1). It necessarily goes beyond the everyday and habit and emerges when we are struck by something "unfamiliar yet interesting – peculiar and novel, but worthy of careful attention" (Clewis, 2018, p. 2). However, as noted by contemporary accounts, the concept of the sublime tends to resist precise definition to the point that the discourse surrounding it has collapsed into generalities (Ashfield and de Bolla, 1996; Clewis, 2018). Landscape architecture and the sublime emerged as distinct notions at the same time in the 18th century, both grappling with what it means to experience the world and the implications of that for design. Early designer-thinkers such as Thomas Whately and Uvedale Price saw the sublime as a concrete and designable dimension of landscape architectural design practice. Now the notion of the sublime tends to be used largely as an adjective, forgoing a rigorous engagement with it through landscape design. In order for the sublime to be an employable and practical concept for landscape architectural design, this paper argues for a return to engaging with this aesthetic concept from a physiological basis instead of the commonly held psychological mode put forth by Kant and others. The following argument for understanding the sublime through a physiological mode builds on the work of Edmund Burke by entwining it with the contemporary neuroaesthetics of Antonio Damasio (1999). This allows us to conceptualize encounters with the sublime as a spatio-temporal relation between one's body and its environment that disrupts our predetermined or habitual responses. These relations operate

through sensation and as such occur pre-consciously and pre-subjectively, being interpreted and acted upon by the body before thought, reason, or rationality enters the scene. A return to several of the original 18th- and 19th-century designer-thinkers on the sublime illustrates how, at this time when aesthetics was integral for landscape design processes, such a disruptive force was understood and *designed* as an experience that emerges from spatio-temporal relations between our bodies and the world as opposed to from conscious thought, decisions or taste. From this foundation, this paper argues that the sublime is far from a simply subjective experience. Rather, it is a traceable and decipherable form of experiencing that can be engaged with through design. The intent here is not to unearth an aesthetic concept for its own sake or as part of a historical survey, but rather to illustrate its value to contemporary landscape architectural design practice and discourse. As noted by Katherine Melcher (2022), aesthetic encounters, such as the sublime, are what keeps "landscape architecture from being a predictable, predetermined science or a moralistic mandate" (p. 89). Landscape experiences have the capacity to create meaningful change in how we relate to each other and the environment (Thayer, 1989). Encountering the sublime in landscape presents the power to shock us out of habitual or commonsense relationships to ecology, materiality, and both human and more-than-human entities (Connolly & Rosier, 2020, pp. 42-43; Ellison, 2013, p. 90). While the sublime is nothing new, I hope that the discipline can see its value afresh by revisiting it from a bodily and sensory perspective that can be recorded and documented, making it practical for landscape design.

Aesthetics and the Sublime: Why it Matters

Given the current predominance of technoscientific means of knowing and producing knowledge, the lack of landscape architectural scholarship on the sublime (and aesthetics in general) is perhaps not surprising. This lack partially stems from the characterization of the non-machinic aspects of landscape as merely pictorial, which has formed a "problematic past" for contemporary design practices to counter (Hight, 2003, p. 27). Paired with this narrative is a concern with how landscape 'really works' that can only be determined through disinterested objectivity. Richard Weller (2006) argued that "the design process becomes a question of computation, not semiotics, a question of negotiating statistical limits, not hermeneutic intrigues" (p. 81). As documented elsewhere by myself and others, this turn away from the embodied and the encounter, towards the technoscientific, has produced a form of supposedly *open-systems design* that is relatively closed (Brott, 2011; Connolly, 2012; Rosier, 2021). Van Etteger et al (2016) describes this condition as such: "landscape architectural theory has fallen seriously out of balance" due to "positivistic and technocratic tendencies" that prioritize traditional notions of "functional and sustainable design" (p. 80). Further, as noted by Vera Vicenzotti (2017), these technoscientific landscape design practices "dismiss the aesthetic dimension of landscape" so that it is "rendered superfluous by a naturalized, primarily functional conception of landscape" (p. 82). Even within the scholarship of environmental aesthetics, particularly that of Allen Carlson (2000, 2008), there is no room for the, allegedly, "unacceptable degree of subjectivity" inherent in the sublime due to "idiosyncratic meditations which have no real relation to the natural environment" (Shapshay, 2013, p. 194).

However, there has been a recent interest in recovering an embodied sense of aesthetics, particularly in relation to landscape architectural design techniques and practices. Though, as Katherine Melcher (2022) notes, and this author's experience reflects, the understanding of what aesthetics *is* within the discipline of landscape architecture is unclear at best (p. 73). Through a discourse analysis, Melcher observes three predominant landscape architectural perspectives on the concept of aesthetics:

1. "Aesthetics as the beautiful," which suggests that the aesthetic experience is about pleasure, particularly the pleasure that arises from viewing beautiful objects;
2. "Aesthetics as the meaningful," which places cultural meaning as the central aesthetic aim; and
3. "Aesthetics as experience," which suggests that our immediate experience in a landscape—as an entangled combination of sensations, emotions, memories, thoughts, and perceptions—is the source of aesthetic pleasure (p. 75).

Highlighting *aesthetics as experience* as an emergent approach is useful in that it signals a disciplinary return to the *material* of landscape. As a concept, 'material' is employed by this author and others in a fashion that is also inclusive of the immaterial dimensions of landscape (and encounters with landscape), which may take the form of intensities, forces, relations, virtuality, and memory (Rosier, 2022). Doing so allows an aesthetic engagement with the totality of landscape beyond that which exists in physical space such as deep time and histories, the memories of individuals and collectives, and the relationships between entities.

The History of the Sublime: A Triptych of Interpretations

The concept of the sublime has long fascinated scholars, offering a complex terrain where emotions, intellect, and physical experiences intersect. Authors such as Ashfield and de Bolla (1996), Clewis (2018), Kirwan (2014), and Shaw (2006) have delved into its intricacies, acknowledging the challenge of defining what the sublime encompasses. Since its emergence in the late 17th and early 18th centuries, the sublime has been perceived as an encounter with the divine, a linguistic effect, a gap between perception and nature's power, an assertion of reason over nature, and that which defies reason or representation. This diversity of interpretation has led to it "eluding precise definition" (Clewis, 2018, p. 1) and, eventually, to a reduction to "quibbling over terms" (Ashfield & de Bolla, 1996, p. 8).

A recurring theme in discussions about the sublime is the heightened sense of agency experienced by those encountering it. Immanuel Kant, Edmund Burke, and Jean-François Lyotard stand as prominent figures in unravelling the sublime's complexity. Kant, writing in the late 18th-century and grounded in Enlightenment rationality, classified the sublime into two modes: the mathematical sublime and the dynamic sublime. The mathematical sublime challenges the imagination with objects of infinite scale, leading reason to intervene by expressing its power over the sensible (Kant, 1790/1987, p. 113). Those objects, due to "carrying with it the idea of their infinity" deny the imagination the ability to comprehend their extensive measure, presenting the subject with their limitations to sense and perceive (Kant, 1790/1987, p. 112). In response to their limit, Kant (1790/1987) argues that reason steps in and provides an *idea of the infinite*, illuminating the "supersensible power" of the mind to comprehend beyond what we can aesthetically understand (p. 106). In contrast, the

dynamic sublime arises from encounters with natural phenomena like storms or earthquakes eliciting fear for one's safety. In the face of nature's power, we find our physical beings limited, yet for Kant (1790/1987), in comparison to "our power of reason…everything in nature is small" (p. 120). Ultimately for Kant (1790/1987), sublimity isn't found in the world, "but only in our mind" through its ability to "judge nature without fear and to think of our vocation as being sublimely above nature" (p. 123).

In 1757, prior to Kant, Burke delved into the emotional and visceral aspects of the sublime. Burke examined how encounters with nature triggered psychological and physiological changes from an empirical basis. These changes in one's being result from a negative production of harm: harm that does not actually eventuate due to a critical distance from its source. According to Burke, the sublime in an encounter with landscape emerged from the mind's suggestion of danger, prompting bodily reactions associated with fear. His notion of terror elaborates on this process: "terror generally affect[s] the bodily organs by the operation of the mind suggesting the danger…" (Burke, 1757/2008, p. 130). He argued that terror is "in all cases whatsoever, either more openly or latently the ruling principle of the sublime" (1757/2008, p. 58), illustrating the importance of the aforementioned critical distance from the perceived source of terror (1757/2008, p. 46). Today, the Grand Canyon, Niagara Falls, Central Park, Landschaftspark Duisburg-Nord, and the Himalayas each draw immense numbers of visitors to experience some sense of the sublime. The sense of awe and intense differentiation from one's everyday encounters at these landscapes is related to the sublime. One's body undergoes a struggle to confront the sheer scale and magnitude, despite each being documented through a variety of media. Terror in this sense does not necessarily mean an awful and arresting experience, but rather a physiological response to an external

relation that poses some danger that does not eventuate. This is why horror movies – or more rightly termed ‘terror movies’ – are as capable of grabbing our imagination and attention as the geomorphic violence found in The Alps (Figure 01).

Figure 01 The Swiss Alps captured the imagination of those conducting the Grand Tour in the 18th–century due to the immense physical and temporal scale of these mountainous landscapes. “Switzerland” by Guillaume Vachey, 2019. https://www.flickr.com/photos/152930510@N02/48305380887/. Converted to grayscale by Author. Reprinted with permission by CC0 1.0 DEED.

Lyotard, adopting a post-modernist lens, revitalized interest in the sublime in the mid–late 20th century. Developing Kant’s work, Lyotard explored the limitations of imagination, leading to the concept of the ‘unpresentable’. The unpresentable is “something which can’t be shown, or presented”, that which “consciousness cannot formulate, and even what consciousness forgets in order to constitute itself” (Lyotard, 1985, pp. 1,2). The unpresentable dimension of art breaks our established orders of language by posing the question *will anything happen after this*? This question is raised by our expectations of each word, color, or idea being followed by another in kind (Lyotard, 1985, p. 3). Each word spoken or line

stroked is an event, yet we know that each is not the last of its kind by an establishment of a continuous rhythm. The sun rises each day, the baker bakes bread, and the birds erupt in chorus. The sublime creates an anxious pause in this rhythm, holding it at bay. Lyotard (1985) argues that the unpresentable threatens the subject by kindling the idea of nothing further happening: "What is terrifying is that the It that happens does not happen, that it stops happening" (p. 10). We only become acutely aware of the threat of existence ceasing by an encounter with the sublime *forcing* us to be aware of the here and now. It is a disruptive break in our experience of landscape (and the world at large) that jolts us out of habitual rhythms. "[T]he here and now, seemingly the most commonplace of experiences, is in fact the most uncommon. Nothing is more strange to us as the awareness of 'here' and 'now'" (van de Vall, 1995, p. 69). This does not need to be a terrifying break, à la Burke, but just enough to make ourselves distinctly aware of the present and the possibility of this and all other experiences ceasing.

The Sublime within Contemporary Landscape Architecture

Despite the entwined emergence and histories between landscape architecture as a distinct discipline and the sublime as an aesthetic concept, there is a general lack of clarity around what the sublime *is* and how it *unfolds* in contemporary landscape-oriented discourse. Landscape architecture's historical relationship to the sublime is worth revisiting in the hope of learning from the original designer-thinkers. Doing so allows us to recontextualize the contemporary discipline's relationship to the sublime and perhaps the broader notion of aesthetics within design practices and techniques.

The Unpresentable

It is first worth canvassing how contemporary landscape architectural discourse engages with the sublime before returning to several of the original works. In the little contemporary literature that does touch on the sublime, this aesthetic concept tends to be briefly introduced, typically as a means to name the incommensurable scale of an object or process, but rarely, if ever, taken forward to think about the *actual means of designing landscape*. Linda Pollak's two essays "Sublime Matters: Freshkills" (2002) and "Matrix Landscape: Construction of Identity in the Large Park" (2007) illustrate a uniquely North American understanding of the sublime in relation to landscape urbanism. Pollak argues that the sublime emerges from the unrepresentable scale and complexity of ecological systems, both natural and those designed at Fresh Kills by James Corner Field Operations. In "Sublime Matters" she writes that: "[to] engage with the sublime...has to do with the role of landscape ecology...in terms of the sublime, this ecological approach offers a means of addressing something too large or too complex to even begin to be comprehended as a totality" (Pollak, 2002, p. 61). This categorizes the sublime as essentially, if not entirely, intellectual in a way that breaks with the Kantian mode of incommensurability. Whereas Kant's object under examination is experienced in a tangible sense, the ecological processes that Pollak argues are sublime fundamentally cannot be experienced in the same or similar manner due to their lack of form. Instead, design practices characteristic of landscape urbanism led to spatializing *these processes*, reducing them to a defined, thinkable object or conception, which tends to be restrictive in creating aesthetic encounters. This notion of the sublime as appropriated by Pollak reads as an attempt to recast aesthetics through technoscientific means by bringing the shiftiness of Lyotard's concept of the *unpresentable* into contact with ecology. Doing so creates a reconciliation of sorts between the rejection of form by contemporary systems-

oriented discourses and, therefore, the traditional notion of aesthetics (Jorgensen, 2011, p. 354) and the operationalization of process.

Elizabeth Meyer (1998) similarly engages with Lyotard's sublime as understood through an encounter with unpresentablity, doing so via an autoethnographic comparison of Gas Works Park and Bloedel Reserve, both designed by Richard Haag. Through fieldwork, Meyer discovers that there is *something more* to each landscape that escapes rational or conscious thought, which she identifies, through Lyotard, as a sublime encounter with each site's *longue durée* (deep time) and interrelatedness beyond the immediately given. In contrast to Pollak, Meyer's (1998) articulation of the sublime here emerges from an *encounter* where "terra firma gives way to terra incognita; that which is visible is challenged by the invisible" (p. 11). At Bloedel Reserve, a water table rises near the surface within a section of the forest, creating a moss garden where you can feel the change in soil composition as you walk. This is a shared water table with Gas Works Park, where contaminants had historically leaked into it. The soil oozes with moisture, making its presence felt with each step, connecting bodily movement with the invisible flows of subterranean hydrological structures and all that they have been in contact with. This isn't solely an intellectual examination of scientific phenomena but a "dispersed and episodic" experience where the "movement of the body unfolds the content" (Meyer, 1998, p. 25). Likewise, encountering the colossal stumps of felled trees evoke a sense of their former scale and mass as well as the site's historical land use. The unpresentable dimension of time and memory is given presence through markers that allude to the site's various processes and actions that cannot be presented through form. Haag's decision to retain these stumps allows them to act as mnemonic devices, spatializing

both the immense timeframe necessary for these former trees to grow to such a scale and a bodily sense of that scale without them being present (Meyer, 1998, p. 8).

Sensation and Encounter

Others, such as Paul Roncken and Maria Hellström Reimer, have also argued for an understanding of the sublime that goes beyond the limits of subjectivity, coming to conclusions that point towards a revival of a physiological modality. Roncken, a Dutch landscape architecture scholar, in his doctoral thesis (2018) describes a renewed interest in the sublime via societal interest in "wrong" or "ecologically degraded" landscapes (p. 18). An experience of the sublime in relation to these landscapes is described as "an experiential sequence: a sensational drift aggravated by mental forces such as internal conflict or stress", involving "continuous action and reaction between bodily and mental states" (pp. 91,90). While sensations are given attention here, even going so far as to suggest that the sublime involves a "habit-breaking affect" (p. 133), the seemingly indefatigable subject-object dichotomy is relied upon to explain one's relation to the world (p. 91).

Hellström Reimer, a Swedish scholar in landscape architecture, aesthetics, and creative research, follows a similar trajectory to Roncken's articulation of a contemporary sublime modality. She argues that experiences of the sublime make present an experience of "tension, entanglement, and interdependence" between oneself and landscape (Hellström Reimer, 2010, p. 29). Such experiences have a critical part to play in creating sustainable designs that go beyond mere "greenwash[ing] by designing encounters with landscape that are more disruptive and "less harmonious and less consoling" (Hellström Reimer, 2010, pp. 35–36). Hellström Reimer turns to Lyotard, finding the sublime to be neither lofty nor moral, but

rather at the "everyday level of the unexpected encounter…an upfront confrontation with the World, a horizontal encounter, discomforting and agitated rather than contemplative and pleasurable…[a] calling for the interaction with the 'raw' realm of Otherness" (p. 20). As such, the sublime is described as an encounter with a force that agitates our very being by something Other, eliciting an uncertainty in our response to it. The nature of this *horizontal encounter* bypasses the subject-object dichotomy so that it can be understood by the structure of interweaving layers that characterize ecological relations as understood by the natural sciences and in the wider process philosophy sense. The sublime for Hellström Reimer (2006) emerges neither from within the rational subject or from an object, but rather a complex of relations: "the sublime opens up a sphere of events, of striking difference, of all singularities and deviating phenomena" (p. 20).

Of course, these authors noted here do not represent the entire scope of the discipline's engagement with the sublime. On the contrary, they operate outside the normative approach by grappling with this concept in a concrete way that allows engagement through design. They go beyond merely describing large, often rugged, landscapes as sublime. Simply labeling a landscape as sublime does neither the concept nor the landscape justice.

Rethinking Encounter

In his (in)famous maxim cogito ergo sum (I think, therefore I am), Descartes cemented the mind-body or subject-object, dualism in Western socio-cultural thought and praxis. Descartes separates the mind from the material world, leading to spatial encounters and experiences being dismissed as psychological and subjective. However, this was not always the case. This

section argues that experiencing the sublime can be understood as an event that involves concrete material relations between one's being and the environment it occupies. Following this, three examples of how early landscape architecture designer-thinkers grappled with the notion of a physiological sublime are described, bringing forth the notion that, despite historical canon suggesting preoccupations with the scenographic, sensation and experiential force was at the core of their work.

Primacy of Sensation

Within Burke's treatise on the sublime, *A Philosophical Enquiry into the Origin of Our Ideas on the Sublime and Beautiful* (1757), we find two modes or processes of the sublime: the psychological and the physiological. The former is what tends to come to mind when referring to the sublime: the subject's faculties or consciousness grappling with an exterior terrifying entity. The latter has received much less attention within landscape discourse. As part of Burke's empirical approach, the physiological mode strikes to the singular nature of an encounter with the sublime by focusing on the autonomous, pre-personal, and involuntary dimensions of sensation. Burke (1757/2008) writes that the sublime is a force "capable of affecting the body, and thus of exciting out passions" (p. 2). This vividly illustrates two things critical to understanding the sublime through physiological means. First, the sublime affects the body as its primary vector. Changes in the body's compositional state instigated by an exterior force create a physiological reaction *before* the mind is aware of what is happening. This force produces an "unnatural tension and certain violent emotions of the nerves…whatever is fitted to produce such a tension…must be a source of the sublime" (Burke, 1757/2008, p. 122). For Burke, the sublime is an affective force that acts on a body, creating a state change. The magnitude of this state change doesn't matter, though it is

presumably large enough to disrupt a body's repertoire of at-the-ready responses. What is important is that this emerges through a relation between the body and an external entity, which in our case would likely be something in an environment. Second, the mental or psychological dimensions of encounters with the landscape-sublime are subsequent results of this affective force acting on and with the body. Therefore, the conscious aspects of feeling some aspect of the sublime only result after the relation has been parsed through the body's physiological mechanisms. This allows us to understand how it (and the rest of our body) is ecologically connected to the material conditions of the world. The 'excitement of the faculties,' a common notion within the sublime's discourse is placed at the end of the entire aesthetic process – an afterparty as opposed to the main show (Bromwich, 1997).

Emotion and Feeling

While inciting terror is not necessarily relevant to the contemporary design of landscapes, because this emotion is at the extreme end of the gradient of physiological responses – just like the sublime is at the 'extreme' end of aesthetic encounters – it provides a clearer insight into how our bodies and beings interact with the world autonomously. Burke's physiological sublime operates through external relations instigating changes within one's bodily state, causing a rising, terrifying emotion. The traditional Aristotelian view ties emotions to cognition and intellect, though the 19th-century philosopher and psychologist William James and contemporary neuroscience argue the opposite is true. An Aristotelian understanding of the world suggests that upon seeing a bear in the wilderness we feel fear and flee, creating a series of physiological changes: increased heart rate, trembling, adrenaline rush. Emotion follows cognition and action. However, James (1884) argues that "the more rational statement is that we feel…afraid because we tremble, and not that we tremble because we are fearful"

(p. 190). This shifts emotions from being cognitive events that we act on to a "complex set of physiological occurrences" perceived as sensation throughout our bodies (Pashman, 2013, p. 212). Relations, movement and physiological change create emotion, not the reverse. It follows then that experiences with landscape (sublime or not) do not emerge from our conscious thoughts, associations, or actions, but rather from our pre-conscious and pre-subjective physiological relations to our environment. Antonio Damasio, a prominent Portuguese-American neuroscientist, affirms and takes James's argument further through experiments with patients who suffered movement-limiting brain injuries. As such, they do not experience emotion as others do, if at all. For Damasio (1999), the term 'emotion' refers to a bloc of bodily processes that produce a reaction in relation to external stimuli or regulation of the body's internal milieu in anticipation of a specific reaction (pp. 53–54). They are autonomous, automatic, and "*about* the life of an organism", forming the "substrate for the neural patterns which eventually become [conscious] feelings of emotion" (Damasio, 1999, pp. 51–52). The body unconsciously feels these changes in its physical state – this is what Damasio refers to as 'feelings' – and then produces mental images based on these internal sensations. These mental images are the *feelings of fear* produced when we tremble and sweat at the sight of a bear. Only at this point, after the physiological reaction, is consciousness born, a feeling of a feeling, or knowing a feeling in the here and now (Damasio, 1999, p. 37).

Consciousness emerges from movement at both the micro and macro scales within the body. The body senses itself moving in relation to a stimulus or object which produces feelings that are later taken up as mental images by consciousness. We move, we feel, we think; in that order, instead of the commonly held idea of the 'mind-as-homunculus'

(Damasio, 1999, p. 11). Therefore, as argued by this author and others, the *landscape moves us* before we think (Connolly, 2012; Pashman, 2013; Prezelj, 2022; Rosier, 2022). We are physiologically related to and moved by the world before we cognitively begin to conceive it (Damasio, 1999; Massumi, 2002, pp. 28–29; Shouse, 2005). For Deleuze (1994): "something in the world forces us to think. This something is an object not of recognition but of a *fundamental encounter* [emphasis added]" (p. 234). We are ecologically connected to the world through our body.

Returning to the sublime, we can now begin to understand it as emerging from pre-conscious physiological changes within one's being in relation to an external entity or force. Burke argued for the primacy of sensation in understanding the sublime and both James and Damasio affirm this conception. The body holds a bank of pre-prepared emotional (movement) responses at the ready as "matching answer[s]" to intense internal or external stimuli (Damasio, 1999, p. 54). The sublime breaks or at least temporarily short circuits these pre-prepared emotions, or it hinders the problem solving that the organism undertakes when faced with sensations (Pashman, 2013, p. 222), forcing a moment of kinesthetic experimentation to determine an appropriate response. This affirms Burke's construction of the sublime being fundamentally a "sensory response to the phenomenal world combined with emotion untrammeled by thought" (Ryan, 2001, p. 273).

Once More – With Sensation This Time

From this understanding of the sublime, we can describe the process of encounter in an alternative manner:

1. a relation is formed between any number of bodies or relations, one necessarily being animate (presumably a human organism), in which this relation creates a modification in the organism's physiological homeostasis systems via its sensory organs and neural network;
2. this change within the system creates a change in capacity, agency, or power to such a degree that it disrupts the normative responses to stimuli within the nervous system, leaving a gap in its capacity to act or respond;
3. this disruption is felt again as a sensation by the conscious mind – the feeling of a feeling;
4. mental processes and the conscious mind react in an effort to respond to this unfolding event (Rosier, 2021).

The sublime is not some inherent quality, nor does it emerge from within the subject itself via reason or association. Instead, according to Burke (1757/2008) the sublime anticipates and preempts both, hurrying us along "by an irresistible force" (p. 57).

We can also find in Burke an argument for a degree of universality of the sublime. As all humans have a general "conformation of their organs" there is a sharedness in how sensation is understood and processed by the body before subjectivity (p. 14). Further, though not seeking the universality of knowledge and experience characteristic of Kant, Burke (1757/2008) holds that there is a great degree of commonality with our ideas post-sensation as well: "for as the senses are the great originals of all our ideas, and consequently of all our pleasures, if they are not uncertain and arbitrary, the whole ground-work of taste is common to all" (p. 24). Differences in experience emerge from differences in "natural sensibility, or

[experiencing] a closer and longer attention" (Burke, 1757/2008, p. 22). Damasio affirms this large degree of sharedness for emotions and feelings as they have emerged from evolutionary processes we have in common. However, he does note the importance of culture and development in "shaping" some aspects of what induces an emotion and our responses to it (Damasio, 1999, p. 51).

This author has too frequently seen seasoned academics and practioners dismiss or downplay aesthetic experiences such as the sublime in favor of the functional or technoscientific aspects of a student's landscape design project or research. Often this dismissal is predicated on landscape experience being regarded as 'merely subjective' in comparison to more objective dimensions of design. Even though others have argued for the critical importance of aesthetics in the design and study of landscape, it is still regarded as a "personal experience" and therefore able to be set aside based on differences in one's taste or conscious thoughts (Melcher, 2018, p. 79). The physiological landscape-sublime outlined here operates before subjectivity, cognition, and taste. It is an autonomous and involuntary 'doing' that we find ourselves a part of. It therefore avoids the "shaky ground" of subjectivity that Melcher (2018) attributes to the role of aesthetics in the practice and expertise of landscape architecture (pp.79–80).

One Hand in the Dirt, One Hand on the Pen

Burke was not alone in his grappling with and articulation of the physiological sublime, and following the *Enquiry*'s publication in 1757, we can find a period of experimentation through landscape design to further determine causes and instigator tactics. This reading of Burke's

work has obvious implications for how designers understand and engage with the sublime through design itself. Revisiting the writings of Thomas Whately, Uvedale Price, and Frederick Law Olmsted will illustrate how they experimented with the sublime or landscape aesthetics from a physiological basis.

The Force of Rocks

Starting with Thomas Whately, an English politician and writer, his work *Observations on Modern Gardening* (1770) outlines detailed instructions for inciting aesthetic encounters. Whately focuses on arranging landscape elements in an assemblage to evoke something powerful beyond what each element does alone (Hunt, 2016, p. 69; Steenbergen et al., 1996, p. 251). Something forceful. Whately pays particular attention to how specific masses or compositions of rocks are strikingly capable of eliciting experiences of the sublime. The mass, age, and marks alluding to their formation stretches our commonsense conceptions of the world. They are expressions of the planet's *longue durée*, markers and products of a time scale and extent of spatial change far beyond ourselves. For Whately, "mere rocks, unless they are peculiarly adapted to certain impressions, may surprise, but can hardly please; they are too far removed from common life…more horrid than terrible" (Symes, 2016, p. 91). As Whately argues, designing with rock and stone allows encounters with the sublime (and other aesthetic forces) to be instigated with a certain degree of surety. This involves spatial experimentation with geometric relationships by varying height, width, and arrangement; removing vegetation; and adjusting perceptual scales through earthworks and different materials (Symes, 2016, pp. 96,100,103). Doing so allows the designer to "denote force", specifically aesthetic force – an autonomous doing of the world that we are able to connect to (Symes, 2016, p. 100).

Rather than relying on abstract examples Whately turns to the actual material of landscape in his efforts to grapple with aesthetic forces. Consider Dovedale, an English valley featuring striking limestone formations protruding from the topography (Figure 02). Whateley vividly portrays the valley as “continually crossing, advancing, and retiring: the breath of the valley is never the same forty yards together” and “perpetually shifting…grotesque as chance can cast, wild as nature can produce, and various as imagination can invent” (Symes, 2016, pp. 105,106). At the same time as geology was marked as the “frontier of [enlightenment] knowledge”, rocks also expressed something that escaped the nascent scientific categorization of the world (Heringman, 2004, p. 8). What emerged from encounters such as those at Dovedale, with its looming and vehement geologic structures, is an aesthetic force that is “prehuman and nonrational” (Heringman, 2004, p. 7). This force, the sublime, emerges from the interactions and relations formed between the environment’s spatio-temporal configuration and the physiological body.

Figure 02: The rock formations of Dovedale seem to thrust up from the earth's surface at the same time as feeling like they're likely to erode or collapse at any moment. A slice of geologic time. "Peak District – Dovedale" by Michael John Button, 2015. https://www.flickr.com/photos/michaeljohnbutton/17026775420. Converted to grayscale by Author. Reprinted with permission by CC BY 2.0.

On Firs and Memory

In his influential work *Essays on the Picturesque, as Compared to the Sublime and the Beautiful* (1796), Uvedale Price, like Burke and Whately, delves into how spatio-temporal relations shape aesthetic experiences. Burke's influence on Price is evident through direct citations and their correspondence, suggesting a sharedness in their experimentation with aesthetic material (Burke, 1794, as cited in Watkins, 2014, p. 510). Price, residing between the practicalities of landscape design and philosophy, intertwined experiments with the material of landscape with written thought experiments. His estate at Foxley in Herefordshire served as a canvas, drawing enthusiasts in aesthetics to see and discuss his work (Watkins, 2014, p. 512). This work keenly explored how landscapes impact our subconscious, triggering memories of past encounters via what we feel in the here and now. He writes of the body's memory of "pain and irritation" elicited by "rough and rugged objects," which our sensory-perception processes call forth when we perceive entities exhibiting similar qualities (Price, 1796, p. 119). The looming, rough-edged rock or the uncertainty of a topographical edge elicits a *physical* change based upon what the body has previously encountered. These processes operate pre-subjectively in line with Burke's construction of the sublime (Di Palma, 2016, p. 62; Hunt, 2002, p. 72).

Though sight is frequently referred to by Price in relation to aesthetic forces, visual perception is often an intermediary for haptic sensation: sensing texture and form through vision. Similarly, forms of movement can be anticipated via vision through the body's

proprioceptive memory. One such example within *Essays* efficiently communicates this dimension of Price's work: the effect of density in a fir plantation for eliciting some sense of the sublime. Saplings planted closely give the appearance of a natural wood, and if not curated and thinned they may take on sublime qualities:

> They are consequently all drawn up together, nearly to the same height; and as their heads touch each other, no variety, no distinction of form can exist, but the whole is one enormous, unbroken, unvaried mass of black. Its appearance is indeed so uniformly dead and heavy, that instead of those cheering ideas which arise from the fresh luxuriant foliage, and the lighter tints of deciduous trees, it has something of that dreary image, that extinction of form and colour (Price, 1796, p. 286).

The extensive and intensive dimensions of the fir planting in conjunction with a (human) body produces an affectual relation through sensation, which in turn is processed by the "theatre of the body" (Damasio, 2003, p. 79). Our consciousness then takes these sensations and cultivates them through what Price understood as 'taste'. This both sharpens our ideas on the encounter itself, but also makes it communicable without making it entirely subjective thanks to our shared sensory foundations (Hunt, 2002, p. 72).

Olmsted Made Sublime Affects, He Didn't Just Conceptualize Them

Robert Smithson, the acclaimed 20th-century land artist, regarded Frederick Law Olmsted's Central Park as one of the greatest pieces of American art (1996). Smithson portrayed Central Park as stemming from Olmsted's phenomenological encounter with the site's materiality and immateriality. Olmsted "dramatized" the site's geologic forces "as if he were an agent of

nature" (Martin, 2011, p. 169). This is perhaps most evident in how this geologic material was subtly edited throughout the site to bring occupants into direct encounter with it, whilst also exposing it in monolithic masses that suggest its continuance beneath all of Manhattan (Figure 03).

Rather than relying on Richard Payne Knight's aesthetic model that regarded such experiences as entirely a "matter of individual perception" informed by association (Hunt, 2002, p. 89), Olmsted instead engaged with the extensive and intensive dimensions of landscape. In his apprenticeship to landscape, he highlights the ability of design to "[cultivate] susceptibility to the power of scenery" through aesthetic encounters (Olmsted, 1893, as cited in Beveridge, 2000, p. 32). As Charles Beveridge (2000), a prominent Olmsted scholar, notes, "[Olmsted] concluded that the most powerful effect of scenery was one that worked by an unconscious process" (p. 33). Beveridge continues, writing that Olmsted developed an understanding of how the environment and the human body, when in relational contact, produce doings or what has contemporarily been termed 'affects'. This involves an "unconscious process" that emerges from participation with landscape through movements where "the viewer was unaware of its workings" (Beveridge, 2000, p. 34). As Smithson (1996) notes, Olmsted paid close attention to the work of Uvedale Price as a "professional touchstone", designing from a similar position where the picturesque, and therefore the sublime, was understood as "far from being an inner movement of the mind, [and instead] is based on real land" (p. 119).

Figure 03: One of many instances of Olmsted's efforts to appropriate geologic forces and material in creating Central Park. Many of these instances are the most public elements within the whole parkscape. Image by Author, 2018.

We can turn to The Ramble within Central Park (Figure 04-06), a dense wood full of paths that "out-laybrinthed labyrinths", as evidence of Olmsted's application of this design theory (Smithson, 1996, p. 126). Smithson (1996) describes it as a "primordial condition brought into the heart of Manhattan" where the winding paths, vegetation, and topography are so disruptive that "the walker has no sense of direction" (p. 127). This designed landscape draws together individual affectations in the service of a greater whole. For example: the never-ending labyrinthine path structure, a constantly varying degree of spatial perception, vegetation structures, and a shifting landform that rises and falls. These body-environment relations come together to produce a more significant affect or *doing*, which this author has described, and previously documented as a 'slow zone' within The Ramble (Rosier, 2021, pp 61–124). This slowing down involves a sense of introspection and an individual appropriation

of space, where one's sense of time seems to extend and become lost, and sense of space is drastically contracted. Both sensations are a rare condition within Central Park or Manhattan itself. The combination of these sensuous relations leads to a physiological response that we can describe as the sublime, albeit in a lower intensity or less disruptive mode. This is not a sublimity of excessive magnitude or terror, but one where our bodies struggle to produce an immediate yet adequate response. A *minor* or *everyday* mode of the sublime produced by the same physiological pathways. Within The Ramble, Olmsted orchestrated a "subordination of details" and a contraction of seemingly mundane or uninteresting relations to an overall affect that "act[s] unconsciously", creating a forced movement within its bounds (Beveridge, 2000, p. 36). Such a movement is neither consciously determined nor personal. It emerges as an autonomous doing between oneself and the landscape, with the 'slow zone' produced by The Ramble rising to consciousness as a 'feeling of a feeling'. Such feelings should be of immense interest to landscape designers. First, they are what we should be intending the participants in designed works to encounter, they are what makes a space singular. Second, such feelings, and the relations that produce them, are the material from which we design.

Figure 04: The sense of space, time, and ability to reference yourself is constantly in flux throughout The Ramble. Image by Author, 2018.

Figure 05: As you emerge from a constricted tunnel-like formation, the space around you opens up and a sense of direction begins to unfold. The Manhattan Schist now begins to rise up and form a looming wall, bringing you into contact with the site's deep time. Image by Author, 2018.

Figure 06: The volume of space opens further, but the means of navigation become more muddied as vegetation, topography, and rock overlap to deny spatial orientation. Image by Author, 2018.

Conclusion

As argued by both Melcher (2018, 2022) and Van Etteger et al (2016), contemporary landscape architecture discourse remains ambiguous in its understanding of and engagement with the aesthetic (experiential) material and relations of landscape. This same material is what makes "landscape architecture's most unique" in disciplines associated with design and natural environments (Kapper & Chenoweth, 2000, p. 152). The discipline is grappling with increasingly complex technical demands. This has seen greater emphasis placed on functionality and positivism, eschewing the bodies of knowledge (including those of indigenous peoples) and, perhaps more importantly, the design *techniques* strongly suited to engaging with the aesthetic material of landscape. This threatens a "narrowing definition" that is exclusive rather than inclusive, countering the traditional breadth that landscape has long advertised (Grose, 2023). Despite this trend towards positivism, Barbara Prezelj (2022) points

out that “the necessity of sensation, of movement, and of thought remains as timely as ever” for landscape architectural discourse and practice (p. 330).

Just as the Claude glass assisted in viewing and designing landscape through the language of picturesque painting (Di Palma, 2016, p. 59), a verbal and graphic language of sensation would highlight the significance of aesthetic encounters within landscape design. Looking at the sublime through a physiological lens offers landscape architectural design the means to treat landscape experience seriously without relying on the traditional visually oriented lexicon that the systems-based dialect of the 1990s and 2000s sought to replace. Doing so champions a design vocabulary of sensation and affect built from the reality of encounter as opposed to external forms of knowledge and metrics. The physiological landscape-sublime as argued here is grounded in the instigator material relations between the body and space-time, making it not necessarily objective in the scientific sense, but certainly an empirical reality. Further, it takes each sublime event as singular, involving this specific relation between this environment and this organism on a given orientation in the world. It demands an obligation to the uniqueness of a situation as opposed to generalizable universality. This obligation must be addressed through representation and design techniques that go beyond generalities, categories, and cliché to reveal the actual operations of an event. As designers, using our bodies as affective registers as we walk through a landscape allows us to illuminate how specific sensations and emotions create encounters by recording what happened and how in a sublime event. Geometric and perceptual relationships between one’s body and the landscape in space-time can be drawn out on the page, creating an “external prolongation” of this experience through documentation (Claramunt & Mosbach, 1999, p. 58). Documenting an event – the distances or angles between the body and different

landscape elements, what came before, what is anticipated ahead, the material underfoot or the haptic quality of one's surroundings – allows it to be recorded. At this point the landscape-sublime may become concrete, designable, and practical; allowing for experimentation and modification in the production of a new landscape. This is the power of a physiological sublime for landscape architectural design: it works upwards from the material of landscape to illustrate what real experience *actually is* as opposed to conceptualizing *possible* experience mediated by subjectivity. In doing so it highlights the *thisness* of any given landscape or situation that exceeds the grasp of notions such as category, type, or program.

At a point in time where we are beset from a seemingly never-ending range of crises, the sublime offers a means to connect to something greater than ourselves. It allows us to *feel* our connection to the world, a connection that is always already happening before thought. Designing with the sublime doesn't require immensity, darkness, or terror, nor is it something that escapes our reason or ability to represent it. Rather, the sublime can equally be found in the small and everyday as habit-breaking affects: physiological encounters that disrupt our pre-formed emotional responses. It is always lurking nearby, just around the corner waiting to explode into our experience.

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