

THE TECHNO- LOGICAL SUBLIME

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The sublime is an aesthetic concept of ‘the exalted,’ of beauty that is grand and dangerous. Through 17th and 18th century European intellectual tradition, the sublime became associated with nature. In the 20th century, the technological sublime replaced the natural sublime. Has our sense of awe and terror been transferred to factories, war machines and the unknowable, infinite possibilities of computers and genetic engineering?

When we call a landscape or a piece of art 'sublime,' we express the fact that it evokes particular beauty or excellence. Note that the 'sublime' is not only an aesthetic characterization; a moral action of high standing or an unparalleled goal in a soccer game may also be called 'sublime.' Roughly speaking, the sublime is something that exceeds the ordinary. This aspect of its meaning is expressed aptly in the German word for the sublime: the 'exalted' (das Erhabene). In the latter term we also hear echoes of the religious connotation of the concept. The sublime confronts us with that which exceeds our very understanding.

The notion of the sublime goes back a long way. It stems from the Latin *sublimis*, which – when used literally – means 'high up in the air,' and more figuratively means 'lofty' or 'grand.' One of the oldest essays on the sublime dates back to the beginning of our calendar. It is a manuscript in Greek entitled Περὶ ὕψους (*On the Sublime*), long ascribed to Longinus, though probably incorrectly so. In this treatise, the author does not provide a definition for 'the sublime,' and some classicists even doubt whether 'the sublime' is even the correct translation of the Greek word used – *hypsous*. Using a number of quotes from classical literature, the author discusses fortunate and less fortunate examples of the sublime. For one, the sublime must address grand and important subjects and be associated with powerful emotions. For pseudo-Longinus, the sublime landscape even touches upon the divine. Nature "has implanted in our souls an unconquerable passion for all that is great and for all that is more divine than ourselves".¹

Longinus' essay was hardly noticed by his contemporaries and, in the centuries that followed, we rarely find references to this text. The essay was printed for the first time as late as 1554 in Basel. But only after the French translation by Boileau (1674) and the English translation by Smith (1739) did the text begin its victory march through European cultural history. From the Baroque period onward, which culminated in Romanticism, the sublime grew to become the central aesthetic concept, at which time it was often associated with the experience of nature. In the eighteenth century, we find it predominantly in the descriptions of nature of a number of British authors, portrayals of their impressions collected on Grand Tours through Europe and the Alps (a common practice in those days among young

people from prosperous families). These authors use the term to render the often fear-inducing immensity of the mountain landscape in words.

The sublime refers to the wild, unbounded grandeur of nature, which is thus contrasted starkly with the more harmonious experience of beauty. In *A Philosophical Inquiry into the Origin of Our Ideas of the Sublime and Beautiful*, Edmund Burke defines the sublime as a "delightful terror".² That the forces of nature may nevertheless leave the viewer in a state of ecstasy is connected with the fact that the viewer observes these forces from a safe distance.

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In German Romanticism, however, the sublime loses its innocent character. The work of Immanuel Kant has been of particular critical importance in this respect. In the *Critique of Judgement* (*Kritik der Urteilskraft*, 1790), Kant, following Burke, makes an explicit distinction between the beautiful (das Schöne) and the sublime (das Erhabene). Beautiful are those things that give us a pleasant feeling. They fill us with desire because they seem to confirm our hope that we are living in a harmonious and purposeful world. A beautiful sunrise, for instance, gives us the impression that life is not that bad, really. The sublime, on the other hand, is connected with experiences that upset our hopes for harmony. It is evoked by things that surpass our understanding and our imagination due to their unbounded, excessive, or chaotic character.³

Kant makes a further distinction between the mathematical sublime and the dynamic sublime. The first, the mathematical sublime, is evoked by that which is immeasurable and colossal, and pertains to the idea of infinitude. When we view the immensity of

a mountain landscape or look up at the vast night sky, we are overcome by a realization of our insignificance and finitude. Kant associates the second, the dynamic sublime, with the superior forces of nature. The examples he uses include volcanic eruptions, earthquakes and turbulent oceans. Here, too, we experience our insignificance and finitude, but in these cases this understanding is supplemented by the realization that we could be destroyed by the devastating power of these forces of nature. The dynamic sublime evokes both awe and fear; it induces a 'negative lust',³ in which attraction and repulsion melt into one ambiguous experience.

Since the sublime remains primarily an aesthetic category in Kant's work, he maintains the idea that 'safe distance' characterizes the experience of the sublime. When viewing a painting of a turbulent storm at sea, one can contemplate the superior force of nature while remaining comfortably assured that one is safely in a museum and not at sea! Friedrich Schiller, in contrast, takes things one step further and 'liberates' the sublime from the safe cocoon of aesthetic experience. The political terror under Jacobin rule following the French Revolution had deeply impressed him and shaped his view of the sublime, as elaborated in a series of essays.

In order to accomplish this liberation, Schiller rephrases Kant's distinction between the mathematical sublime and the dynamic sublime. In a 1793 text called *On the Sublime (Vom Erhabenen)*, Schiller argues that the mathematical sublime ought to be labeled the theoretical sublime. The immeasurable magnitude of the high mountains and the night sky evoke in us a purely reflexive observation of infinitude. When nature shows itself to be a destructive force, on the other hand, we experience a practical sublime, which affects us directly in our instinct for self-preservation. Still, in Schiller's view, we need to make yet another distinction. When we view life-threatening forces from a safe distance – for instance, by observing a storm at sea from a safe place on land – we might experience the grandeur of the storm, but not its sublime character. An experience can only be truly sublime when our lives are actually endangered by the superior forces of nature. And yet, for Schiller, even that is not enough. Human beings have an understandable urge to shield themselves both physically and morally from the

superior forces of nature. He who protects his country by building dykes attempts to gain 'physical certainty' over the violence of a westerly gale; he who believes his soul will live on in heaven after death protects himself by means of 'moral certainty.' He who manages to truly conquer his fear of the sea, or of death, shows his grandness, but loses the experience of the sublime. According to Schiller, truly sublime is he who collapses in a glorious battle against the superior powers of nature or military violence. "One can show oneself to be great in times of good fortune, but merely noble in times of bad fortune" ("Groß kann man sich im Glück, erhaben nur im Unglück zeigen").⁴ Schiller's work transforms the sublime from an ambiguous aesthetic category into a no less ambiguous category of life.

History doesn't stop, however. Over the nineteenth and twentieth centuries, the main site for the ambiguous experience of the sublime has gradually shifted from nature to technology. Our current period is viewed as the age of secularization. God is retreating from nature and nature is gradually becoming 'disenchanted' in the process. Nature no longer implants in us, as was the case in Longinus's time, "an unconquerable passion for all that is great and for all that is more divine than ourselves," but invites technical action and control. Divine rule has become the work of man. The power of divine nature has been transferred to the power of human technology. In a sense, the sublime now returns to what it was in Longinus' work: a form of human technè. However, these days it no longer falls into the category of the alpha technologies, such as rhetoric, but rather, we find ourselves on the brink of the age of sublime beta technologies. Modern man is less and less willing to be overpowered by nature; instead, he vigorously takes technological command of nature.

As David Nye has documented in great detail in his book, *American Technological Sublime*⁵, Americans initially embraced the technological sublime with as much enthusiasm as they had embraced the natural sublime. The admiration of the natural sublime, as it might be experienced in the Grand Canyon, was replaced by the sublime of the factory, the sublime of aviation, the sublime of auto-mobility, the sublime of war machinery, and the sublime of the computer.⁵ The computer in particular discloses a whole new range of sublime experiences. In a world in which the computer has become the dominant technology,

everything – genes, books, organizations – becomes a relational database. Databases are ontological machines that transform everything into a collection of (re)combinatory elements.

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As such, the database also transforms our experience of the sublime, and the sublime as such. The mathematical sublime in the age of computing manifests itself as a combinatorial explosion. As Borges has shown in *The Library of Babel*, the number of combinations of a finite number of elements – in his story, 25 linguistic symbols – is hyper-astronomical.⁵ Borges' library, consisting of books of 410 pages, each having 40 lines of 80 characters – contains no less than $25^{1,312,000}$ books. The number of atoms in the universe (estimated by physicists to be roughly 10^{80}) is negligible compared to the unimaginable number of possible (re)combinations in the 'Database of Babel.' And the number of possible (re)combinations of the three billion nucleotides of the human genome is even more sublime.⁷

Moreover, by actively recombining the elements of the database (by genetic manipulation or synthetic biology, for example), we unleash awesome powers and, in so doing, transform the dynamic sublime. In our (post)modern world it is no longer the superior force of nature that calls forth the experience of the sublime, but rather, the superior force of technology. However, with the transfer of power from divine nature to human technology, the ambiguous experience of the sublime also nests in the latter. In the era of converging technologies – information technology, bio-technology, nano-technology and the neurosciences – it is technology itself that gains a confounding character in its battle with nature. While technology is an expression of the grandeur of the human intellect, we experience it more and more as a force that controls and threatens us. Technologies such as atomic power stations and genetic modification, to mention just two paradigmatic examples, are Janus-faced: they reflect, at once, our

hope for the benefits they may bring as well as our fear of their uncontrollable, destructive potentials.

According to David Nye, this explains why enthusiasm for the technological sublime has transformed into fear in the course of the twentieth century. This is also why it is often said, in relation to such sublime technologies, that we 'shouldn't play God.' At the same time, twenty-first century man has been denied the choice to not be technological. The biotope in which we used to live has been transformed, in this (post)modern age, into a technotope. We have created technological environments and structures beyond which we cannot survive. The idea that we could return to nature and natural religion is an unworldly illusion. In fact, because of its Janus-faced powers, technology itself has become the sublime god of our (post)modern age. Assessments regarding the fundamental transformation from the natural to the technological sublime may vary; however, no one can deny that technology is a no less inexhaustible god.

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