

The sublime evolved:

On how the theory of evolution can account for the Kantian experience of
the sublime



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I hereby declare and assure that I, Jordi Vervoort, have drafted this thesis independently, that no other sources and/or means other than those mentioned have been used and that the passages of which the text content or meaning originates in other works - including electronic media - have been identified and the sources clearly stated.¹

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¹ David Mazure, "Altruism," Feero Molaf Duul installation, Posted June 24, 2010, <http://www.davidmazure.com/blog/2010/06/24/feero-molaf-duul-part-3/> (cover image used with permission of the artist).

May you chase the sublime.

Abstract

In this thesis I examine how the experience of the sublime, as described by Immanuel Kant, can be explained from an evolutionary perspective. The theory of evolution can seemingly account for the existence of our sense of beauty, yet, for the judgement of the sublime, no explanatory theories seem to have been developed so far. However, much empirical research has been conducted into the psychological variant of the sublime: awe. After demonstrating that the sublime and a variant of awe, that is, aesthetic awe, refer to the same experience, I use the results of the studies on awe. These results substantiate the explanation of how and why the judgement of the sublime could have evolved. Most importantly, to be in awe and thus to experience the sublime, provokes altruism in man. Since altruism has been beneficial to the survival of man, this appears to be a plausible evolutionary explanation for the sublime.

Key words: *Theory of evolution, sublime, awe, altruism, aesthetics*

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Introduction

Some time ago, I was suffering from a broken heart. After a few days, desperation led me to consult the Internet, where some website told me my pain was evolutionarily explainable.² Supposedly, I felt this way because when one emotionally bonds with another person, the chance of successfully reproducing with this person increases. If for some reason the relationship comes to an end, one can feel sadness due to disappointment in the lost chance of reproduction. The emotions you experience supposedly tend to motivate you to reach that reproductive goal. For obvious reasons, reading this did not fix my misery, nor did I take delight in the explanation. The reason I did not particularly like this evolutionary explanation, I assume, is because although I think it is actually accurate, it detracts from the experience of a broken heart. It takes away from the romance of pain. Yet, it made me wonder what other subjective experiences the theory of evolution can account for.

From August 2017 till February 2019, I traveled around the world. During this journey I encountered many sights that took my breath away. Every time I witnessed a mesmerizing sunset or an indescribably impressive formation of mountains, I realized I could not put to words what it was exactly, that made me so speechless. I felt I wished to have the ability to ‘grasp’ this sensation, for I could not. Thinking back on these experiences, I wonder: if the theory of evolution can explain my broken heart, can it also explain the experience of something so marvelous, or rather, so sublime?

In short, the evolutionary process, as described by Charles Darwin in ‘On the Origin of Species’, comes down to natural selection favoring the survivability of individuals with traits best adapted to their environment. Those best adapted individuals are more likely to survive and thus to reproduce, passing on their

² Sara Lentz, “Love – what is it good for? A lot, says evolutionary psychology,” accessed February 10, 2021, <https://news.utexas.edu/2018/08/03/love-what-is-it-good-for/>

favorable traits to future generations. Because many traits are hereditary and eventually only the individuals with the most favorable traits live long enough to reproduce, the species will change over time, possibly into a new species.³ For example, leaf-eating insects that are green in color are well-adapted to their environment. Due to their camouflage, they are less likely to be eaten by birds than, for example, red colored leaf-eating insects. Since these green insects are less likely to get caught by birds, they are more likely to survive and thus reproduce, passing on their camouflage qualities to future generations. This way, camouflage can evolve in insects.⁴ What kind of adaptive purpose our ability to judge the sublime would serve is less clear. There is no evident adaptive advantage in being astonished by a thunderstorm.

Since the judgment of the sublime is part of our ability to make an aesthetic judgment, it is reasonable to ask ourselves what the evolutionary function of our aesthetic judgment is at all.⁵ Darwin tried to explain this in 'The Descent of Man, and Selection in Relation to Sex', where he presented his theory of sexual selection. He did so by giving examples of different bird species, courting each other through aesthetical displays. The male birds exhibit this behavior to court the picky females and thus increase their chance of reproduction. The decorations used by the birds serve as fitness indicators: the more willing the male is to convince the female with aesthetically pleasing display, the better his hereditary qualities are likely to be in the eyes of the female.⁶ This process is known as sexual selection. Since Darwin's conclusion that our ability to make aesthetic judgements originated through sexual selection, many explanatory theories about the evolution of the aesthetic judgement in man have been developed. British philosopher Anthony O'Hear, for example, argues that although sexual attraction is one of the most primary

³ Charles Darwin, *On the Origin of Species*, ed. Gillian Beer (Oxford World's Classics. Oxford: Oxford University Press, 2008) 5-394.

⁴ Darwin, *On the Origin of Species*, 66.

⁵ Immanuel Kant, *Critique of Judgement*, ed. Nicholas Walker (Oxford World's Classics. Oxford: Oxford University Press, 2007), 35-165.

⁶ Charles Darwin, *The Descent of Man and Selection in Relation to Sex*, Vol. 1, Cambridge Library Collection - Darwin, Evolution and Genetics (Cambridge: Cambridge University Press, 2009) 63-5.

experiences of beauty, in man, the aesthetic judgement often transcends the influence of sexual selection.⁷ In the footsteps of O'Hear, we may wonder if sexual selection can sufficiently explain man's aesthetic judgement, especially the judgement of the sublime.

A beautiful sunset, a mighty set of mountains or an overwhelming thunderstorm can all be experienced as sublime. What common features of these sights enables them to be perceived by us as something so awe-inspiring? In this thesis I will appeal to the notion of the sublime as described by Immanuel Kant in 'Kritik der Urteilskraft', translated as 'Critique of Judgement'.⁸ I will do so because Kant is considered one of the most influential writers in the history of the sublime.⁹ Kant distinguishes the judgment of the sublime from the judgement of the beautiful. He then distinguishes two notions of the sublime: the mathematical and the dynamical. The mathematical sublime refers to our inability to grasp the size of what we see, such as when we stand at the base of a skyscraper. Unlike in the beautiful, our sensible cognition cannot grasp the mathematically sublime sight we witness. The dynamical sublime refers to being overwhelmed by force, such as by the sight of a thunderstorm. We experience the dynamical sublime when we can observe nature's brute force from a safe distance. Both notions of the sublime have in common that they refer to a sense of inadequacy which ends in pleasure. When we experience the sublime, we realize we are puny creatures in comparison to the brute forces of nature. While realizing this, we find comfort in the revelation that our power of reason is superior to the power of nature.¹⁰

In this thesis, I will examine whether the theory of evolution can account for the Kantian experience of the sublime. I will do so by first elaborating on how Kant envisions the sublime and what purpose he supposed this experience would serve. Kant's notion of the sublime, as well as the contemporary interpretation by

⁷ Anthony O'Hear, *Beyond Evolution: Human Nature and the Limits of Evolutionary Explanation* (Oxford: Clarendon Press, 1997).

⁸ Kant, *Critique of Judgement*, 35-165.

⁹ Christine Battersby, *The Sublime, Terror and Human Difference* (London: Routledge, 2007), 1.

¹⁰ Kant, *Critique of Judgement*, 75-119.

Douglas Burnham, will be discussed in the first chapter.¹¹ In the second chapter, I will cover 'awe', which is thought to be the psychological variant of the philosophical sublime. Awe is a popular research topic in contemporary psychology, which means that many studies are currently being conducted on the topic.¹² After discussing the effects that these empirical studies ascribe to awe, I will use the third chapter to demonstrate that awe, as long as it is aesthetic, refers to the same experience as the sublime. This will allow me to draw on the results of empirical studies on awe, which will eventually substantiate the evolutionary explanation of the sublime.

After briefly discussing the theory of evolution in the fourth chapter, I will shift the focus to Darwinian aesthetics. I will demonstrate how evolutionary aesthetics can account for our sense of beauty. With the help of Geoffrey Miller, I will explain how our sense of beauty might have evolved to assess one's fitness.¹³ With the help of Stephen Kaplan, I will explain how we aesthetically judge environments in order to assess whether they threaten or serve our own fitness.¹⁴ These explanations for our sense of beauty will lead us to the question whether they can also be applied in explaining the judgment of the sublime. In the fifth chapter, I will answer that question. In the sixth and final chapter, I will draw conclusions on how Darwin's theory of evolution can account for the experience of the sublime, as described by Kant.

To my knowledge and to my surprise, no studies have been conducted on evolutionary explanations of the sublime. Although some evolutionary beneficial effects have been ascribed to awe, there also seem to be no actual evolutionary explanations for its emergence in man. I consider the question posed in this thesis

¹¹ Douglas Burnham, *An Introduction to Kant's Critique of Judgement* (Edinburgh: Edinburgh University Press, 2000), 40-102.

¹² Summer Allen, "The Science of Awe," (Ph.D. White paper, Greater Good Science Center at UC Berkeley, 2018), 2-4; Margherita Arcangeli et al., "Awe and the Experience of the Sublime: A Complex Relationship," *Frontiers in Psychology* 11 (2020): 1-5, <https://doi.org/10.3389/fpsyg.2020.01340>.

¹³ Geoffrey Miller, *The Mating Mind : How Sexual Choice Shaped the Evolution of Human Nature*, 1st Anchor Books ed. (New York: Anchor Books, 2001).

¹⁴ Stephen Kaplan, "Environmental Preference in a Knowledge-Seeking, Knowledge-Using Organism," in *The Adapted Mind : Evolutionary Psychology and the Generation of Culture*, ed. Jerome Barkow, Leda Cosmides, and John Tooby, (New York, N.Y.: Oxford University Press, 1992), 595.

relevant for two reasons. First of all, if I manage to prove that the sublime and aesthetic awe refer to the same experience, the field of psychology and philosophy can make use of each other's theories and results regarding these topics. Currently, this is difficult, because due to their conceptual differences, the relationship between awe and the sublime is said to be complex.¹⁵ Secondly, Kant believes that all people possess the transcendental conditions to experience the sublime.¹⁶ This makes it remarkable that the theory of evolution, with its extensive explanatory potential, has not yet been applied to the explanation of this universally experienced judgement. Therefore, it is high time that the theory of evolution is applied to this philosophical concept.

¹⁵ Arcangeli et al., *Complex Relationship*, 2.

¹⁶ Kant, *Critique of Judgement*, 95.

Chapter 1: The sublime

1.1 Kant's philosophical system In this chapter, I will discuss Kant's aesthetics, as described in his Critique of Judgement. In order to understand certain claims that will be covered, one must understand some of the fundamentals of Kant's philosophical system. Prior to the Critique of Judgement, Kant wrote the Critique of Pure Reason and the Critique of Practical Reason. Together, these three works are considered the foundation of Kant's philosophical system.¹⁷ Kant developed this system in order to understand the nature and limits of human knowledge.¹⁸ Below, I will give a brief overview of how he classifies this system.

Kant makes a dichotomy of two worlds: the phenomenal and the noumenal. The phenomenal world is the world as it appears to us. The noumenal world consist of 'the things in themselves'. One can sensibly observe the phenomenal world, but of the noumenal world, one cannot have a sensible experience.¹⁹ Kant criticized traditional metaphysics for merging phenomena and noumena. This conflation led to conclusions about objects that do not fall within the domain of a possible experience. This led him to the question what possible experience we can have.²⁰ To answer this question, Kant explains how man attains knowledge in the first place. To do this, he distinguishes three 'powers' of the mind, which he calls 'faculties'. These are the faculties of sensibility, understanding and of reason. All these faculties have different cognitive tasks and produce certain representations. Additionally, they all have *a priori* forms which precede empirical knowledge. *A priori* forms of the faculty of sensibility are time and space. These *a priori* forms cover all sensory aspects of our sensible cognition's experience. In this sense, sensible cognition refers to "the representation of objects

¹⁷ Immanuel Kant, *Kritiek Van De Zuivere Rede*, trans. Jabik Veenbaas (Amsterdam: Boom, 2004), 31.

¹⁸ Michelle Grier, "Kant's Critique of Metaphysics," In *The Stanford Encyclopedia of Philosophy*, Article published February 2004, last modified March 2018, <https://plato.stanford.edu/archives/sum2018/entries/kant-metaphysics/>.

¹⁹ Immanuel Kant, *Critique of Pure Reason*, ed. Howard Caygill and Gary Banham, trans. Norman Kemp Smith (Basingstoke: Palgrave Macmillan, 2007), 257-75.

²⁰ Grier, "Kant's Critique of Metaphysics," 2.

that takes the form of knowledge by acquaintance.”²¹ This means that, according to Kant, our sensory experience has a spatio-temporal structure. We can conceive time and space without objects, but we cannot conceive the absence of space and time.²² The faculty of understanding knows twelve *a priori* concepts of the understanding. Kant calls these concepts ‘categories’. Whereas the faculty of sensibility ‘receives’ sensuous input, the faculty of understanding is the source of concepts and judgements. With the categories, our faculty of understanding ‘structures’ the input received by the faculty of sensibility.²³ The third faculty, that of reason, enables us to draw inferences and build syllogistic reasoning. The faculty of reason also has three *a priori* ideas which, according to Kant, cannot possibly be based on phenomenal experience. These are the ideas of God, the world (as a whole) and the soul. It is not just reason, Kant claims, that came to these ideas, but *pure reason*. God, the world and the soul ‘are’ in the noumenal world, which means we cannot have *a posteriori*, that is, experience-based knowledge of them.²⁴ Unlike rationalist philosophers who predated Kant, such as René Descartes and Gottfried Leibniz, Kant believed that “although we think the soul, the world, and God (necessarily) *as* objects, these ideas actually lack objective reality.”²⁵ However, Kant also disagreed with empiricists such as David Hume and John Locke, who believed that only *a posteriori* knowledge can be valid and thus useful. Kant realizes the *a priori* ideas of pure reason serve a practical purpose. Although we cannot have knowledge of them, we can think these ideas.²⁶

In the Critique of Practical Reason, Kant explains how the concepts of the soul, the world and God serve this practical purpose. In order to behave morally, Kant explains, we must postulate concepts of freedom, immortality of the soul and of a God who can reward us with that immortality. Even though we cannot gain

²¹ Roberto Horácio de Sá Pereira, “What Is Nonconceptualism in Kant’s Philosophy?,” *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 164, no. 1 (2013): 246.

²² Kant, *Critique of Pure Reason*, 48-82.

²³ Kant, *Critique of Pure Reason*, 111-3.

²⁴ Kant, *Critique of Pure Reason*, 303-26 (original italics).

²⁵ Grier, “Kant’s Critique of Metaphysics,” 2.1 (original italics).

²⁶ Karin de Boer, *Kant’s Kritik van de zuivere rede: een leeswijzer* (Amsterdam: Boom, 2010), 9-14 (original italics).

objective knowledge of these ideas, they can serve as objective justifications for our moral actions.²⁷ Since the soul, the world and God are part of the noumenal sphere, man now participates in both the phenomenal and the noumenal world. In the phenomenal world, we are subjected to natural law. We can participate in the noumenal world by transcending the phenomenal world with our pure practical reason. When transcending the phenomenal world, we are independent from natural law, meaning one's reason can transcend the laws of nature. While looking at the starry sky, for example, one sees oneself as a diminished, matter-based creature, bound to eventually lose its life-force. Here, one is (overwhelmingly) exposed to the phenomenal world. While looking at moral law within oneself, one transcends the phenomenal world and participates in the noumenal.²⁸ For this reason, he famously concludes that he "found it necessary to destroy knowledge in order to make room for faith."²⁹

Now, Kant is left with the task of explaining how man can realize his freedom in nature. How exactly can reason transcend natural law? In order to explain this connection of the two worlds within us, Kant wrote the *Critique of Judgement*. In this work, he argues that certain judgements catalyze the process of this connection.³⁰ In the remainder of this chapter, I will elaborate on how Kant envisions this with regard to the aesthetic judgement. While discussing the *Critique of Judgement*, I will at times refer to 'An Introduction to Kant's *Critique of Judgement*' by Kant scholar Douglas Burnham. I will use this work, for Burnham wrote a "comprehensive and erudite," yet non-reductive, non-modernized exposition of the *Critique of Judgement* in its entirety.³¹

²⁷ Immanuel Kant, *Critique of Practical Reason*, ed. Mary J. Gregor and Andrews Reath, (Cambridge: Cambridge University Press, 1997), 17–89.

²⁸ Kant, *Zuivere Rede*, 32-3.

²⁹ Kant, *Critique of Practical Reason*, xiv.

³⁰ Kant, *Critique of Judgement*, 86-8.

³¹ Thomas Teufel, "An Introduction to Kant's *Critique of Judgment*," *British Journal of Aesthetics* 42, no. 2 (2002): 216–19.

1.2 The aesthetic judgement

In the Critique of judgement, Kant studies multiple forms of judgement, including aesthetic judgements. He explains that “aesthetic judgement refers not merely, as a judgement of taste, to the beautiful, but also, as springing from a higher intellectual feeling, to the *sublime*.”³² According to Burnham’s interpretation of Kant, “an aesthetic judgement (or judgement of taste) means a judgement which ‘connects’ a feeling of pleasure to the mere experience of something, and accordingly calls it ‘beautiful’, or ‘sublime’.”³³ The ‘mere experience’ refers to the fact that in the aesthetic judgement, the experience of something cannot be conditioned by either sensible or intellectual interest. Therefore, not all pleasures connected to experiences can be aesthetic pleasures. Calling one’s drawing beautiful because one is proud of it, for example, is falsely mistaken for an aesthetic judgement, for one has a subjective interest in the drawing.³⁴ Below, I will explain under what conditions, according to Kant, a judgement can be considered aesthetic. While doing so, I will first focus on the judgement of the beautiful. This will allow me to show how the judgement of the sublime opposes this, later on.

1.2.1 The beautiful According to Kant, the judgement of the beautiful meets four conditions. Kant also describes these features as ‘moments’ (in this order):³⁵

1) Disinterestedness: the relation to the observed object should be free of interest.³⁶ We “judge it on the basis of mere contemplation,” meaning we are indifferent to the existence of the object while judging it, but we merely judge whether it relates

³² Kant, *Critique of Judgement*, 27.

³³ Burnham, *Introduction to Kant*, 44.

³⁴ Kant, *Critique of Judgement*, 37-42.

³⁵ Kant, *Critique of Judgement*, 35-74.

³⁶ Note: When referring to something we want to judge as either beautiful or sublime, I will speak of ‘the object’. ‘Object’ can therefore refer to a traditional object such as a vase, as well as to the passage of a poem or the sight of a cloudy sky.

to the feeling of delight or aversion.³⁷ When we judge an object by means of a delight, *apart from any interest*, we call this object *beautiful*.³⁸

2) Universality: without having an objective concept of beauty, our judgement pretends to have some sort of universal validity. Because of our disinterestedness towards the object, we feel completely *free* to judge it as beautiful. This freedom means the delight is not based on any subjective inclination. Therefore, we presuppose every other person would judge this object in similar fashion.³⁹ For example, if one think some drawing is beautiful, simply because the drawing delights one, one thinks everyone else should feel the same way about it. However, one cannot prove the beauty of what one judges as so, since one has no concept of beauty. Kant claims we cannot have a concept of beauty, because from concepts, “there is no transition to the feeling of pleasure or displeasure.”⁴⁰ Below, we will see that pleasure is necessary in forming an aesthetic judgement.

3) Purposiveness: the object appears to be designed or manufactured, because its beauty seems to have a purpose. However, beauty has no definite purpose, meaning it does not strive to be utilized, nor to be perfect. Yet, we still recognize purposiveness in the object. It is this recognition of purposiveness that brings us pleasure, since pleasure arises when a purpose is achieved, or in the case of beauty, purposiveness is recognized.⁴¹ What Kant is doing here is far more complex than I have just described. Understanding his notion of purposiveness in relation to aesthetics requires a comprehensive understanding of his philosophical system. This notion of purposiveness is so complex that it is still debated to this day.⁴² For

³⁷ Kant, *Critique of Judgement*, 37-42.

³⁸ Kant, *Critique of Judgement*, 41 (original italics).

³⁹ Kant, *Critique of Judgement*, 43.

⁴⁰ Kant, *Critique of Judgement*, 43.

⁴¹ Kant, *Critique of Judgement*, 52-4.

⁴² Hannah Ginsborg, “Kant’s Aesthetics and Teleology,” In *The Stanford Encyclopedia of Philosophy*, Article published July 2005, last modified December 2019, 3.1, <https://plato.stanford.edu/archives/win2019/entries/kant-aesthetics/>.

the remainder of this thesis, I will not join this debate, for the key takeaway is that purposiveness is recognized, and this brings us pleasure.

4) Necessity: following the sense of universal validity comes the realization that not everyone will share one's pleasure in the object. Therefore, not everyone will agree with one's judgement, but everyone 'ought to do so'.⁴³ Kant explains this as follows:

[...] beauty is not a concept of the object, and the judgement of taste is not a cognitive judgement. The latter simply claims that we are justified in presupposing that the same subjective conditions of judgement which we find in ourselves are universally present in everyone, and further that we have rightly subsumed the given object under these conditions.⁴⁴

This necessity of the judgement is based on what Kant refers to as our 'common sense'. By common sense, he means a subjective principle for taste, which determines what pleases or displeases. It does so by means of feeling and not through concepts, yet, it does so with universal validity. Our common sense is a mere ideal standard for the judgement of the beautiful.⁴⁵

In summary, this means that according to Kant, when we truly judge an object as beautiful, we are not in a relationship of interests with it. This is linked to the idea that our judgement holds universal validity. In addition, we recognize 'the form of purposiveness' in the object, even though beauty has no definite purpose. Finally, based on our subjective principle of common sense, we assume that the pleasure we derive from what we witness stands in a necessary relation to the object. This results in us considering the necessity of our judgement as exemplary,

⁴³ Kant, *Critique of Judgement*, 68.

⁴⁴ Kant, *Critique of Judgement*, 120.

⁴⁵ Kant, *Critique of Judgement*, 69-70.

meaning we consider our own judgement of the beautiful as how everyone is ought to judge.⁴⁶

Books could be and have been written on the implications of Kant's notion of the aesthetic judgement of the beautiful. For the remainder of this thesis, however, these implications are irrelevant. Therefore, I will now focus on Kant's notion of the sublime.

1.2.2 The sublime compared to the beautiful The sublime, as Kant describes it, is an object "the representation of which determines the mind to regard the elevation of nature beyond our reach as equivalent to a presentation of ideas."⁴⁷ This definition of the sublime is best understood from his division of the concept, which will be covered in the next paragraph. For now, I will base myself on Burnham's interpretation of Kant's sublime. According to Burnham, the sublime stands at its most general for whatever makes us experience awe. Kant refers to this awe as "sacred awe."⁴⁸ This 'whatever' could be an ocean, architecture, as well as heroic human actions or the passage of a poem. More specifically, the sublime stands for "the feeling of, or associated with, the overwhelmingness of an object."⁴⁹ Kant refers to this overwhelmingness as *astonishment*.⁵⁰ Taking up over twelve pages, Kant's definition of the sublime is quite extensive. Burnham's definition of the sublime is compact, yet true to Kant's. Therefore, I will mostly make use of Burnham's definition and terminology.

Just like the judgement of the beautiful, the judgement of the sublime is an aesthetic judgement, according to Kant. Although, to some respect, these judgements oppose each other, they show three relationships of identity. First, both the judgement of the sublime and the judgement of the beautiful are characterized by disinterestedness. Being frightened by a tsunami will not allow

⁴⁶ Kant, *Critique of Judgement*, 35-71.

⁴⁷ Kant, *Critique of Judgement*, 98.

⁴⁸ Burnham, *Introduction to Kant*, 88; Kant, *Critique of Judgement*, 99.

⁴⁹ Burnham, *Introduction to Kant*, 88.

⁵⁰ Kant, *Critique of Judgement*, 99 (original italics).

one to experience the sublime, for getting to safety will be one's priority. Secondly, just like the beautiful, we assume our judgement of the sublime has universal validity. One would have a hard time understanding why one's neighbor is not as impressed by the thunderstorm as oneself is. Thirdly, if one judges an object as sublime, one feels that this is based on one's common sense, just like when one judges an object as beautiful. As these moments are key to the judgement of the beautiful and the sublime, Kant argues that just like the beautiful, the sublime is an aesthetic judgement.⁵¹

Although the sublime and the beautiful are both aesthetic judgements, they oppose each other as well. Kant names three relationships of difference. First, beauty focusses on the form of an object, such as the shape of a statue. The sublime on the other hand, can be ascribed to things that are formless. We cannot really comprehend the form of a hurricane or even of an Egyptian pyramid, for we cannot appreciate its form, size and details simultaneously. Secondly, beauty is compatible with the notion of 'charm', like with the inclusion of charming ornaments in a beautiful living room. The sublime, however, has no relation with 'charm', as it is more 'serious' due to its involvement with negative feelings akin to pain. Thirdly, while judging the beautiful, we recognize purposiveness, which makes pleasure arise from this judgement. On the contrary, while judging the sublime, the object initially causes outrage, for the sublime resists our attempt to find form in the object. The object will appear as counter-purposive. Nevertheless, this experience ends with a sense of pleasure.⁵²

Although aesthetic judgements are subjective according to Kant, the beautiful does in fact say something about the form of the object. The sublime, however, does not. Therefore, Kant concludes that when one experiences something as sublime, this feeling is completely internal to the subject. The object, which merely gives rise to that feeling, is in itself not sublime. Remarkably,

⁵¹ Kant, *Critique of Judgement*, 96-108.

⁵² Kant, *Critique of Judgement*, 76-110.

although the sublime object does not allow our cognition to ascribe purposiveness to it, we still derive pleasure from encountering it. Kant argues something else must be happening in order for us to experience pleasure from this outraging, ‘painful’ experience.⁵³ In order to explain how Kant envisions this, I will first explain how he distinguishes the mathematical and the dynamical sublime.

1.3 Stages of the sublime Kant distinguishes between the mathematical and the dynamical sublime. When we experience something as overwhelming because of its size, we are dealing with the mathematical sublime. This form of sublimity outrages our imagination, for our senses cannot grasp all that we see. When we experience something as overwhelming because of the vastness of its power, we are dealing with the dynamical sublime. This form of sublimity outrages our will, for we realize we are no match for its power. Kant claims the experience of the sublime should be understood as a two-stage process. In the first stage, both forms of the sublime find counter-purposiveness in the object. The mathematical sublime leads to the realization that our sensible cognition is unable to aesthetically grasp the object. We therefore cannot comprehend the object in one intuition.⁵⁴ The dynamical sublime confronts our will with the realization that we cannot offer any resistance to the object’s power. Our will, Kant explains, is “the faculty of desire and, as such, is just one of the many natural causes in the world.”⁵⁵ Both the effects of the mathematical and the dynamical sublime have in common that our cognitive faculties and our will cannot pursue their fundamental purposes, leading to displeasure. In the second stage, something transforms the sublime experience into a pleasurable one.⁵⁶

Sublimity, Kant claims, is not in the object itself, but in the mind of the contemplating subject. When confronted with something either mathematically or

⁵³ Kant, *Critique of Judgement*, 76-101.

⁵⁴ Kant, *Critique of Judgement*, 78-96.

⁵⁵ Kant, *Critique of Judgement*, 8.

⁵⁶ Kant, *Critique of Judgement*, 88-101.

dynamically sublime, our mind stumbles upon something that transcends the initial overwhelmingness. With regard to the mathematical sublime: our sensible cognition's apparent inability to grasp the object leads to the revelation of a purposiveness in this failure. Since our sensible cognition cannot comprehend the object, our faculty of reason and its idea of totality 'step in'. Our reason is compelled to think totality in and beyond nature.⁵⁷ Since nature is part of an endless chain of cause and effect, our reason cannot comprehend it in its totality and therefore transcends this chain.⁵⁸ Thus, the first overwhelming stage of the mathematical sublime confronts us with our sensible cognition's inability to comprehend the object. The second stage makes us realize that, being compelled to do so, our reason will necessarily experience the totality of the object, exceeding nature in the process. This makes us recognize purposiveness in the second stage, because sensible cognition's failure to grasp the object led to a purpose for our reason. This unexpected purposiveness in the second stage, makes the sublime experience pleasurable.⁵⁹

With regard to the dynamical sublime: our will appears unable to overcome the object's power. This leads to the revelation of our moral nature transcending our sensible selves. The dynamical sublime belongs to the sphere of our freedom, which cannot be assailed by forces of nature, for it refers to *activity without natural determination*.⁶⁰ When confronted with the overwhelming power of nature and thus with the will's inability to offer resistance, our reason transcends nature's determinations. While doing this (in the second stage), pleasure is experienced because our reason is able to think a freedom which transcends the determinations of natural law. This process results in the revelation of our moral nature. Reason's demand for the transcendence of the will over natural law thus goes hand in hand with reason's own demand to obey moral law.⁶¹ Moral law is

⁵⁷ Kant, *Critique of Judgement*, 86-7.

⁵⁸ Burnham, *Introduction to Kant*, 97-9.

⁵⁹ Kant, *Critique of Judgement*, 88-9.

⁶⁰ Burnham, *Introduction to Kant*, 99-100 (original italics).

⁶¹ Kant, *Critique of Judgement*, 81-99.

an incentive in the judgement of reason. Based on moral law, Kant formulated his categorical imperative, which tells us to “act only in accordance with that maxim through which you can at the same time will that it become a universal law.”⁶²

Sensible cognition and reason now seem to be in conflict. Reason is compelled to find totality and freedom in nature, while sensible cognition delivers nothing but limitations to that vocation. Kant claims that this is not the case, and this ‘conflict’ should be seen as a kind of purposiveness, which means it is experienced as pleasurable. He explains that reason’s demands are in resistance to sense’s interests. This leads to a revelation of the sensible faculties’ true calling, which, according to Burnham’s interpretation, is to also serve as a means for the higher faculty of reason: “[sensible faculties] are coordinated with respect to moral vocation.”⁶³

Kant claims that nothing sublime can be found in nature, for the sublime is subjective. The reason we nevertheless ascribe sublimity to objects, is that the experience of the sublime is subject to ‘subreption’, a kind of forgetting. One would not say: “wow, my reason just transcended my sensible cognition’s inability to comprehend that tornado in its totality, such a sublime experience!” One says: “that tornado is sublime, isn’t it?” According to Kant, this is due to the fact that we are only aware of the occurrence of the first stage of the sublime experience. Even though we feel the effect of the second stage, we ‘forget’ the revelation of human transcendence. This is why we refer to the observed object when we speak of sublimity. Thus, in the common usage of the term, ‘sublime’ refers to the catalyst, the object, which merely allows the actual sublime process to take place in the second stage.⁶⁴

⁶² Peter Herissone-Kelly, *Kant on Maxims and Moral Motivation : A New Interpretation*, Studies in German Idealism, Volume 21 (Cham, Switzerland: Springer, 2019), 115.

⁶³ Kant, *Critique of Judgement*, 87-99; Burnham, *Introduction to Kant*, 100.

⁶⁴ Kant, *Critique of Judgement*, 76-98.

1.4 Moral culture We can judge objects as sublime due to the development of moral ideas, Kant argues. These moral ideas can develop on a basis of culture.⁶⁵ Burnham has tied these terms together under the heading of 'moral culture'. In this sense, culture refers to the training our faculties of judgement and understanding undergo, as well as the context in which this happens (the environment). Moral culture then refers to a culture "that has developed the capacity for understanding and feeling the fount of moral action in man's freedom for moral law."⁶⁶ A mind so cultivated that it understands morality as a function of freedom, is receptive for rational ideas. This mind will understand that reason is a human characteristic that can somehow transcend the laws of nature. Hereby, Kant does not claim that exclusively some elite cultured group of people can experience the sublime. All people possess the transcendental conditions to experience the sublime. However, he does argue that not all people are aware of this experience. In order to become aware of this feeling, one must first train the relevant faculties through moral culture. This enables people to understand the demands of their own reason. This understanding will result in the ability to experience the sublime. Therefore, moral culture is required for the sublime experience. It is also reinforced by it.⁶⁷

1.5 Aesthetic judgements and morality According to Kant, moral culture is required for the experience of the sublime. Without it, we would only experience the first, terrifying stage of the sublime, for reason would not be able to redeem this pain. To experience the sublime is to further discipline moral culture on the individual level. It therefore may also create an exemplary situation for the social culture on a larger scale.⁶⁸ Kant believes aesthetic experiences serve to educate our moral feeling: "The beautiful prepares us to love something, even nature, apart

⁶⁵ Kant, *Critique of Judgement*, 95.

⁶⁶ Burnham, *Introduction to Kant*, 101.

⁶⁷ Kant, *Critique of Judgement*, 94-6.

⁶⁸ Kant, *Critique of Judgement*, 95-6.

from any interest: the sublime to esteem something highly even in opposition to our (sensuous) interest."⁶⁹

To summarize this chapter: Kant claims that the judgement of the sublime is an aesthetic judgement. This experience consists of a painful, terror-like stage, followed by pleasurable stage, due to reason offering resistance to the senses. This experience is possible by way of moral culture.⁷⁰ At the same time, experiencing the sublime serves as a propaedeutic for morality.⁷¹ In the next chapter, I will discuss what some consider the psychological variant of the sublime.⁷²

⁶⁹ Kant, *Critique of Judgement*, 98.

⁷⁰ Kant, *Critique of Judgement*, 99.

⁷¹ Ginsborg, "Aesthetics and Teleology", 2.8.

⁷² Arcangeli et al., *Complex Relationship*, 2.

Chapter 2: Awe

2.1 A complex emotion In this chapter I will cover the contemporary discussion on 'awe', for multiple studies suggest that "what psychologists call 'awe' is what philosophers call 'experience of the sublime.'"⁷³ Awe can be defined as "a complex emotion or emotional construct characterized by a mix of positive (contentment, happiness), and negative affective components (fear and a sense of being smaller, humbler or insignificant)."⁷⁴ Whereas the sublime has been the subject of philosophical discussions since the days of Dionysius Longinus (1st century CE), the field of psychology only started studying awe in 2003.⁷⁵ The topic was introduced in 'Approaching Awe, a Moral, Spiritual, and Aesthetic Emotion,' by Dacher Keltner and Jonathan Haidt.⁷⁶ With this study, they have laid the foundation for the further scientific approach to awe. Ever since, awe has been a popular subject in psychology, especially because of its many effects, both physiological, psychological and social. This popularity has led to many empirical studies on this complex emotion, which in turn have yielded many results.⁷⁷ In the next chapter I will discuss the extent to which these results are applicable to the sublime. In this chapter, taking into account the past eighteen years of research, I will explain the supposed effects of awe, starting with the physiological ones.

2.2 Effects of awe: physiological Some studies mention piloerection, better known as goose bumps, as an immediate physiological effect of awe. Dacher Keltner claims we experience goose bumps when we "feel expanded beyond the

⁷³ Robert Clewis, "Towards A Theory of the Sublime and Aesthetic Awe," in *The Sublime Reader*, ed. Robert R. Clewis (London: Bloomsbury Academic, 2018), 341-54; Arcangeli et al., *Complex Relationship*, 2.

⁷⁴ Arcangeli et al., *Complex Relationship*, 1.

⁷⁵ Philip Shaw, *The Sublime* (London: Routledge, 2006) 4.

⁷⁶ Dacher Keltner and Jonathan Haidt, "Approaching Awe, a Moral, Spiritual, and Aesthetic Emotion," *Cognition and Emotion* 17 (2003): 297-314.

⁷⁷ Robert Clewis, David Yaden, and Alice Chirico. "Intersections between Awe and the Sublime: A Preliminary Empirical Study," *Empirical Studies of the Arts* (2021): 24-5, <https://doi.org/10.1177/0276237421994694>; Alexander Danvers and Michelle Shiota, "Going Off Script: Effects of Awe on Memory for Script-Typical and -Irrelevant Narrative Detail," *Emotion* 17, no. 6 (2017): 938-52.

boundaries of our skin, and feel connected to other group members. [...] Our self is expanding beyond our physical boundaries to fold into a collective.”⁷⁸ Another study suggests that physical health improves as a long term effect of experiencing awe on a frequent basis. This study found that the more awe subjects experienced, the lower their levels of proinflammatory cytokine were.⁷⁹ “High levels of proinflammatory cytokines have been linked to a number of chronic diseases, such as cardiovascular disease, diabetes, and depression.”⁸⁰ Although more research needs to be conducted on the causality of the correlation, we can at least state that there is in fact a correlation between awe and lower levels of proinflammatory cytokines. If awe can be proven to be causally responsible for these lower levels, awe is proven to be physically healthy.

2.2.1 Effects of awe: psychological Awe seems to have more psychological than physiological effects. Multiple studies conclude that awe has many positive psychological effects, both cognitive and emotional. Psychological effects lead to social effects, which I will cover later. First, I will briefly explain some of the psychological effects awe is said to have:

- *‘the small self’ and humility.* In their study on the effects of nature on emotions, Yannick Joye and Jan Willem Bolderdijk concluded that awe makes people feel small. This confirmed the idea that “awe is an emotional response to exceptional (natural) vastness.”⁸¹ Small, in this sense, means that subjects experience a relatively diminished sense of self in relation to the vastness of the observed object. ‘Diminished’ refers to the feeling of decrease in significance of one’s goals and entire being.⁸² According to Paul Piff et al., this feeling leads to

⁷⁸ Dacher Keltner, *Born to be good: the science of a meaningful life* (New York: W.W. Norton & Co, 2009), 336.

⁷⁹ Jennifer Stellar et al., “Positive Affect and Markers of Inflammation: Discrete Positive Emotions Predict Lower Levels of Inflammatory Cytokines,” *Emotion* 15, no. 2 (2015): 129–33. <https://doi.org/10.1037/emo0000033>.

⁸⁰ Summer Allen, “The Science of Awe,” (Ph.D. White paper, Greater Good Science Center at UC Berkeley, 2018), 23.

⁸¹ Yannick Joye and Jan Willem Bolderdijk, “An Exploratory Study into the Effects of Extraordinary Nature on Emotions, Mood, and Prosociality,” *Frontiers in Psychology* 5 (2015): 7, <https://doi.org/10.3389/fpsyg.2014.01577>.

⁸² Paul Piff et al., “Awe, the Small Self, and Prosocial Behavior,” *Journal of Personality and Social Psychology* 108, no. 6 (2015): 884,

“more prosocial tendencies by broadening the individual’s perspective to include identities vaster and more powerful than oneself and diminishing the salience of the individual self.”⁸³ Additionally, awe evokes humility. Jennifer Stellar et al. found that people prone to awe are considered more humble by their peers. Participants of their study also felt more humble when feeling awe either via video, emotion recall and ‘in vivo’ experiences. This humility is most likely a result of the small self-experience.⁸⁴ Humble in this sense opposes pride:

Pride gives rise to an inflated self-concept and subsequently a sense of superiority and dominance over others [...], awe shifts self-perception in the opposite direction, causing an individual to fully appreciate the value of others and see themselves more accurately, evoking humility.⁸⁵

- *Cognitive accommodation*. In 2017, a study was conducted into the effects of awe on our reliance on ‘scripts’. Scripts refer to our “default tendency to filter current experience through the lens of prior knowledge and expectations.”⁸⁶ The results showed that awe promotes increased cognitive accommodation by inhibiting our tendency to ‘view the world through a script’. Awe does this by “suppressing the usual expectations through which people filter experience of the world, and enhancing people’s attention to unexpected details.”⁸⁷ This study presented a story about a traditional romantic dinner to its participants. While recalling this story, participants in awe state were less likely to recall false details than participants in neutral or other positive emotion states. For the participants in awe state, the likeliness of a falsely recalled detail had less truth value. While in awe state, participants also responded more strongly to the quality of arguments

<https://doi.org/10.1037/pspi0000018>.

⁸³ Piff et al., “Small Self,” 895-6.

⁸⁴ Jennifer Stellar et al., “Awe and Humility,” *Journal of Personality and Social Psychology* 114, no. 2 (2018): 258–6, <https://doi.org/10.1037/pspi0000109>.

⁸⁵ Stellar et al., “Awe and Humility,” 266.

⁸⁶ Danvers and Shiota, “Going Off Script,” 947.

⁸⁷ Danvers and Shiota, “Going Off Script,” 949.

than participants in neutral or other positive emotion states, who were more responsive to the quantity of arguments.⁸⁸ This is in line with a 2010 study that found people in a state of awe to be more critical of persuasive messages than people in neutral or other positive emotion states.⁸⁹ The results of these studies add to the hypothesis that awe induces cognitive accommodation.

- *Other psychological effects.* Awe is thought to have many more psychological effects. Most of these effects are still the subject of research, for although the current evidence seems promising, more is needed to causally connect awe to those effects. A small selection: one study suggests that awe is thought to influence our time-perception, resulting in an increased willingness to help others.⁹⁰ Consistent with the results of multiple studies, awe's influence (on our perception of time) supposedly also leads to a decreased materialism.⁹¹ Another study has shown that by confronting people with what they cannot comprehend, awe can lead some people to look for explanations in the supernatural.⁹² Interestingly enough, another study has shown that awe can lead children to look for explanations through scientific learning.⁹³ Additionally, one study has shown that "awe drives theists away from scientific explanations (and correspondingly toward supernatural explanation [...])."⁹⁴ The study also suggests that, although less obviously, but still likely, awe drives nontheists to scientific explanations. According to Piercarlo Valdesolo, Junn Park and Sara Gottlieb, these findings suggests that "the effect of awe on explanation is not limited to the domain of the supernatural, and that existing differences in theism matter in

⁸⁸ Danvers and Shiota, "Going Off Script," 938-52.

⁸⁹ Vladas Griskevicius, Michelle Shiota, and Samantha Neufeld, "Influence of Different Positive Emotions on Persuasion Processing: A Functional Evolutionary Approach," *Emotion* 10, no. 2 (2010): 190-206.

⁹⁰ Melanie Rudd, Kathleen Vohs, and Jennifer Aaker, "Awe Expands People's Perception of Time, Alters Decision Making, and Enhances Well-Being," *Psychological Science* 23, no. 10 (2012): 1130-36.

⁹¹ Libin Jiang et al., "Awe Weakens the Desire for Money," *Journal of Pacific Rim Psychology* 12 (2018): 1-10, <https://doi.org/10.1017/prp.2017.27>.

⁹² Piercarlo Valdesolo and Jesse Graham, "Awe, Uncertainty, and Agency Detection," *Psychological Science* 25, no. 1 (2014): 170-78.

⁹³ Piercarlo Valdesolo, Andrew Shtulman, and Andrew Baron, "Science Is Awe-Some: The Emotional Antecedents of Science Learning," *Emotion Review* 9, no. 3 (2017): 215-21, <https://doi.org/10.1177/1754073916673212>.

⁹⁴ Piercarlo Valdesolo, Junn Park and Sara Gottlieb, "Awe and Scientific Explanation," *Emotion (Washington, D.C.)* 16, no. 7 (2016): 940, <https://doi.org/10.1037/emo0000213>.

determining what kinds of explanations experiences of awe motivate.”⁹⁵ This seems to suggest that awe reinforces prevailing worldviews. However, this could contradict the study of Alexander Danvers and Michelle Shiota, for they concluded that awe suppresses “the usual expectations through which people filter experience of the world [...]”⁹⁶ Further research will have to show whether these two results can be combined without excluding each other.

2.2.2 Effects of awe: social Many of the above mentioned psychological effects of awe lead to social effects. Most importantly, many studies conclude that awe leads to increased prosociality. As Piff et al. explain, prosocial tendencies, described as inclinations to care, share and assist, improve the functionality of individuals within social collectives. In several studies, participants in awe endorsed more ethical decisions, were more generous to strangers and reported more social values. As explained above, Piff et al. reason that the small, diminished self, drives the increase of prosocial behavior. As awe triggers a diminishment of the individual self in relation to the vastness of the witnessed object, it promotes more other-oriented, selfless behavior, also known as altruism.⁹⁷ Additionally, Stellar et al. suggest that awe creates greater group cohesion and coordination. Feeling awe towards an individual, the leader of the group, for example, can lead to commitment and devotion to that person. In this case, awe also leads to a positive view of the group to which the awe-inspired person belongs. It generates feelings of interconnectedness and common humanity.⁹⁸ In the next chapter, I will explain how these effects relate to the effects of the sublime.

⁹⁵ Valdesolo, Park and Gottlieb, “Awe and Scientific Explanation,” 940.

⁹⁶ Danvers and Shiota, “Going Off Script,” 949.

⁹⁷ Piff et al., “Small Self,” 883-97.

⁹⁸ Stellar et al., “Self-Transcendent Emotions,” 203.

Chapter 3: The sublime = aesthetic awe

3.1 A (not so) complex relationship In 'Awe and the Experience of the Sublime: A Complex Relationship', Margherita Arcangeli et al. claim there is a relationship between awe and the sublime, but this relationship is hard to define.⁹⁹ This is problematic, because the extent to which the results of empirical studies on awe are applicable to the experience of the sublime, depends entirely on the degree to which these concepts correspond to each other. Therefore, I will use this chapter to demonstrate how awe and the sublime can be reconciled under the same heading.

According to Arcangeli et al., the concepts of awe and the sublime do not refer to the same type of experience. They explain that, although it is likely that all sublime experiences lead to awe, "it is not clear that all awe-inspiring objects are also objects of [the experience of the sublime] or, for that matter, of any aesthetic experience at all."¹⁰⁰ Their suspicions are justified. Awe can be experienced due to fear of great danger.¹⁰¹ When awe is experienced due to fear, the relationship to the object is not disinterested and the object can therefore not be judged aesthetically in the Kantian sense.¹⁰² Luckily, some studies distinguish different kinds of awe. Besides fear-induced awe, sociopolitical awe, religious awe, and most importantly, aesthetic awe are distinguished as subsets of awe. These subsets refer to the different objects that inspire awe in the subject. One can experience sociopolitical awe, for example, by observing a powerful leader.¹⁰³ In this thesis, however, aesthetic awe is the most relevant type of awe, for it excludes non-aesthetic awe from the comparison with the sublime. The fact that both aesthetic awe and the

⁹⁹ Arcangeli et al., *Complex Relationship*, 2.

¹⁰⁰ Arcangeli et al., *Complex Relationship*, 3.

¹⁰¹ Clewis, "Towards A Theory," 340.

¹⁰² Kant, *Critique of Judgement*, 91

¹⁰³ Clewis, "Towards A Theory," 340.

sublime are aesthetic by definition, might make the relationship between these concepts a little less complex.

We now have the philosophical concept of the sublime on the one hand, and the psychological concept of awe on the other. Below, I will demonstrate that one subset of awe, aesthetic awe, refers to the same experience as the experience of the sublime. I am not the first person to do so. However, my predecessors made the connection between these terms solely on the basis of their definitions and the way in which these terms have been used interchangeably throughout history.¹⁰⁴ Therefore, I will be the first to substantiate this connection by demonstrating how Kant's ideas about the sublime find confirmation in empirical studies on awe.

3.1.1 Aesthetic Awe

Robert Clewis uses the terms sublime and aesthetic awe interchangeably. He justifies this alternate use of the terms by the fact that the English language has a long tradition of using both terms in similar ways and contexts.¹⁰⁵ He thinks it is "desirable if a philosophical theory is at least compatible with the latest scientific findings relevant to the topic."¹⁰⁶ Therefore, he decides not to dig any deeper into the conceptual difficulties of awe and the sublime. He does, however, explain that aesthetic awe differs from fear-induced awe, for the latter is characterized by "uncontrollable fear before a great power or threat."¹⁰⁷ Here, Clewis builds on Vladimir Konečni's definition of aesthetic awe. Konečni elaborates on the difference between aesthetic awe and fear-induced awe. Aesthetic awe, "the prototypical subjective reaction to a *sublime stimulus-in-context*," is "a unique, and fundamental, emotional product of *fear and joy*, a state as primordial from an evolutionary point of view."¹⁰⁸ Fear-induced awe, on the

¹⁰⁴ Arcangeli et al., *Complex Relationship*, 4; Clewis, "Towards A Theory," 340.

¹⁰⁵ Clewis, "Towards A Theory," 340.

¹⁰⁶ Clewis, "Towards A Theory," 341.

¹⁰⁷ Clewis, "Towards A Theory," 340.

¹⁰⁸ Vladimir Konečni, "Aesthetic Trinity Theory and the Sublime," *Philosophy Today* 55, (2011): 65 (original italics).

other hand, is a form of awe that involves neither pleasure nor joy, only uncontrollable fear.¹⁰⁹

Arcangeli et al. support the idea that the sublime is more evidently related to aesthetic awe than to awe in a general sense. They suggest that “[the experience of the sublime] would be a species of awe, namely aesthetic awe.”¹¹⁰ This is in agreement with Clewis’ idea of aesthetic awe (and thus the sublime) as a subset of awe. Arcangeli et al. claim that there are no *prima facie* reasons against the idea that Konečni’s definition of aesthetic awe refers to the same experience as the sublime does.¹¹¹ Looking at the descriptions of Konečni and Kant, we can clearly see the similarities. Both the sublime and aesthetic awe describe a subjective experience, catalyzed by an external object. More importantly, both the experience of the sublime and of aesthetic awe start out as outraging/fearful, only to be either overcome by a sense of pleasure, or to be mixed with joy. An important condition here is that neither aesthetic awe, nor the sublime can be experienced when fear prevails.¹¹² In agreement with Clewis and Arcangeli et al., we can conclude that the definitions of aesthetic awe and the sublime seem to describe the same experience.

The field of psychology generally claims that the sublime is a kind of awe, making awe the genus to the sublime.¹¹³ The field of philosophy often claims that the experience of the sublime “makes us experience awe”, making awe an effect of the sublime instead of its origin.¹¹⁴ I suggest it is exactly this difference in terminology that makes the relationship between these concepts so difficult to determine. “The terminology in this conceptual territory is [so] difficult”, it even limited a 2021 empirical study on discovering the link between these phenomena.¹¹⁵ Most articles on this subject come to the same conclusion, stating

¹⁰⁹ Konečni, “Aesthetic Trinity,” 65; Clewis, “Towards A Theory,” 340.

¹¹⁰ Arcangeli et al., *Complex Relationship*, 4.

¹¹¹ Arcangeli et al., *Complex Relationship*, 4 (original italics).

¹¹² Konečni, “Aesthetic Trinity,” 65; Kant, *Critique of Judgement*, 89-90.

¹¹³ Clewis, Yaden, and Chirico, “Intersections,” 24-5; Arcangeli et al., *Complex Relationship*, 4.

¹¹⁴ Burnham, *Introduction to Kant*, 88.

¹¹⁵ Clewis, Yaden, and Chirico, “Intersections,” 25.

that awe and the sublime are strongly correlated, and the awareness of that fact should form a bridge between the field of philosophy and the field of psychology.¹¹⁶ Arcangeli et al. even suggest philosophers “should get more interested in awe itself and its role in the determination of the overall valence of [the experience of the sublime].”¹¹⁷ I will take their advice to heart by building on their suggestion that “[the experience of the sublime] would be a species of awe, namely aesthetic awe.”¹¹⁸ Below, I will show how this suggestion can be confirmed by combining the ideas of the Kantian sublime with empirical studies on the effects of awe. However, I will first dig a little deeper into the conceptual differences of awe and the sublime.

3.2 Similarities and differences: definitions The sublime refers to “the feeling of [...] the overwhelmingness of an object.”¹¹⁹ This overwhelmingness can be felt due to the vastness of either the size or power of an object. According to Piff et al., awe can be defined as “an emotional response to perceptually vast stimuli that transcend current frames of reference.”¹²⁰ Aesthetic awe, as described by Konečni, is simply awe that leads to *existential security*, which means fear cannot prevail.¹²¹ Arcangeli et al. suggest that there are no *prima facie* reasons to accept that Konečni’s notion of aesthetic awe refers to the same experience as the sublime.¹²² Therefore, we could state that aesthetic awe, as described by Konečni, is simply awe that is induced by an object we would also judge as sublime. However, as I will show below, there may be a reason why Konečni’s aesthetic awe does not refer to the exact same experience as the Kantian sublime.

It is unclear whether Konečni’s criteria for awe to be aesthetic meet Kant’s terms for a judgement to be sublime. In order to judge an object as sublime, Kant

¹¹⁶ Clewis, Yaden, and Chirico, “Intersections,” 26.

¹¹⁷ Arcangeli et al., *Complex Relationship*, 4.

¹¹⁸ Arcangeli et al., *Complex Relationship*, 4.

¹¹⁹ Burnham, *Introduction to Kant*, 88.

¹²⁰ Piff et al., “Small Self,” 883.

¹²¹ Konečni, “Aesthetic Trinity,” 65 (original italics).

¹²² Arcangeli et al., *Complex Relationship*, 4 (original italics).

sets the conditions of disinterestedness, universal validity, necessity and pleasure. Universality follows disinterestedness, and necessity follows universality. Subsequently, this must lead to pleasure in order for the experience to be sublime.¹²³ This means that in equating the sublime and aesthetic awe, disinterestedness is a particularly important condition. Konečni explains that for awe to be aesthetic, it cannot be fear-induced, and it has to lead to existential security. Existential security is the feeling one gets when the initial overwhelmingness is met by a sense of safety, which results in joy.¹²⁴ The problem here is that Kant's condition for disinterestedness covers more than just fear. Therefore, an awe experience that is aesthetic under Konečni's conditions might not necessarily be aesthetic under Kant's condition of disinterestedness. However, I will show that aesthetic awe, as described by Konečni, could still be aesthetic in the Kantian sense.

As described in 1.2.1, being disinterestedness towards an object means we are indifferent to its existence while judging it. We merely judge whether it relates to the feeling of delight or aversion. It is not clear whether Konečni also applies this strict condition for awe to be aesthetic. However, Sandra Shapshay explains that awe responses are generally aesthetic by definition, for "awe tends to be an outwardly, object-focused emotion, rather than a self-focused emotion like happiness or pride."¹²⁵ An object is often awe-inspiring because one judges it "for its own sake rather than in some particular-goal-directed way."¹²⁶ Therefore, it is more likely that one would be in awe due to the perceptual features of an object than due to being in a relationship of interests with the object.¹²⁷ Additionally, Konečni claimed that the feelings of existential security, "that are indispensable for aesthetic awe to occur," are rather Kantian.¹²⁸ Existential security is a product of

¹²³ Kant, *Critique of Judgement*, 77-8.

¹²⁴ Konečni, "Aesthetic Trinity," 69.

¹²⁵ Sandra Shapshay, "A Two-Tiered Theory of the Sublime," *The British Journal of Aesthetics* 61, no. 2 (2021): 132, <https://doi.org/10.1093/aesthj/ayaa047>.

¹²⁶ Shapshay, "Two-Tiered Theory," 132.

¹²⁷ Shapshay, "Two-Tiered Theory," 132.

¹²⁸ Konečni, "Aesthetic Trinity," 69.

what both Konečni and Kant describe as an experience that starts out as outraging/fearful, only to be either overcome by a sense of pleasure or to be mixed with joy.¹²⁹ Kant's pleasure necessarily results from his conditions for a judgement to be sublime, since this pleasure, experienced due to the found purposiveness in the second stage of the sublime, is conditional for an experience to be sublime.¹³⁰ Since Kant's pleasure and Konečni's existential security seem to describe a similar feeling, it is unlikely that existential security could come about in ways that are not in accordance with Kant's conditions for a judgement to be sublime. More precisely, it seems unlikely that one could feel existential security when one is in a relationship of interests with the observed object. Therefore, it seems reasonable to assume that Konečni's notion of aesthetic awe meets Kant's conditions for a judgement to be sublime. This means that we can fully accept Arcangeli et al.'s suggestion that aesthetic awe refers to the same experience as the sublime. In order to further substantiate this claim, I will demonstrate how Kant's ideas about the sublime find confirmation in empirical studies on awe.

3.2.1 Similarities and differences: effects Awe is thought to be physically healthy, yet stating this with certainty requires more research.¹³¹ The sublime is also thought to be physically healthy. Kant explained that the sublime momentarily 'puts a hold' on the vital forces, only to discharge them all the more powerful.¹³² This "shudder that is associated with the sublime belongs to the vital sense (*sensus vagus*) and penetrates the body to the center of life."¹³³ Clewis explains that this process vivifies the body. The mental movement of the sublime's "springboard-like bouncing between positive and negative poles" is physically healthy for the body.¹³⁴ This results in the contribution to one's happiness. Claims

¹²⁹ Konečni, "Aesthetic Trinity," 65; Kant, *Critique of Judgement*, 89-90.

¹³⁰ Kant, *Critique of Judgement*, 88-9.

¹³¹ Stellar et al., "Positive Affect, 132.

¹³² Kant, *Critique of Judgement*, 75-6.

¹³³ Robert Clewis, *The Kantian Sublime and the Revelation of Freedom* (Cambridge, UK: Cambridge University Press, 2009), 167 (original italics).

¹³⁴ Clewis, *Revelation of Freedom*, 167.

about the physiological effects of both awe and the sublime require more research. Although they both claim beneficial health effects, the similarities between these claims are not necessarily evident.

In psychological and social effects, we can find more evident similarities. Kant explained that the sublime makes us experience a feeling that is contrary to sensible interests. By doing this, it teaches us to put our self-centered interests to the side, so we can esteem something that conflicts with our own interests. When the right time comes, we can act out of moral respect because of this experience. This way, the experience of the sublime serves as a propaedeutic for morality. To experience the sublime is to further discipline moral culture on the individual level. Therefore, it may also create an exemplary situation for the social culture on a larger scale.¹³⁵ Here, we can see that Kant ascribes a societal function to the sublime. Clewis explains that by representing moral law, the sublime makes us understand how moral law feels. By experiencing this, “the sublime offers us the possibility of feeling the freedom to choose to live up to the demands of morality.”¹³⁶ In the studies on the effects of awe, we can find similar psychological and social effects. As we have seen in ‘Awe, the Small Self, and Prosocial Behavior’ by Piff et al., participants in awe endorsed more ethical decisions, were more generous to strangers and reported more social values. This is because awe triggers a diminishment of the individual self in relation to the vastness of the witnessed object. This promotes more other-oriented, selfless behavior, also known as altruism.¹³⁷ This is consistent with the claims of both Kant and Clewis that the sublime serves as a propaedeutic, reminding us of our freedom to live up to morality. Additionally, Piff et al. suggest that “by diminishing the emphasis on the individual self, awe may encourage people to forego strict self-interest to improve the welfare of others.”¹³⁸ This is again consistent with Kant’s claim that by making

¹³⁵ Kant, *Critique of Judgement*, 95-101.

¹³⁶ Clewis, *Revelation of Freedom*, 139.

¹³⁷ Piff et al., “Small Self,” 895-7.

¹³⁸ Piff et al., “Small Self,” 897.

us experience a feeling that is contrary to sensible interests, the sublime teaches us to act out of moral respect.

The similarities between the effects ascribed to the sublime and awe seem to confirm that these two terms refer to the same experience. If this is the case, the advice of Arcangeli et al. goes both ways. Philosophers should not just “get more interested in awe itself and its role in the determination of the overall valence of [the experience of the sublime].”¹³⁹ Likewise, the field of psychology should show mutual interest in what philosophers have been saying about the sublime and its role in the determination of the overall valence of awe.

3.2.2 Positive and negative awe Above, we have seen that the ideas about the supposed effects of the Kantian sublime find confirmation in empirical studies on awe. These findings, however, lead to a new problem. The studies consulted refer to awe in a general sense. The sublime, however, only relates to aesthetic awe. If the results of the studies on awe were based on fear-induced awe, they would not be applicable to the sublime.

Luckily, a 2019 study examined whether different types of awe also produce different effects. Fang Guan et al. made a distinction between positive and negative awe. Positive awe is mostly characterized by greater feelings of tonic positive affect and calm states. Negative awe, on the other hand, describes experiences that “are associated with greater feelings of fear and powerlessness [...]”¹⁴⁰ Looking at Konečni’s definition of aesthetic awe, the ‘existential security’ one experiences as a result of chills and thrills seems to fit in with the description of greater feeling of calm states. More so, aesthetic awe cannot be characterized by feelings of fear and powerlessness. Aesthetic awe therefore logically falls under the category of positive awe.¹⁴¹ Since the sublime refers to the same experience as aesthetic awe, the sublime also falls under the category of positive awe. Fear-

¹³⁹ Arcangeli et al., *Complex Relationship*, 4.

¹⁴⁰ Guan et al., “Awe and Prosocial Tendency,” 1034.

¹⁴¹ Konečni, “Aesthetic Trinity,” 65; Guan et al., “Awe and Prosocial Tendency,” 1033.

induced awe logically falls under the category of negative awe, for it is characterized by feelings of fear and powerlessness: chills but no thrills.¹⁴²

Guang et al. found evidence that positive awe promotes prosocial behavior. Interestingly enough, negative awe can promote prosociality as well, but to a different effect. "Positive awe experience motivates a desire to help strangers both in the form of volunteering time and donating money."¹⁴³ Negative awe mostly leads to the donation of money, not to volunteering time. With these findings, Guang et al. confirm what Piff et al. concluded in their respective study.¹⁴⁴ Awe promotes prosocial behavior, also known as altruism. Since aesthetic awe falls under the category of positive awe, and positive awe is confirmed to promote prosociality, we can now confidently apply the effects of awe, as found by Piff et al., to aesthetic awe.

3.2.3 Prerequisite At first hand, the condition Kant sets for being able to experience the sublime seems to exclude certain people from experiencing aesthetic awe. This condition, as formulated by Burnham, is the acquirement of moral culture.¹⁴⁵ Without moral culture, reason would not be prepared for higher morality. Without it, one would only experience the outraging stage of the sublime.¹⁴⁶ Concerning the influence of culture on awe, Yang Bai et al. concluded the following:

[The] findings [of this study] are in keeping with the claim that the small self that awe produces might be thought of as a functional universal: that while varying in elicitor, magnitude, and content across cultures, it is

¹⁴² Konečni, "Aesthetic Trinity," 65.

¹⁴³ Guan et al., "Awe and Prosocial Tendency," 1039.

¹⁴⁴ Guan et al., "Awe and Prosocial Tendency," 1040; Piff et al., "Small Self," 897.

¹⁴⁵ Burnham, *Introduction to Kant*, 101-2.

¹⁴⁶ Kant, *Critique of Judgement*, 95.

cognitively available to individuals from different cultures and serve a similar end, in integrating the individual into the collective.¹⁴⁷

Another study compared awe experiences from the United States, Poland, Malaysia and Iran. They found that participants in the United States experience the highest frequency of awe and people in Iran experience the lowest frequency of awe.¹⁴⁸ A danger of combining Kant's philosophy with these results, would be the attribution of some moral superiority to the culture of the United States, and thus moral inferiority to Iranian culture. However, as Razavi et al. explain, there are many possible explanations for the low frequency of awe experiences among Iranian participants. For example, "different cultures value certain emotions more than others; therefore, they are more likely to experience them."¹⁴⁹ This way, we could hypothesize that the morality is developed to a high degree in Iranian culture, but at the same time, awe is not a valued experience. However, Razavi et al. did not measure the cultural ingredients that could account for the differences of awe experiences between countries. Therefore, there is no point in fallaciously coming up with possible explanations. This means there is also no valid reason to attribute superiority to any single culture in this matter. The key takeaway is that both Bai et al. and Razavi et al. confirmed that awe is in fact experienced across various cultures.¹⁵⁰ This is in line with Kant's idea that all people possess the transcendental conditions to experience the sublime. Therefore, when we cover studies on awe in which participants experience aesthetic awe and thus the sublime, we can rightfully assume these participants developed moral culture to at least some extent.

¹⁴⁷ Yang Bai et al., "Awe, the Diminished Self, and Collective Engagement: Universals and Cultural Variations in the Small Self," *Journal of Personality and Social Psychology* 113, no. 2 (2017): 202.

¹⁴⁸ Pooya Razavi et al., "Cross-Cultural Similarities and Differences in the Experience of Awe," *Emotion* 16, no. 8 (2016): 1100.

¹⁴⁹ Razavi et al., "Cross-Cultural," 1100.

¹⁵⁰ Bai et al., "Awe, the Diminished Self," 202; Razavi et al., "Cross-Cultural," 1100.

3.3 Differences resolved In this chapter, I have demonstrated that the Kantian sublime refers to the same experience as aesthetic awe, as described by Konečni. I did this by showing that Konečni's definition of aesthetic awe correlates with the Kantian definition of the sublime. Konečni seemed to set a different condition for awe to be aesthetic than Kant does for a judgement to be sublime. However, I have shown that the existential security that results from aesthetic awe is similar to the pleasure that overcomes the first, fearful stage of the sublime. Therefore, the Kantian sublime and Konečni's aesthetic awe refer to the same experience. This means that both aesthetic awe and the sublime describe Piff et al.'s general definition of awe, with the caveat that it came about under Kant's condition for a judgement to be sublime.¹⁵¹ In order to substantiate the claim that this Kantian understanding of aesthetic awe is a subset of awe, I have shown that the supposed effects of the Kantian sublime find confirmation in empirical studies on the effects of awe. In conclusion to the above, I maintain that aesthetic awe as a subset of awe refers to the exact same experience as the sublime. This makes the Kantian sublime a subset of awe.

With regard to the problem that Kant's moral culture seems to preclude awe from being experienced in various cultures all over the world: this problem has been overcome, because Kant also believes that the predisposition for this experience is present in every human being.¹⁵² For this reason, we may assume that wherever people experience awe, they have developed a certain degree of moral culture on an individual level. This way, even people who live in what Kant might have considered a morally less developed culture, can experience the sublime and thus awe.¹⁵³

Since the sublime and aesthetic awe now refer to the exact same experience, I can draw from the scientific research that was conducted on awe. As long as a research is based on awe that can be classified under Guan et al.'s notion of positive

¹⁵¹ Piff et al., "Small Self," 883; Kant, *Critique of Judgement*, 77-8.

¹⁵² Burnham, *Introduction to Kant*, 101-2; Kant, *Critique of Judgement*, 95.

¹⁵³ Kant, *Critique of Judgement*, 92.

awe, I can and will draw from its conclusions.¹⁵⁴ Therefore, when I refer to evolutionary explanations of awe in the continuation of this thesis, this includes by definition aesthetic awe unless I explicitly state otherwise.

¹⁵⁴ Guan et al., “Awe and Prosocial Tendency,” 1033.

Chapter 4: Darwin's idea

4.1 Survival of the fittest Many are familiar with the phrase “survival of the fittest.”¹⁵⁵ Coined by Herbert Spencer and at times used by Darwin as a replacement of ‘natural selection’, this phrase is often misinterpreted as survival of the strongest. However, survival of the fittest and thus natural selection does not mean that the strongest individual is most likely to survive. It means that those best adapted to their environment ‘fit in’ best, and therefore are most likely to survive and reproduce more often.¹⁵⁶ Key factor in the process of natural selection is variation. In Darwin's days, the existence of genes had not yet been uncovered. Therefore, he had to acknowledge that “our ignorance of the laws of variation is profound.”¹⁵⁷ Nowadays, we know that due to mutations and genetic recombination, individuals within a population differ from one another. When a certain variation increases the fitness of its possessor, it increases its chances to survive and reproduce more often. If this variation is hereditary, it can change the ‘design’ of the population. Therefore, “natural selection is the sieve that retains favorable variations and rejects adverse variations.”¹⁵⁸ Since organisms can pass on their traits through reproduction, this sieve cumulatively gets filled with favorable genes. Over time, fitness increasing traits are passed on to stay, while fitness decreasing traits will slowly be eliminated from the population. Together, variation, selection and reproduction, also known as the vsr-algorithm, form the building blocks of evolution.¹⁵⁹

In the ‘Origin of Species’, Darwin describes the biological evolution of species. In ‘The Descent of Man and Selection in Relation to Sex,’ he addresses the evolution of man. Here he discusses, among other things, how certain qualities

¹⁵⁵ Darwin, *Origin of Species*, xix.

¹⁵⁶ Thomas Heams et al., eds., *Handbook of Evolutionary Thinking in the Sciences* (Dordrecht: Springer Science, 2015), 37-8, <https://doi.org/10.1007/978-94-017-9014-7>.

¹⁵⁷ Darwin, *Origin of Species*, 127.

¹⁵⁸ Buskes, *Evolutionair Denken*, 42 (my translation).

¹⁵⁹ Buskes, *Evolutionair Denken*, 42-3.

such as consciousness, morality and a sense of beauty could have evolved in man. When it comes to our sense of beauty, Darwin suggests that this evolved as a result of sexual selection. Sexual selection describes a form of selection that “depends on the advantage which certain individuals have over other individuals of the same sex and species, in exclusive relation to reproduction.”¹⁶⁰ With regard to the sense of beauty, Darwin takes the example of Bower-birds. He argues that the female’s appreciation of the male’s colorful courtship display is to be interpreted as admiration of beauty. Without the female’s appreciation of this type of beauty, it would not have evolved in the Bower-birds at all, Darwin concludes. When it comes to the sense of beauty in man, Darwin argues that, unlike animals, we can develop our aesthetic preferences. This is why we can appreciate the heavens at night, or a beautiful landscape. Nevertheless, “judging from the hideous ornaments and the equally hideous music admired by most savages, it might be urged that their aesthetic faculty was not so highly developed as in certain animals, for instance, in birds.”¹⁶¹ Hereby, Darwin says our highly developed taste for beautiful objects depends on culture.¹⁶² This brings us to the question how man develop their sense of beauty through culture, and what influence genetics have on this development. Nowadays, this question is answered by arguing that human behavior is the product of a mixture of cultural and biological evolution. In ‘Genes, Mind and Culture’, Charles Lumsden and Edward Wilson present their theory of gene-culture coevolution. In this theory, they explain that genetic evolution can favor the selection of cultural traits. In turn, cultural traits can influence the rate of genetic evolution.¹⁶³

In this chapter, I set out to find explanatory theories about the evolution of the sense of beauty in man. The focus will primarily be on beauty because from an evolutionary perspective, more statements have been made about this than about

¹⁶⁰ Darwin, *Descent of Man*, 256.

¹⁶¹ Darwin, *Descent of Man*, 64.

¹⁶² Darwin, *Descent of Man*, 64-5.

¹⁶³ Charles Lumsden and Edward Wilson, *Genes, mind and culture: the co-evolutionary process* (Cambridge: Harvard University Press, 1981), 99-192.

the sublime. As both the judgement of the beautiful and the judgement of the sublime fall under the same heading of aesthetic judgements, evolutionary explanations for our sense of beauty might also apply to the sublime. In order to see if this is the case, I will have to find out why and how our sense of beauty could have evolved. I will explore this by looking for the evolutionary functions attributed to the sense of beauty. After covering these functions, I will use the next chapter to discuss whether they apply to the experience of the sublime.

4.2 The tale of the peacock's tail Sexual selection, Darwin says, is the reason for the secondary differences between sexes. The primary differences in sexes can be linked to reproduction directly. The secondary differences, however, are indirectly linked to reproduction, because they generally do not have a reproductive benefit in the act of sexual reproduction itself.¹⁶⁴ The peacock, for example, can easily survive without a colorful tail. In theory, he can also easily physically reproduce with a peafowl without his colorful tail. Without it, he is just very unlikely to be given that opportunity, for the peafowl will choose to mate with a peacock competitor that does have such a tail.¹⁶⁵ The peacock's tail evolved as a result of female choice and although it does not increase its chances of survival, it does increase its chances of reproduction. Therefore, the peacock's tail serves as a fitness indicator.¹⁶⁶ This leads us to the question whether a peafowl likes the peacock's tail for aesthetic reasons, or simply because the tail indicates greater fitness. When looking at birds courting each other by "elaborately displaying their plumes and splendid colours [...], it is impossible to doubt that the females admire the beauty of their male partners,"¹⁶⁷ according to Darwin. Below, I will show why, according to O'Hear, we should not ascribe aesthetic intentions to animals so anthropomorphically.

¹⁶⁴ Darwin, *Descent of Man*, 252-8.

¹⁶⁵ Buskes, *Evolutionair Denken*, 49.

¹⁶⁶ Buskes, *Evolutionair Denken*, 327-8.

¹⁶⁷ Darwin, *Descent of Man*, 63.

4.2.1 The aesthetic continuum O'Hear argues that although it has been confirmed that the most splendid peacocks are chosen by the peafowls, it is not confirmed that this choice is made for pure aesthetic reasons. He claims that "what looks like aesthetic preference to us is really a preference for other qualities which go along with the aesthetic and are not chosen *via* any aesthetic appreciation."¹⁶⁸ Thus, Darwin had no valid reasons to attribute aesthetic intentions and beliefs to non-linguistic creatures, according to O'Hear.¹⁶⁹ I suggest that the assumption that non-linguistic animals might solely appreciate objects for the sake of its sexual function, although not anthropomorphic, is a rather anthropocentric way of looking at the sense of beauty in animals. O'Hear assumes only man is exceptional enough to develop a sense of beauty that reaches beyond the power of sexual selection.¹⁷⁰ Man, O'Hear argues, can be placed on an aesthetic continuum. He claims our aesthetic experience "– the appreciation of, being attracted by beautiful things – covers a whole continuum from something pretty close to sexual attractiveness right through to a sense that in perceiving something as beautiful we are reaching to the very core of existence."¹⁷¹ In accordance with Darwin, O'Hear claims that unlike animals, man can free themselves from their biological roots by reevaluating their aesthetic judgements and thus develop their sense of beauty.¹⁷² This is consistent with Darwin's claim that some man have an aesthetic faculty less developed than some birds, while cultural development allows others to appreciate the heavens at night. Still, some theories suggest it is not easy to break free from our genetic roots. Nancy Etcoff explains that:

Our extreme sensitivity to beauty is hard-wired, that is, governed by circuits in the brain shaped by natural selection. We love to look at smooth skin, thick shiny hair, curved waists, and symmetrical bodies because in

¹⁶⁸ O'Hear, *Beyond Evolution*, 179 (original italics).

¹⁶⁹ O'Hear, *Beyond Evolution*, 179.

¹⁷⁰ O'Hear, *Beyond Evolution*, 179-93.

¹⁷¹ O'Hear, *Beyond Evolution*, 192.

¹⁷² Darwin, *Descent of Man*, 64; O'Hear, *Beyond Evolution*, 188-9.

the course of evolution the people who noticed these signals and desired their possessors had more reproductive success. We are their descendants.¹⁷³

However, Etcoff's explanation of beauty as a biological adaption does not explain the fact that a painting of something as dull and sex appeal-less as a vase can be judged as beautiful. If we were stuck to our genetic roots, we would only appreciate (the painting of) smooth skin, curved waists et cetera.

When it comes to the peafowl, we cannot ask her why she is attracted to the peacock's tail. Well, we could ask, but we would not get a very workable answer. That is why we will leave the discussion about the aesthetic intentions of animals for what it is. When it comes to man, we can ask how we can get "from something pretty close to sexual attractiveness right through to a sense that in perceiving something as beautiful we are reaching to the very core of existence."¹⁷⁴ This is to ask how the process of aesthetic development arises and proceeds.

4.3 Campbell's Soup Cans One of Darwin's contemporaries, Alfred Wallace, suggested that the beginning of cultural evolution marks the end of biological evolution of man. As Wallace describes, natural selection favors the survivability of the individuals with a mental organization capable of adaption to the environment. Therefore, our bodies hardly change due to natural selection, but our minds do. This means that losing our fur led us to make warmer jackets, instead of depending on natural selection to favor the individuals with more, thicker body hair when it got colder.¹⁷⁵ With the theory of coevolution, we no longer assume that cultural evolution has ended biological evolution.¹⁷⁶ Nevertheless, Wallace was right about the fact that instead of relying on natural selection to increase our

¹⁷³ Nancy Etcoff, *Survival of the Prettiest : The Science of Beauty* (New York: Doubleday, 1999), 24.

¹⁷⁴ O'Hear, *Beyond Evolution*, 192.

¹⁷⁵ Alfred Wallace, "The Origin of Human Races and the Antiquity of Man Deduced from the Theory of 'Natural Selection,'" *Journal of the Anthropological Society of London* 2 (1864): clxiii, <https://doi.org/10.2307/3025211>.

¹⁷⁶ Lumsden and Wilson, *Genes, mind and culture*, 99-192.

fur, we made warmer jackets. The question is why it became important for us that these jackets had to be aesthetically pleasing in addition to their functional purpose. With the 'fitness indicator theory', as described by Geoffrey Miller, we can answer this question. The fitness indicator theory suggests that objects of art, ornamentation and aesthetics could serve as displays of the creator's or owner's fitness. In the case of the aesthetically pleasing jacket, this object would serve as a sexual ornament.¹⁷⁷ This would mean that, unlike the fit individuals, low-fitness individuals have a hard time producing reliable fitness indicators. This is in line with the idea that "Pleistocene artists must have been physically strong enough to defend their delicate creations against theft and vandalism by sexual rivals."¹⁷⁸ During the Pleistocene, which lasted from 1.6 million years to 10.000 years ago, we developed the mind we still possess today, according to evolutionary psychology.¹⁷⁹ Applying this to our contemporary idea of art and beauty, it would mean that beauty equals high cost and difficulty. Only the fittest can design and purchase the most fitness indicating jackets. The appreciation of the beauty of an object has been related to its costs throughout most of the history of man. The old-fashioned notion that the artistic object reveals the artist's virtuosity is actually accurate, according to Miller:

Our sense of beauty was shaped by evolution to embody an awareness of what is difficult as opposed to easy, rare as opposed to common, costly as opposed to cheap, skillful as opposed to talentless, and fit as opposed to unfit.¹⁸⁰

Fitness indicators in the form of sexual ornaments such as jackets, body paint, earrings et cetera, can be seen as extended phenotypes.¹⁸¹ This way, wearing

¹⁷⁷ Miller, *The Mating Mind*, 271-81.

¹⁷⁸ Miller, *The Mating Mind*, 281.

¹⁷⁹ Buskes, *Evolutionair Denken*, 339.

¹⁸⁰ Miller, *The Mating Mind*, 281.

¹⁸¹ Miller, *The Mating Mind*, 270-1.

a beautiful jacket would be more or less like a peacock sticking extra feathers into its tail. Peacocks and peafowls, however, will probably not be too impressed by the image of a can of soup, yet, we can be. To explain how this is possible, Miller distinguishes between folk aesthetics and elite aesthetics. The former concerns what ordinary people find beautiful. The latter concerns what highly educated elites deem worthy objects of art. A folk aesthetic will most likely not fully appreciate a Warhol, but will react by saying a child or idiot could have made it. Miller suggests fitness indicator theory can explain this by revealing the aesthetic instinct of the ordinary observer. Saying a child could have made it, could mean “I cannot discern here any signs of learned skill that would distinguish an adult expert from an immature novice.”¹⁸² Likewise, saying an idiot could have made it, could mean “I cannot judge the artist’s general intelligence level from this work.”¹⁸³ Ordinary (folk) observers want art to function as an indicator of the artist’s skillset and creativity. Modern art, however, does not easily lend itself to this view. Then, how come the elite can more easily appreciate a Warhol, or a Kandinsky for that matter? Miller states the elites “often try to distinguish themselves from the common run of humanity by replacing natural human tastes with artfully contrived preferences.”¹⁸⁴ Miller stops there, but I suggest the unusual appreciation of non-fitness indicating objects could itself serve as a fitness indicator. Appreciating an object which regular folk would just be frustrated by, suggests one is ‘special’, cultured and educated on the subject. This suggests exceptionality which then serves as a fitness indicator in its own respect. However, the main group to focus on are ordinary people, says Miller. From an evolutionary (psychologist) perspective, folk-aesthetics can tell us more about the origins of aesthetics.¹⁸⁵

¹⁸² Miller, *The Mating Mind*, 285.

¹⁸³ Miller, *The Mating Mind*, 285.

¹⁸⁴ Miller, *The Mating Mind*, 284.

¹⁸⁵ Miller, *The Mating Mind*, 284.

4.4 Safety of the savanna By using the fitness indicator theory, we have evolutionarily explained why certain objects can be appreciated as beautiful. With this theory, however, Miller mainly focused on man-made objects. It does not answer the question why we appreciate the beauty of natural objects that could not possibly serve as sexual ornaments. The fitness indicator theory would have a hard time answering this question, for the appreciation of a natural object cannot be directed toward its creator, for there is none (creationists disregarded). Moreover, the fact that elites appreciate certain objects for the sake of appreciation does not apply here either, for the beauty of natural objects can be appreciated by ordinary people. Ordinary people do not appreciate beauty for the sake of appreciation.¹⁸⁶ An example of natural objects that even eight-year-olds universally appreciate, is that of landscapes.¹⁸⁷

In their study on human response to landscapes, Gordon Orians and Judith Heerwagen found that people aesthetically preferred savanna type landscapes. Natural landscapes are universally preferred over urban environments. Of natural landscapes, savanna landscapes are preferred over the rain forest or desert. Orians and Heerwagen suggest this preference is a legacy from our Pleistocene ancestors, for they evolved in the African savanna. The idea is that the savannas of tropical Africa can provide sufficient resources to the omnivorous primates we are. Therefore, natural selection favored the individuals with a more positive response to this type of landscape. Natural selection especially favored the individuals with responses that led them to settle in such habitats.¹⁸⁸ When it comes to the appreciation of natural objects, we seemingly do not look to judge the fitness of its creator. Instead, we look to judge what fitness benefits the object can provide us. In the aesthetic judgement of environments, this interest-serving process is both

¹⁸⁶ Miller, *The Mating Mind*, 285.

¹⁸⁷ Buskes, *Evolutionair Denken*, 340.

¹⁸⁸ Gordon Orians and Judith Heerwagen, "Evolved responses to landscapes," In *The Adapted Mind : Evolutionary Psychology and the Generation of Culture*, ed. Jerome Barkow, Leda Cosmides, and John Tooby, (New York, N.Y.: Oxford University Press, 1992), 555-79.

efficient and economical, according to Stephen Kaplan.¹⁸⁹ He suggests this process extends beyond the environmental context. Interestingly enough, aesthetically judging a natural object does not necessarily feel as if it serves a function or a certain interest. Kaplan concluded “the way preference feels to the perceiver stands in sharp contrast to the process that underlies it. Preference is experienced as direct and immediate. There is no hint in consciousness of the complex, inferential process that appears to underlie the judgment of preference.”¹⁹⁰

In summary, according to Miller’s fitness indicator theory, we generally tend to aesthetically judge objects in order to determine the fitness of their creator or possessor. This is our ‘default-setting’, unless we learn to appreciate beauty in another way.¹⁹¹ This is in line with Darwin’s idea that the aesthetic sense evolved from sexual selection, but its development depends on culture and complex associations.¹⁹² When it comes to our appreciation and preference for natural objects, Kaplan argues we judge objects to assess whether they serve or threaten our own fitness.¹⁹³ Whereas Miller’s theory focusses on the reproductive function of beauty, Kaplan seems to suggest our sense of beauty serves a survival function. In the next chapter, I will assess how the experience of the sublime fits in to this story.

¹⁸⁹ Stephen Kaplan, “Environmental Preference in a Knowledge-Seeking, Knowledge-Using Organism,” in *The Adapted Mind : Evolutionary Psychology and the Generation of Culture*, ed. Jerome Barkow, Leda Cosmides, and John Tooby, (New York, N.Y.: Oxford University Press, 1992), 581–598.

¹⁹⁰ Kaplan, “Environmental Preference,” 595.

¹⁹¹ Miller, *The Mating Mind*, 280-8.

¹⁹² Darwin, *Descent of Man*, 64.

¹⁹³ Kaplan, “Environmental Preference,” 581-98.

Chapter 5: Evolutionary functions

5.1 Reproduction can be fun

In this chapter, I will attempt to explain the existence of the experience of the sublime, using evolutionary theories. First, I will check whether the evolutionary explanations for our sense of beauty can account for the experience of the sublime as well. In order to do so, I must first fix a 'problem' that arises as a result of the previous chapter. This concerns the fact that according to Miller and Kaplan, our aesthetic appreciation and preference, that is, our aesthetic judgement, serves the pursuit of interests. This is at odds with Kant's theory according to which judgements cannot be aesthetic if they are in a relation of interests to the object.¹⁹⁴ In this paragraph, I will try to show that this pursuit of interests is actually disinterested. By doing this, I will show that Kant's notion of aesthetic judgments is compatible with evolutionary descriptions of aesthetic sense.

I argue that the (fitness related) interests underlying our aesthetic judgments do not mean that these judgments can no longer be aesthetic in the Kantian sense. My main argument is that when judging an object aesthetically, we are not aware of the fact that interests underly our judgement. As Miller explains, "with every one of our pleasures and pains there is this lack of an explicit link. [...] No instinctive reaction to anything ever carries a special coded message saying why the reaction evolved."¹⁹⁵ Or as Kaplan described, "the way preference feels to the perceiver stands in sharp contrast to the process that underlies it. [...] There is no hint in consciousness of the complex, inferential process that appears to underlie the judgment of preference."¹⁹⁶ To mention a similar example, the (underlying) function of having sex is to reproduce. Yet, in most cases people do not have sex for this reason, but simply because they enjoy the act.¹⁹⁷ Chris Buskes,

¹⁹⁴ Kant, *Critique of Judgement*, 35-74.

¹⁹⁵ Miller, *The Mating Mind*, 276

¹⁹⁶ Kaplan, "Environmental Preference," 595.

¹⁹⁷ Kaplan, "Environmental Preference," 590

in similar fashion, says we can consciously experience aesthetic preferences, regardless of their genetic roots.¹⁹⁸

I suggest the same holds true for Kant's theory of aesthetic judgements. When we enjoy sex, we do not consciously realize we evolved to like it because it lets us reproduce. We are only aware of our pleasure. Likewise, when we judge something aesthetically, we can do this because we do not consciously feel like we are in a relationship of interests to the object. We consciously feel disinterested. Therefore we are not aware of the fact that our judgement is unconsciously driven by interests of survival and reproduction. I claim that the actual conscious experience we have when judging an object aesthetically, is therefore sufficient. The unconscious, genetically rooted interests therefore do not prevent judgements from being aesthetic in the Kantian sense.

5.2 Skyscrapers and pyramids The theories discussed in the previous chapter reasonably explain our sense of beauty from an evolutionary perspective. The question is to what extent they are applicable to the experience of the sublime. Objects we judge as sublime can be man-made or natural.¹⁹⁹ Let us take a New York skyscraper and the sight of a mountain landscape in the Himalayas as objects we judge as sublime. When applying the fitness indicator theory to the skyscraper, some questions arise. Exactly whose fitness do we (unconsciously) wish to judge when being overwhelmed by the object? The architect's creativity? The skillfulness of all the construction workers who built it? Or maybe the wealth of those who live or work in it? It seems unlikely that we judge sublime man-made objects as fitness indicators in the way we judge beautiful objects as fitness indicators, for it is unclear whose fitness we would assess. We could apply the idea that we judge objects to assess whether they serve or threaten our own fitness. However, this

¹⁹⁸ Buskes, *Evolutionair Denken*, 334-5 (original italics).

¹⁹⁹ Kant, *Critique of Judgement*, 81-7.

becomes problematic when we exchange the New York skyscraper for the pyramid of Giza. Both objects can be judged as sublime, even though only the former would be reasonably inhabitable, while we would most likely die of dehydration in the latter. Yet, one would judge both objects as sublime, meaning both objects lead to a similar experience.²⁰⁰ Therefore, we can state that when we judge a man-made object as sublime, we do not seem to be assessing the fitness benefits it provides, at least, not in the same way as when we judge an object as beautiful.

In the previous chapter, we noted that the fitness indicator theory is not applicable to the judgement of natural objects. Therefore, it must be so that when we judge the Himalayan mountains as sublime, we do this to assess whether they serve or threaten our own fitness. Although this seems to make sense, we run in to the same problem as with the skyscraper and the pyramid. The sublime experience coincides with being overwhelmed, followed by pleasure due to the transcendence of reason over natural law/our sensible selves.²⁰¹ If we judge natural objects to assess whether they serve or threaten our fitness, it does not make sense that we have a similar response to the sunset over a savanna as to the sight of the freezing Himalayas. When it comes to beauty, we universally have an aesthetic preference for environments that can benefit our genes through survival and reproduction.²⁰² When it comes to the sublime, however, “many of us derive aesthetic pleasure from the bare landscapes of winter or the tumultuous seas and driving sleet of January gale.”²⁰³ Unlike with the judgement of the beautiful, when judging natural objects as sublime, there seems to be no preference for fitness benefiting or threatening factors.²⁰⁴ If the experience of the sublime would serve to assess the fitness benefits/threats an object provides/poses, the sight of the Himalayas or the

²⁰⁰ Burnham, *Introduction to Kant*, 87-91.

²⁰¹ Kant, *Critique of Judgement*, 90-100.

²⁰² Richard Joyce, *The Routledge Handbook of Evolution and Philosophy*, Routledge Handbooks in Philosophy (London: Taylor and Francis, 2017), 362-3, Routledge Handbooks Online.

²⁰³ Christopher Smith, “Evolutionary Neurobiology and Aesthetics,” *Perspectives in Biology and Medicine* 48, no. 1 (2005): 22.

²⁰⁴ Smith, “Evolutionary Neurobiology and Aesthetics,” 22.

pyramid of Giza would make our own fitness feel threatened, and we would feel the urge to leave. Nevertheless, when looking at these objects, we can have the same sublime experience as when observing a sunset over the savanna, or an overpriced but nevertheless habitable New York skyscraper.²⁰⁵ Therefore, when judging a natural object as sublime, we do not seem to be assessing its fitness benefits/threats, at least, not in the same way as when we judge an object as beautiful.

5.2.1 Flexibility and adaptability Even though the judgement of the beautiful and the judgement of the sublime are both aesthetic judgements, they seem to require different evolutionary explanations. This is because the evolutionary functions of our sense of beauty seem to be inapplicable to our judgement of the sublime. Therefore, I shall examine whether there is another way in which we can evolutionarily explain the experience of the sublime. Rather than testing whether evolutionary explanations for our sense of beauty apply to the judgement of the sublime, I will look for evolutionary explanations of the sublime in its own terms.

As Christopher Smith noted, the evolutionary explanation for our appreciation of natural objects cannot fully explain our aesthetic preferences, due to our appreciation of fitness threatening objects. He suggests there might be a different explanation for this preference. Before the fifteenth century, before we lived in our 'comfortable city suburbs', we were supposedly terrified of mountains, for we considered it landscapes of evil. The fact that we now often experience the sight of mountains as sublime might be the result of our comfortable lives in cities. By being amazed by such challenging sights, we might actually wish to break free from this comfort through the stimulation of our senses.²⁰⁶ Richard Joyce makes a similar suggestion, claiming that:

²⁰⁵ Piff et al., "Small Self," 883-97 (It must be noted that this research by Piff et al. implied that natural objects bring about stronger effects of awe than do man-made objects. Nevertheless, both can bring about a sense of awe).

²⁰⁶ Smith, "Evolutionary Neurobiology and Aesthetics," 22.

at least some of our environmental preferences may be bent to look favorably on habitats and landscapes that support a comparatively easy subsistence, but our flexibility and adaptability in face of extreme environmental change might have been more relevant to our survival.²⁰⁷

If our adaptability and flexibility have actually been more relevant to our survival than the ability to properly judge the fertility of a landscape, then this could shine a different light of the evolutionary function of the sublime. One suggestion would be that our ancestors with an aesthetic admiration for fitness threatening landscapes were more resistant to extreme climate instability, which allowed them to flexibly adapt. Individuals with a wide range of preferences would more easily survive through their adaption to the changing climate than individuals with a fixed aesthetic preference. The individuals with an admiration for fitness threatening landscapes probably learned to adapt to environments that did not necessarily support easy subsistence. The individuals with a fixed aesthetic preference for a certain type of landscape likely were less flexible and adaptable when their environment changed due to extreme climate instability.²⁰⁸ Over time, our flexible ancestors with an aesthetic preference for landscapes that can threaten or benefit our fitness were able to adapt and thus survive. At the same time, the individuals with a fixed aesthetic preference for fitness benefiting landscapes died out, because they were unable to properly adapt to environmental changes that were not in accordance with their preferences. This way, our ability to judge natural objects (or at least natural landscapes) as sublime might have evolved. This all sounds rather suggestive and maybe even a bit far-fetched. Nevertheless, as we have seen in the second chapter, awe promotes increased cognitive accommodation by inhibiting our tendency to ‘view the world through a script’.²⁰⁹ Danvers and Shiota suggest that by allowing people to critically process new,

²⁰⁷ Joyce, *Evolution and Philosophy*, 363.

²⁰⁸ Joyce, *Evolution and Philosophy*, 363.

²⁰⁹ Danvers and Shiota, “Going Off Script,” 949.

complex information, awe could help people adapt to new experiences and environments.²¹⁰ In the next chapter, I will show how this suggestion can complement the idea that our ancestors with an aesthetic admiration for fitness threatening landscapes were more resistant to extreme climate instability.

5.3 Helicopter view In the search for evolutionary explanations for certain phenomena, one cannot help but create arguments that can no longer be tested empirically. For example, we cannot test whether a predisposition to judge certain landscapes as sublime actually benefitted the survival of our ancestors. Neither can we test whether our ancestors with a fixed aesthetic landscape preference were actually less flexible and adaptable. Since we lack some divine helicopter view of mankind throughout time, we can only use our reason. Whereas the suggestions made in the previous paragraph have not been empirically confirmed, contemporary empirical science allows us to make arguments with a higher probability value. What I am referring to here, are the implications of the studies on awe. By looking at the beneficial effects of awe, we can reason, and cautiously conclude, how and why our ability to judge the sublime has evolved.

Although some contemporary studies mention the evolutionary benefits of the effects of awe, no research seems to have been conducted into why awe evolved in man. Piff et al. briefly mention that awe serves a vital social function of facilitating life within social collectives by encouraging prosociality through a diminished self. However, they did not elaborate on why evolution would have favored the emergence of awe, nor why prosociality (and thus altruism) is vital for survival in social collectives.²¹¹ Perhaps because this is self-evident. Either way, it is striking that no research has been conducted into the evolution of awe. This means that in order to apply the effects of awe to the evolutionary explanation for the sublime, I will have to focus on effects that are evolutionary beneficial. This

²¹⁰ Danvers and Shiota, "Going Off Script," 947-8.

²¹¹ Piff et al., "Small Self," 895.

brings me to altruism. Below, I will examine why, if awe promotes altruism in man, it makes sense that the sieve of selection retained the ability to experience awe.

5.3.1 Awe-some altruism As mentioned in the chapters two and three, positive awe, which, as I have demonstrated, coincides with the Kantian experience of the sublime, promotes more other-oriented, selfless behavior, also known as altruism. According to Piff et al., awe therefore serves a vital social function. It may “encourage people to forego strict self-interest to improve the welfare of others.”²¹² Although this seems like a promising explanation for why awe evolved, it does seem to contradict the common view of where altruistic behavior stems from. It is generally taken to be true that our genes are ‘selfish’. If behavior costs us energy while it benefits others, this behavior is expected to serve a hidden, genetically selfish benefit.²¹³ These benefits are usually explained as genes taking care of the survival of their copies through kinship, or the expectation of reciprocity.²¹⁴ It is seemingly difficult to fit altruism as a result of experiencing awe in to this framework. That is because “[...] awe shifts people away from being the center of their own individual worlds, toward a focus on the broader social context and their place within it,” implies that this altruism is genuinely ‘self-less’.²¹⁵ Although altruism as a result of awe seems incompatible with the prevailing views on altruism, there is a possible explanation for this problem.

Although awe might have caused one to behave altruistically, the underlying function can nevertheless be genetically selfish. As found by Piff et al., awe promotes selfless, other-oriented behavior. Nevertheless, they also concluded this experience shifts us away from our individual selves, in order to focus on the

²¹² Piff et al., “Small Self,” 897.

²¹³ Richard Dawkins, *The Selfish Gene*, 30th anniversary ed., (Oxford: Oxford University Press, 2006) 94; Miller, *The Mating Mind*, 295.

²¹⁴ Dawkins, *The Selfish Gene*, 94; Robert Trivers, “The Evolution of Reciprocal Altruism,” *The Quarterly Review of Biology* 46, no. 1 (1971): 35–57.

²¹⁵ Piff et al., “Small Self,” 897.

broader social context and our place within it.²¹⁶ In theory, reciprocal altruism can account for this. Reciprocity knows many forms, including ‘indirect reciprocity’.²¹⁷ ‘Offering’ the self in order to focus on the welfare of others sounds genuinely selfless, but could bring hidden genetically selfish benefits. Indirect reciprocity describes building a certain reputation within the community. Unlike tit-for-tat reciprocity, indirect reciprocity describes altruistic behavior that does not need to be repaid the next day, or even by the same person that was favored by the behavior.²¹⁸ Piff et al. concluded that the diminished self that results from experiencing awe allows one to focus on “the broader social context and their place within it.”²¹⁹ This focus on the social context could be interpreted as follows: awe leads to a temporary diminishment of the self. As a result, one behaves altruistically towards one’s social group. By doing so, one gains high social status. This social status will be repaid, for example by reproductive advantage through mate choice.²²⁰ This way, being in awe leads to behaving altruistically, but there can still be a hidden selfish benefit to that altruism, which can be explained by indirect reciprocity. This explanation respects the existing framework by which we evolutionary explain altruism in humans. It does, however, seem to take away from the sincerity of the altruistic behavior, which results from a sense of selflessness, which in turn results from experiencing awe.²²¹ Below, I will explain why the motivation to behave altruistically can still be genuine.

5.3.2 Genuine or selfish According to Miller, we must make a clear distinction between human motivation and evolutionary function. By doing this, the motivation for altruism can be genuine, while its underlying (selfish) function

²¹⁶ Piff et al., “Small Self,” 895-7.

²¹⁷ Richard Alexander, *The Biology of Moral Systems*, Foundations of Human Behavior, (New York: Aldine de Gruyter, 1987), 77.

²¹⁸ Frans de Waal et al., *Primates and Philosophers : How Morality Evolved*, The University Center for Human Values Series, (Princeton, NJ: Princeton University Press, 2006), 20 .

²¹⁹ Piff et al., “Small Self,” 897.

²²⁰ Miller, *The Mating Mind*, 292-340.

²²¹ Piff et al., “Small Self,” 895.

is to be reciprocated.²²² This way, awe can lead to altruistic behavior through a genuine sense of selflessness. The motivation can then genuinely be “to forego strict self-interest to improve the welfare of others.”²²³ Although this behavior might have evolved to, for example, build a social status which will bring one reproductive advantage through mate choice, this does not take away from the sincerity of the motivation to behave altruistically. This is in line with Kaplan’s view of having sex: we evolved to enjoy it because it has the function of reproduction, but when we have it, we are usually not motivated to reproduce.²²⁴ The same reasoning can be applied to altruism as a result of awe: altruistic behavior likely evolved because it brings us certain benefits, but when we behave this way, we do not do so because we consciously expect to be reciprocated. We do so because we genuinely feel like it, in this case, due to a sense of selflessness.²²⁵

One could still doubt the sincerity of the motivation to behave altruistically as a result of awe. For example, one could claim that something genuine cannot be built on a self-serving foundation.²²⁶ In this case, we could just choose to ignore whether the altruism as a result of awe is genuine or not, and focus on the fact that altruistic behavior, which serves the fitness of a group, is a result awe.²²⁷ Whether altruism can be genuinely self-less or not is still under discussion, yet this poses no problem for drawing conclusions in this thesis. What is most relevant for now is that positive awe, and thus the Kantian sublime, leads us to behave more altruistically.

²²² Miller, *The Mating Mind*, 320-5.

²²³ Piff et al., “Small Self,” 897.

²²⁴ Kaplan, “Environmental Preference,” 590.

²²⁵ Piff et al., “Small Self,” 895.

²²⁶ David Sloan Wilson, *Does Altruism Exist? : Culture, Genes, and the Welfare of Others* (New Haven: Yale University Press, 2015), 32-4.

²²⁷ Stellar et al., “Self-Transcendent Emotions,” 203; Piff et al., “Small Self,” 897.

5.4 The importance of altruism If one wants to evolutionarily explain the existence of something, we often look for its function.²²⁸ Eyelashes, for example, divert the airflow to protect the eye.²²⁹ Therefore, eyelashes likely evolved in order to protect our eyes against airflow and the dirt it brings along. Likewise, if we want to understand why altruism evolved in humans, we look at 'what it does'. When it comes to what altruism 'does', we are more or less forced to look from the perspective of our genes. Based on the assumption that our genes are actually selfish, the question is how this costly behavior benefits our own genes. This question will lead us back to kinship and reciprocity, as covered in paragraph 5.3.1. However, there are more angles from which we can approach altruism. In addition to the genetic level, altruism affects us on other levels as well. For example, the urge to help usually arises from empathic concern for the welfare of others.²³⁰ Performing "a helpful act that is carried out in the absence of obvious and tangible rewards for the helper,"²³¹ makes receiver of that help 'feel better'. On an individual level, we all have a natural potential for altruism. Robert Cloninger and Ada Zohar found that prosocial behavior is a key aspect of happiness and health in human beings.²³² Altruistic behavior is not limited to helping individuals. It extends to "family, clan, and group, up to and including tribe and nation."²³³ Altruism is not weeded out by selection, because it can result in increased survival and reproduction of the receivers.²³⁴ On a group level, altruistic cooperation was beneficial in the environments of early humans.²³⁵

²²⁸ Buskes, *Evolutionair Denken*, 255-6.

²²⁹ Guillermo Amador et al., "Eyelashes Divert Airflow to Protect the Eye," *Journal of the Royal Society Interface* 12, no. 105 (2015), <https://doi.org/10.1098/rsif.2014.1294>.

²³⁰ John Dovidio et al., *The Social Psychology of Prosocial Behavior* (Mahwah: Taylor & Francis Group, 2006), 134-7, ProQuest Ebook Central.

²³¹ Dovidio et al., *The Social Psychology*, 26,

²³² Robert Cloninger and Ada Zohar, "Personality and the Perception of Health and Happiness," *Journal of Affective Disorders* 128, no. 1 (2011): 24-33.

²³³ Frans De Waal, *Good natured: The origins of right and wrong in humans and other animals* (Cambridge: Harvard University Press, 1996), 212.

²³⁴ De Waal, *Good natured*, 12.

²³⁵ Samuel Bowles and Herbert Gintis, *A Cooperative Species : Human Reciprocity and Its Evolution* (Princeton: Princeton University Press, 2011, chap. 12, ProQuest Ebook Central.

Unfortunately, literature on the actual effects of altruism is limited. Most found literature goes directly into the discussion about the motivation for altruism, devoting only one or two descriptive sentences to its beneficial effects. For now, we can at least conclude that altruistic behavior has been beneficial to our survival, both on a genetic, individual and species level. By ascribing this function to altruistic behavior, we have evolutionarily explained the function of altruism in humans. Since awe leads us to behave in a way that serves such an important function for mankind, we can now draw conclusions on how the theory of evolution accounts for the experience of the sublime.

Chapter 6: Conclusion

6.1 A fitness increasing trait How can we evolutionary explain the existence of the Kantian judgement of the sublime? Looking at the vsr-algorithm, we can reason that the ability to judge objects as sublime emerged as a variation and got retained by the sieve of selection. This ability could have evolved from biological or cultural evolution, or even from a combination of the two. This way, judging the sublime could have been a biological adaption and/or a mental adaption to the environment of our ancestors. Either way, since the evolutionary process of man favored the ability to judge objects as sublime, it must be a fitness increasing trait.²³⁶ To answer the main question is to answer why judging the sublime increases our fitness. The answer to that question is best supported by empirical evidence. For as far as I could find, no empirical research has been conducted on the beneficial effects of the experience of the sublime. However, I did find many empirical results on the effects of the psychological variant of the sublime: awe.²³⁷ In accordance with Arcangeli et al., I have demonstrated that the sublime and aesthetic awe, a subset of awe, refer to the same experience. This allowed me to apply the results of the studies on awe to the evolutionary explanation of the experience of the sublime. Below, I will briefly summarize how the sublime and aesthetic awe refer to the same experience. Then, I will focus on two evolutionary important effects of awe: 1.) Awe inhibits “people’s default tendency to filter current experience through the lens of prior knowledge and expectations.”²³⁸ 2.) As awe triggers a diminishment of the individual self in relation to the vastness of the witnessed object, it promotes more other-oriented, selfless behavior, also known as altruism.²³⁹ I applied these effects to the evolutionary explanation of the sublime, for these traits provide many (potential)

²³⁶ Buskes, *Evolutionair Denken*, 42-3.

²³⁷ Arcangeli et al., *Complex Relationship*, 2.

²³⁸ Danvers and Shiota, “Going Off Script,” 947.

²³⁹ Piff et al., “Small Self,” 897.

fitness benefits for man. After I draw the final conclusion on whether my findings sufficiently evolutionarily account for the judgement of the sublime, I will discuss the implications of this thesis for future research.

6.2 Different words for the same experience

In order to apply the results of empirical studies on awe to the sublime, I have demonstrated that aesthetic awe, which is a subset of awe, refers to the same experience as the Kantian sublime. While doing so, I ran into a problem. Kant's conditions for a judgement to be sublime seemed stricter than Konečni's conditions for awe to be aesthetic. In order to judge an object as sublime, Kant sets the conditions of disinterestedness, universal validity and necessity. Universality follows disinterestedness, and necessity follows universality. Subsequently, this must lead to pleasure in order for the experience to be sublime.²⁴⁰ Therefore, disinterestedness is a particularly important condition for the Kantian judgement of the sublime. Konečni explains that in order for awe to be aesthetic, it cannot be experienced as "uncontrollable fear before a great power or threat."²⁴¹ Since Kant's condition for disinterestedness covers more than just fear, Kant's condition for a judgement to be sublime is stricter than Konečni's conditions for awe to be aesthetic. Luckily, Konečni set a second condition for awe to be aesthetic. This is the condition that aesthetic awe has to lead to a rather Kantian feeling of existential security. Existential security is a product of what both Konečni and Kant describe as an experience that starts out as outraging/fearful, only to be either overcome by a sense of pleasure or to be mixed with joy.²⁴² Kant's pleasure necessarily results from his conditions for a judgement to be sublime, for this pleasure, experienced due to the found purposiveness in the second stage of the sublime, is conditional for an experience to be sublime.²⁴³ Since Kant's pleasure and Konečni's existential security seem to

²⁴⁰ Kant, *Critique of Judgement*, 77-8.

²⁴¹ Clewis, "Towards A Theory," 340.

²⁴² Kant, *Critique of Judgement*, 75-90; Konečni, "Aesthetic Trinity," 65 (original italics).

²⁴³ Kant, *Critique of Judgement*, 88-9.

describe a similar feeling, it is unlikely that existential security could come about in ways that are not in accordance with Kant's conditions for a judgement to be sublime. More precisely, it seems unlikely that one could feel existential security when one is in a relationship of interests with the observed object. Therefore, I could reasonably accept that Konečni's notion of aesthetic awe meets Kant's conditions for a judgement to be sublime. This is in line with Arcangeli et al.'s suggestion that the sublime is a species of awe, that is, aesthetic awe.²⁴⁴ Hence, we can reasonably assume that when the field of psychology refers to aesthetic awe, this also refers to the Kantian sublime.

In order to substantiate the claim that the sublime describes the same experience as aesthetic awe, I have demonstrated that Kant's ideas on the sublime find confirmation in empirical studies on the effects of awe. Kant explains that the sublime makes us experience a feeling that is contrary to sensible interests. By doing this, it teaches us to put our self-centered interests to the side, so we can esteem something that conflicts with our own interests. When the right time comes, we can act out of moral respect because of this experience. This way, the experience of the sublime serves as a propaedeutic for morality. To experience the sublime is to further discipline moral culture on the individual level. Therefore, it may also create an exemplary situation for the social culture on a larger scale.²⁴⁵ By representing moral law, Clewis explains, the sublime makes us understand how moral law feels. By experiencing this, "the sublime offers us the possibility of feeling the freedom to choose to live up to the demands of morality."²⁴⁶ In the studies on the effects of awe, I found similar psychological and social effects. In the 'Small Self' study by Piff et al., participants in awe endorsed more ethical decisions, were more generous to strangers and reported more social values. This is because awe triggers a diminishment of the individual self in relation to the vastness of the witnessed object. This promotes more other-oriented, selfless

²⁴⁴ Arcangeli et al., *Complex Relationship*, 4.

²⁴⁵ Kant, *Critique of Judgement*, 95-101.

²⁴⁶ Clewis, *Revelation of Freedom*, 139.

behavior, also known as altruism.²⁴⁷ These findings were consistent with the claims of both Kant and Clewis that the sublime serves as a propaedeutic, reminding us of our freedom to live up to morality.

By demonstrating that the Kantian sublime corresponds to aesthetic awe by definition, and finds confirmation in the empirical studies on awe, I could fully accept that aesthetic awe refers to the exact same experience as the sublime. This makes the Kantian sublime a subset of awe. This knowledge allowed me to apply the results of empirical studies on awe to the evolutionary explanation of the sublime.

6.2 Flexible scripts

As we have learned from Orians and Heerwagen in 4.4, natural selection likely favored the individuals with positive responses to landscapes that provide easy subsistence. The individuals with responses that led them to settle in such habitats would have been especially favored.²⁴⁸ This is likely why our aesthetic preference for certain landscapes evolved. However, as Joyce argued:

at least some of our environmental preferences may be bent to look favorably on habitats and landscapes that support a comparatively easy subsistence, but our flexibility and adaptability in face of extreme environmental change might have been more relevant to our survival.²⁴⁹

This could explain why the ability to judge the sublime might have evolved. By suppressing “the usual expectations through which people filter experience of the world, and [enhancing] people’s attention to unexpected details,” awe is thought to help people adapt to new experiences and environments.²⁵⁰ If experiencing awe

²⁴⁷ Piff et al., “Small Self,” 895-7.

²⁴⁸ Orians and Heerwagen, “Evolved responses to landscapes,” 555-79.

²⁴⁹ Joyce, *Evolution and Philosophy*, 363.

²⁵⁰ Danvers and Shiota, “Going Off Script,” 947.

and, as long as it is aesthetic, the sublime, could actually improve our adaptability, it would make sense that our aesthetic admiration for objects we judge as sublime got retained by selection. It could have allowed us to properly adapt to environmental changes. Over time, our flexible ancestors with an aesthetic admiration for landscapes that can threaten or benefit our fitness were able to adapt and thus survive. At the same time, the individuals with a fixed aesthetic preference for fitness benefiting landscapes died out, because they were unable to properly adapt to environmental changes that were not in accordance with their preferences.

This suggestion would be my first evolutionary explanation for the existence of the Kantian judgement of the sublime. However, I realize this explanation is rather suggestive. Currently, there are too many conditions to reasonably prove this possibility. For example, it is uncertain whether adaptability and flexibility have been more relevant for our survival than the ability to properly judge a landscape's fertility, as suggested by Joyce.²⁵¹ Then, there is also the problem we ran into while applying evolutionary theories for our sense of beauty to the experience of the sublime in 5.2. If judging objects as sublime improves our adaptability, then why can we have a similar reaction to landscapes that threaten our fitness as to landscapes that support easy subsistence? Currently, these unresolved but not unsolvable obstacles diminish the plausibility of my suggestion. Nevertheless, the idea that the experience of the sublime has an evolutionary function of improving our chances of survival through improved adaptability, is rather interesting. It is especially interesting because empirical research on awe seems to confirm the existence of an underlying connection between the judgement of the sublime and improved adaptability.²⁵² Future research could and should point out whether improved adaptability actually contributed to the evolution of the sublime.

²⁵¹ Joyce, *Evolution and Philosophy*, 363.

²⁵² Danvers and Shiota, "Going Off Script," 949.

6.3 Altruism

Looking at the effects of awe, one of them has an important evolutionary function. As awe triggers a diminishment of the individual self in relation to the vastness of the witnessed object, it promotes more other-oriented, selfless behavior, also known as altruism. Altruism, which extends to “family, clan, and group, up to and including tribe and nation,” is not weeded out by selection, because it can result in increased survival and reproduction of the receivers.²⁵³ On a group level, altruistic cooperation was beneficial in the environments of early humans.²⁵⁴ Interestingly enough, Kant seemed to be aware of these beneficial effects (of the sublime). He claimed that the sublime makes us experience a feeling that is contrary to sensible interests, which teaches us to put our self-centered interests to the side, so we can esteem something that conflicts with our own interests. When the right time comes, we can act out of moral respect because of this experience. For this reason, experiencing the sublime serves as a propaedeutic for morality.²⁵⁵ Kant thus seemed to already realize that the experience of the sublime can lead us to behave more altruistically. Contemporary empirical studies seem to just confirm what was already established by Kant, just not yet demonstrated in an empirical manner. Piff et al., for example, found that awe triggers a diminishment of the individual self in relation to the vastness of the witnessed object, which promotes altruism.²⁵⁶ Such a result not only seems to confirm that aesthetic awe and the sublime refer to the same experience, more importantly, it confirms that Kant was right about the effects of the judgment of the sublime. This means that the field of philosophy should get more interested in awe, and the field of psychology should get more interested in the sublime. Robert Clewis, David Yaden and Alice Chirico could not have said it better:

²⁵³ De Waal, *Good natured*, 212.

²⁵⁴ Bowles and Gintis, *A Cooperative Species*, 12.

²⁵⁵ Kant, *Critique of Judgement*, 101.

²⁵⁶ Piff et al., “Small Self,” 897.

[the strong correlation between the sublime and awe forms] a bridge between the psychology of awe and the philosophy of the sublime, allowing access to a literature of which specialists from one of the fields may be unaware. Psychologists interested in awe could profitably learn from the philosophical literature on the sublime [...]. The benefit also flows in the other direction. Bearing in mind how close awe is to the sublime, philosophers can learn from the empirical awe literature in their analyses of the sublime.²⁵⁷

6.4 Final conclusion How can we evolutionary explain the existence of the Kantian judgement of the sublime? In order to answer this question, I tried to look if evolutionary theories about our sense of beauty were applicable to the judgement of the sublime. They were not. According to the theories of Miller and Kaplan, we either judge objects as beautiful to assess the fitness of its possessor or creator, or to assess whether it benefits or threatens our own fitness.²⁵⁸ I have shown that when judging an object as sublime, we cannot assess the fitness of its possessor or creator, for it would be unclear whose fitness we would assess. For example, when judging a New York skyscraper as sublime, whose fitness would one assess: the architect's? The construction workers'? Or the residents'? Since this is unclear, it seems unlikely that we judge sublime man-made objects as fitness indicators in the way we judge beautiful objects as fitness indicators. We could judge an object as sublime in order to assess whether it benefits or threatens our own fitness. If this were the case, however, it does not make sense that the sunset over a safe savanna landscape and the sight of the freezing Himalayas can catalyze a similar sublime experience. Therefore, I concluded that the evolutionary functions of our sense of beauty were inapplicable to the judgement of the sublime.

²⁵⁷ Clewis, Yaden, and Chirico, "Intersections," 26-7.

²⁵⁸ Miller, *The Mating Mind*, 280-8; Kaplan, "Environmental Preference," 581-98.

Consequently, I attempted a different approach, which was to derive a function of the sublime, based on the effects it produces. The first explanation, which suggests that the experience of the sublime has an evolutionary function of improving our chances of survival through improved adaptability, remains suggestive. Improved adaptability as a result of experiencing the sublime could explain why our ability to judge objects as sublime has been retained in the sieve of selection. However, there are currently too many conditions to prove that the sublime is causally responsible for this effect. The second explanation of how the sublime promotes altruism in man seems more plausible. The sublime promotes more other-oriented, selfless behavior, also known as altruism.²⁵⁹ Altruistic behavior results in increased survival and reproduction of the receivers.²⁶⁰ This way, the experience of the sublime can increase the fitness of man. Since the experience of the sublime increases our fitness, its existence makes sense from an evolutionary perspective. The sublime helps us survive, by helping one another.

6.5 Discussion It is striking that no theories have been developed to explain why we can experience something as unique as the sublime. The same thing goes for awe. Although some evolutionary beneficial effects have been ascribed to awe, no actual evolutionary explanations for its emergence in man seem to have been developed. In this thesis, I have done three things on which further research can build. First of all, future research should point out whether the ability to judge the sublime evolved because it improves the adaptability of man. Additionally, if the judgement of the sublime evolved due to its effect of improved adaptability, research should find out what role the other beneficial effect, promoting altruism in man, contributed to its evolution.

Secondly, I have made the relationship between awe and the sublime a little less complex. By showing that Kant's ideas about the sublime find

²⁵⁹ Piff et al., "Small Self," 897.

²⁶⁰ De Waal, *Good natured*, 12.

confirmation in empirical studies on awe, I substantiated Arcangeli et al.'s claim that the sublime is a species of awe, that is, aesthetic awe. By doing this, I have strengthened the bridge between psychological studies on awe and philosophical works on the sublime. This bridge enables both disciplines to draw on each other's knowledge.

Thirdly, I have shown that the theory of evolution can account for the Kantian judgement of the sublime. I have done so by applying the evolutionary beneficial effects of (positive) awe to the experience of the sublime. As the sublime, which, as I have demonstrated, coincides with aesthetic awe, promotes altruism in man, this experience serves a vital function for our survival. An important implication of this finding is that it may shed new light on Kant's ideas about the judgment of the sublime. Even without the results of studies on awe that we have today, Kant was already aware of the effects of the experience of the sublime and thus of aesthetic awe. My findings have shown that Kant was right about the experience of the sublime, at least 200 years before empirical studies on awe could confirm this. This should lead to a newfound appreciation for Kant's theory about the judgement of the sublime. Since this theory is tied to his entire philosophical system, it should lead to a newfound appreciation of Kant's philosophy in general. This goes for the field of psychology in particular, for Kant's philosophy can make a valuable contribution to their studies on awe. Likewise, philosophers interested in the sublime can no longer ignore the psychological findings on awe. Not only can philosophers and psychologists now draw from each other's knowledge. We can actually join forces. By working together, we can create a well of knowledge from which we can all drink.

Epilogue

As I mentioned in the introduction, evolutionary explanations for certain phenomena are not always the most romantic. Nevertheless, the evolutionary explanation for the sublime that I have put forward in this thesis does not, in my opinion, diminish how profound the sublime experience is. One sublime experience I will never forget, is when I was strolling on the beach of El Paredon, on the west coast of Guatemala. Here, the sun set on the right side of the ocean, turning the whole sky red. As I had to walk for some time on the volcanic, deserted beach, towards the sunset, I initially felt slightly scared. I seemed to be caught in some sort of time loop as the flag of the hostel where I worked did not seem to get any closer. But then, immediately, I felt I could be trapped in that moment for eternity and I would not even mind, for everything just seemed 'right'. Everything felt like it 'came together'. I do not really consider myself a spiritual person, but in this moment, I felt so safe in the idea that there had to be 'more' than just everything I knew. In retrospect, I guess I can describe this feeling as both transcendence over natural law and existential security. However, these words do not make that moment any less special for me.

I thought about titling this thesis 'evolution versus romanticism', because I often thought that the explanatory power of the theory of evolution diminished the romanticism of certain phenomena. I have learned this does not have to be the case. Only if we choose to let it. The sublime might serve the purpose of leading to altruism, or even to increase our adaptability. However, I hope this knowledge will not take away from your sublime experience, the next time you chase it.

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