
STARRY SKY
AS » THE GREATEST MUSEUM
OF NATURAL HISTORY «

Sublimity of the sky from Kant to
Santayana and beyond

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The concept 'sublime' was introduced into modern aesthetics by Edmund Burke (1756) although already the ancient author Pseudo-Longinus¹ wrote about "sublime beauty". Burke discerned the sublime from beautiful – and a similar conception was later developed by Kant in his famous pre-critical writing *Observations on the Feeling of the Beautiful and Sublime* (1764)² where he wrote that the subtle feeling was of a two-fold nature: the feeling of sublime <das Erhabene> and beautiful. For example, high oak trees and lonely shadows in the holy grove are sublime, while flower beds, low things and figure-shaped trees are beautiful; the night is sublime, the day is beautiful; deep solitude is sublime, but "in a frightening way" etc.³ In this treatise Kant (like Burke) deals more with the psychological and ethnological aspects of the beautiful and sublime,

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¹ Umberto Eco in his *History of Beauty (Storia della bellezza, 2004)* informs us that Pseudo-Longinus, an author from the Alexandrian period (1. century A.D.), saw sublimity mainly in impetuous and noble passions, moments of spiritual elevation which are put into words in Homeric epic poetry or in the great classical tragedies.

² In this treatise Kant does not mention Burke as his precursor in discerning the beautiful from the sublime, it might be he did not know him at the time. He mentions him only later in his "third critic", in which he says that Burke makes only an "empirical exposition of the sublime and beautiful" – while Kant develops a philosophical, transcendental approach of this difference.

³ The meaning of the concepts "the sublime" and Kant's *das Erhabene* (i.e. "spiritual elevation") are, from today's philosophical point of view *almost* synonymous (especially if they refer to Kant), but not quite so. The term 'sublime' bears in common usage also a different meaning and other connotations than the term 'spiritual elevation'; when we for example say that some poetry is sublime we usually don't mean that it is 'high', but that it is 'refined'; and the term "sublimation" in psychoanalysis means rather "refinement" or "diversion" (e.g. of *libido* in arts

it is only in his *Critique of Judgement* (1790) that he philosophically connects the aesthetics of art and the distinction between the beautiful and sublime with the teleology of nature.

First, let us have a look at how Kant in his third critique conceives beauty, be it the beauty of nature or of a work of art (the former being of primary importance for him): beauty is for Kant what “disinterestedly” pleases taste, so it is not primarily the characteristic of an object (its proportionality, harmony), as it used to be in classicism, but it has to be searched for in the *subjective* relation, in the aesthetic observing of objects. Kant took the “primacy of taste” in the aesthetic judgment, at least partially, from David Hume (*Of the Standard of Taste*, 1757). The important new stress is the “subjective general validity” of beauty,⁴ which leads Kant to the key “theorem” of transcendental aesthetics, with which he influenced also Hegel’s and Schelling’s conception of art: “*Beautiful* is what pleases in general and without a concept”.⁵ Or, as Kant explains later in more detail: “*An aesthetic idea* cannot become a recognition because it is a perception <*Anschauung*> (of the figurative faculty), for which an adequate concept can never be found. *An idea of the mind* can never become a recognition because it contains a *concept* (about the sensually transcendental) which can never be given an adequate perception”.⁶ The mind can never capture the cognitive *whole* in a concept, because the wholeness of cognition inevitably exceeds all possible experience, however, the whole could be found as the “general without concept” in the “aesthetic idea”, which is given to the subject in the perception, e.g., in the *observation of the individual beauty*. From Kant’s subjective (transcendental) approach to beauty it follows that “there can be no rule that would compel someone to recognize something as beautiful”,⁷ since every judgement that comes from this source is aesthetic: “The reason of its determination is the feeling of the subject

etc). However, like for Burke, also for Kant *das Erhabene* means: impetuous, majestic, extreme, excessive, also terrific...

⁴ Kant, I., *The Critique of Judgement*, §8.

⁵ Ibid., § 6.

⁶ Ibid., § 57, Remark 1.

⁷ Ibid., § 8.

not concept of the object.⁸ We might ask whether this attitude marked the beginning of the ever increasing “subjectiveness” of art criticism, which is today close to total arbitrariness? The latter was certainly not Kant’s aim because in his subjective aesthetic judgement he substitutes the idea of mind with the “ideal” of beauty: “An *idea* is actually a concept of the mind, an *ideal* is a notion of a single being as much as it adheres to the idea”.⁹ Then he puts the question: “But how do we get to such an ideal of beauty? A priori or empirically?”¹⁰ – and he answers that “only a *human* can present the ideal of *beauty* among all the things in the world, similarly as humanity can in his person, as an intelligent being, present the ideal of *perfection*”.¹¹ So it is obvious that in this conclusion Kant’s subjectivism does not imply aesthetic relativism, and further on he implements the thought of the “ideal of beauty” with his concept of *genius*, who embodies the spirit and taste of the age.

For our context, Kant’s theory of the sublime is more relevant than his theory of the beautiful. In *The Critique of Judgement* he discerns between the “mathematical” and “dynamical” sublime in nature: an example of the mathematical sublime is the starry sky, an example of the dynamical sublime is a stormy ocean – the former displays the immeasurableness of the *greatness*, the latter the immeasurableness of the *might* of nature. Kant’s “nominal definition of the sublime” goes as follows: “Sublime is the name given to what is absolutely great”,¹² absolutely great being “what is beyond all comparison great”;¹³ and that “is sublime in comparison with which all else is small”.¹⁴ The sublime evidences a faculty of mind <*Gemüt*, soul> to transcend all sense experience. Or, if we say it otherwise: with the sublime the mind as aesthetic “faculty” frees itself of the cognitive limitation in the domain of sensory experience. With Kant’s words: “But the point of capital importance is that the mere ability even to think it as a whole indicates a faculty of mind transcend-

⁸ Ibid., § 17.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid.

¹² Kant, I., *The Critique of Judgement*, § 25.

¹³ Ibid.

¹⁴ Ibid.

ing every standard of sense”.¹⁵ The *cognitive* meaning of the sublime lies for Kant in this: “Nature, therefore, is sublime in such of its phenomena as in their intuition convey the idea of their infinity”.¹⁶ The infinity of nature, of the whole universe thus *returns* into the thought, more precisely, into the *aesthetic perception*, not only as a “regulative idea”, not only as an “ideal of the mind” (as in the transcendental dialectics of pure reason), but as the “actual” infinity, which is aesthetically “recognized” in the sublimity of the starry sky, the ocean, the nature.

An essential difference between Kant’s beauty and sublime is the following: “The beautiful in nature is a question of the form of object, and this consists in limitation, whereas the sublime is to be found in an object even devoid of form, so far as it immediately involves, or else by its presence provokes a representation of limitlessness, yet with a superadded thought of its totality”.¹⁷ What was unavoidably taken from pure reason, the “totality”, is now restored back to human judgement or to aesthetic “faculty” – as *infinity in the finite*. As is the beautiful so is the sublime “subjectively generally valid” but the latter is even more *inner* than the former, because “for the beautiful in nature we must seek a ground external to ourselves, but for the sublime one merely in ourselves and the attitude of mind that introduces sublimity into the representation of nature”.¹⁸ The feeling of sublime involves as its characteristic feature a mental movement combined with the estimate of the object, whereas taste in respect of the beautiful presupposes that the mind is in “restful contemplation, and preserves it in this state”.¹⁹ We may ask: don’t the stars fill the soul more with peace than with motion? And further: do they shine to us only in the motion of *our* “nature”, in the inner uneasiness and anxious fearful respect that the soul experiences when it looks towards them? And finally: *where* is the sublimity, “in myself” or “up there”? *How* do we observe the sublimity of the sky? We might find the answer in the following passage:

¹⁵ Ibid., § 25.

¹⁶ Ibid., § 26.

¹⁷ Kant, op. cit., § 23.

¹⁸ Ibid.

¹⁹ Ibid., § 24.

“So, if we call the sight of the starry heaven sublime, we must not found our estimate of it upon any concepts of worlds inhabited by rational beings, with the bright spots, which we see filling the space above us, as their suns moving in orbits prescribed for them with the wisest regard to ends. But we must take it, just as it strikes the eye, as a broad and all-embracing canopy: and it is merely under such a representation that we may posit the sublimity which the pure aesthetic judgement attributes to this object.”²⁰

In these thoughts we can recognize the originating point for later phenomenological thoughts about the “vicinity of stars”, existential inclusion of everything distant into the human *Lebenswelt*. – *How far are the stars? How big are they?* Old Heraclitus said that the “Sun is as big as it shows itself to us”, which is to say that “it has the width of a human foot” (DK 22 A 1). Among modern thinkers, after the discoveries of Copernicus and Galileo, we come across an “aesthetic” reaction against the immense dimensions of the sky in comparison to our life environment already by Kant, not only later by Heidegger and Merleau-Ponty, by whom it manifests itself as the phenomenological “tendency of Dasein to vicinity”. Kant explicitly states that “all estimation of the magnitude of objects of nature is in the last resort aesthetic (i.e., subjectively and not objectively determined)”.²¹ That the stars are not only some foreign, immensely distant worlds but also *our*, “close” heavenly lights, we can strongly feel while looking at Van Gogh’s big shiny stars, at those numerous, *sensibly* present other suns, which are carried by mighty vortices of clouds above an earthly village and together with the soul of man that flames toward the heaven like a cypress... Yes, but if this sensible *experience* of the starry sky is the only one in which the soul, longing for an infinite fulfillment, for unlimited beauty, can wholly recognize itself,

²⁰ Kant, *The Critique of Judgement*, § 29.

²¹ *Ibid.*, § 26. Of course, Kant was well aware of the actual enormity of the sky. When in his *Critique of Judgement* he writes about the possibility of illustrating enormous astronomical relations, he says among other things: “similarly the Earth’s diameter for the known planetary system; this again for the system of the Milky Way; and the immeasurable host of such systems, which go by the name of nebulae, and most likely in turn themselves form such a system, holds out no prospect of a limit” (Kant, *op. cit.*, § 26). Thus he knew – or at least sensed – that there exists an “immense group” of galaxies, although astronomers discovered this only at the beginning of the 20th century. Until then it was thought that they were all observable nebulae inside our Milky Way.

why then at all do we need science, astronomy, “objective truth”? Is it right to say, as Kant does, that “instead of the object, it is rather the cast of the mind in appreciating it that we have to estimate as sublime”?²² Surely it holds that “we must be able to see sublimity in the ocean, regarding it, as the poets do”²³ – but this does not mean that there is no sublimity also in science, in its “concepts about worlds”. Why deprive science of the sublime?

I try to answer this question with the assumption that Kant does not even search for the sublime in science, in rational cognition, but only in the aesthetic observation, because he already defines the sublime as an unlimited *greatness* and *might*, which are inaccessible to scientific cognition, since they lie *beyond* every possible cognition. Kant does but not consider (at least not explicitly) the sublime as *depth*, as the fathomless *mystery* of the world, nature, universe. In his frame of reflection it is certainly true that we cannot come to an experience of *unlimited* greatness and might of the universal ocean via science but only via our “aesthetic nature”. However, if we take a look beyond this frame of reference, we will see that both art and science express, each in its own way, the fathomless *depth and mystery of the world*. It is true that sciences cannot sing a hymn about the sublimity of nature, but the depth and mystery of the world reveal themselves in them as well, though in a different way, not in the “oceanic” sensation, but in the clear language of mathematics, woven in the immensely complicated abstract “veil”, which screens the senses, but at the same time unveils the deeper truth of Nature.

When we reflect upon these difficult problems, which even the wise Kant did not carry to an end, we have to take into account another thing: it is evident that our “mental faculty” prefers finiteness to infinity, and when it is confronted with infinity, “it represents all that is great in nature as in turn becoming little”.²⁴ Confronted with the immensity of the universe, we experience fearful respect, which is an essential element of the sublime, as Kant defines it – and in this experience we find more anxiety than delight and love. Under the starry sky we feel weak,

²² Ibid.

²³ Ibid., § 29.

²⁴ Ibid., § 26.

small, and that is why we turn into our *interior* where we find some other strength, *different* from nature:

“In the immeasurableness of nature and the incompetence of our faculty for adopting a standard proportionate to the aesthetic estimation of the magnitude of its realm, we found our own limitation. But with this we also found in our rational faculty another non-sensuous standard, one which has that infinity itself under it as a unit, and in comparison with which everything in nature is small, and so found in our minds a pre-eminence over nature even in its immeasurability.”²⁵

Kant’s pre-eminence of the mind over nature can be a source of consolation and reconciliation with our physical finiteness and death, because in spite of the fact that the irresistibility of the might of nature forces upon us the recognition of our physical helplessness as beings of nature, it reveals us a faculty of estimating ourselves as *independent* of nature, and discovers that our “pre-eminence above nature is the foundation of a self-preservation of quite another kind”²⁶ For Kant it is in this that the *ethical* importance of the aesthetic experience of the sublime lies: “In this way, external nature is not estimated in our aesthetic judgement as sublime so far as exciting fear, but rather because it challenges our power (one not of nature) to regard as small those things of which we are wont to be solicitous (worldly goods, health, and life)”²⁷ These thoughts sound rather stoical and we could recognize in them also the platonic quest for eternity against the passing of all the natural world, but there is also an essential difference between Kant and the classics: when Kant speaks about the “pre-eminence of the mind over nature”, this pre-eminence is meant within the horizon of the modern *subjectivity* which tries to “overcome” nature as the “realm of necessity” by subduing it to the human “free will”, which is presumably “not nature”. But from this duality stems an incessant split between nature and mind, between body and soul, it is a source of the modern pain of incompleteness, which was not known to the classics, at least not in such “subjective” and individual sense, but rather in the tragic feeling of the

²⁵ Kant, *The Critique of Judgement*, § 28.

²⁶ *Ibid.*

²⁷ *Ibid.*

distance between the mortal humans and the immortal gods. Of course, Platonism tries to overcome the transitoriness of nature, namely in the eternity of the soul and mind, however – not by trying to overcome nature, but rather by shining through it with the eternal spirit.

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Kant sharply distinguished the beautiful from the sublime, indeed he considered them as *opposites* – but this opposition is neither necessary nor obvious for our “sense of beauty”. We can also say that Kant’s subjective (i.e., inner) opposing to nature is far from the platonic admiring of the beauty of the sky, as expressed in Plato’s late dialogues, *Timaios*, *Philebos* and *Epinomis*. For Plato, nature is not opposite to mind (or spirit), at least not in a subjective sense like for most modern, post-Cartesian philosophers. But there are some fine exceptions ...

One of them is George Santayana who in his first and most known book *The Sense of Beauty* (1896) also wrote about the beauty and sublimity of the starry sky. He developed a kind of “platonic naturalism”, i.e., he stressed the spirit in nature and was engaged in non-confessional, “cosmic” religiosity (he explicitly wrote about his relation to Platonism in his essay *Platonism and Spiritual Life*). In the introduction to his book *The Sense of Beauty* he says that “Platonism is a very refined and beautiful expression of our natural instincts, it embodies conscience and utters our innermost hopes”.²⁸ He tends to stress platonic *kalokagathia*, although his aesthetics is not just platonic in the classical sense, since his definition of beauty includes Kantian “subjectivity” by the concept of “pleasure”. Santayana defines beauty as “pleasure regarded as the quality of a thing”.²⁹ So in Santayana’s aesthetics different influences intertwine, besides Platonism and Kantianism also the influences of Hume, Schelling, and Schopenhauer, nevertheless his thought as a whole does not give an impression of eclecticism, rather of genuineness and coherence. Beauty for Santayana has also a theological sense because “the perception of beauty exemplifies that adequacy and perfection which

²⁸ Santayana, *The Sense of Beauty*, p. 12.

²⁹ *Ibid.*, p. 51.

in general we objectify in an idea of God".³⁰ In *The Sense of Beauty* Santayana systematically treats beauty in its three main aspects: material, formal, and expressive (in the chapter about forms, for example, he speaks of the "charm of symmetry", following Platonism) – but it is not our purpose here to deal with the multiple nuances of his aesthetic philosophy, we will rather focus only at some of the fragments where he writes about the beauty of the sky and stars.

In paragraph 24 of *The Sense of Beauty* under the title "Multiplicity and uniformity" Santayana states that "we can have the sense of space without the sense of boundaries; indeed, this intuition is what tempts us to declare space infinite";³¹ interesting enough, he adds that "[s]pace would have to consist of a finite number of juxtaposed blocks, if our experience of extension carried with essentially the realization of limits"³² – which reminds us of the modern mathematical topology of the "Euclidean torus", that the universe could have if it was (maybe is) spatially "compact", concluded in itself. A nice feature of Santayana's philosophical method lies above all in his persistence in an "aesthetic" *experiencing* of the concepts which he treats, as well when he speaks about space: "The aesthetic effect of extensiveness is also entirely different from that of particular shapes. Some things appeal to us by their surfaces, others by lines that limit those surfaces",³³ but the beauty of the space itself exceeds these lines and surfaces with its immensity, with its "pure sense of extension",³⁴ which is form in its most elementary configuration – but Santayana does not hold the view of a vacuous *res extensa* or Kant's space as "a priori form" of our outer senses, since "the effect of extensity is never long satisfactorily unless it is superinduced upon some material beauty"³⁵ – at this point we can remind ourselves of the big monochromatic blue canvases of Yves Klein – "and the vast smoothness of the sky would grow oppressive if it were not of so tender a blue".³⁶ Yes, even

³⁰ Ibid., p. 13.

³¹ Santayana, op. cit., p. 101.

³² Ibid.

³³ Ibid.

³⁴ Ibid., p. 102.

³⁵ Ibid.

³⁶ Ibid.

the sky becomes low and dismal, it “lies heavy on us”, when the heavy clouds screen it from horizon to horizon – but at night, on the other hand, there is the glimmering “surface” of the stars to protect us from the fathomless blackness of the sky.

In the next, 25th paragraph under the title “Example of the stars” Santayana writes that “[a]nother beauty of the sky – the stars – offers so striking and fascinating an illustration of the effect of multiplicity and uniformity”.³⁷ If we ask ourselves *why* the stars are so beautiful to us, we might answer that it is because we *know* how mighty and distant, how big and shiny they are in comparison to our Earth, some of them even a thousand times brighter than our very bright Sun etc. – but Santayana thinks that the factual (in our times scientific, astronomical) knowledge about stars, which has evolved through history, is not essential at all for us to admire them. “Before the days of Kepler the heavens declared the glory of the Lord; and we needed no calculation of stellar distances, no fancies about a plurality of worlds, no image of infinite spaces, to make the stars sublime”.³⁸ The sensory aspect of what we observe is much more important for our feeling of the sublime, because various “theories”, interpretations change, while the perceivables – in our case the immense dimensions of the starred “heavenly arch” – are the “experiences which remain untouched by theory”,³⁹ and this is why it is so universal:

³⁷ Santayana, op. cit., p. 102–3.

³⁸ Ibid., p. 103. Observing the sky and stars has always been wonderful and amazing, also for those who didn't look for the “glory of gods” there. At this point we can quote some verses of Lucretius from his great cosmological poem *On the Nature of the Universe* (*De rerum natura*, 1st century B.C.), which speaks about how people would be astonished and mesmerized if they saw one night the starry sky for the *first* time. Today we have – like the inhabitants of imperial Rome – almost forgotten this majestic, *sublime* scene. (Lucretius II, 1030–39):

*Look up to the clear and pure colour of the sky,
and all the travelling constellations that it contains,
the moon and the bright light of the dazzling men;
if all these were now revealed for the first time to mortals,
if they were thrown before them suddenly without preparation,
what more wonderful than these things could be named,
or such as the nations would not have dared to believe beforehand?
Nothing, as I think: so wondrous this spectacle would have been,
which now, look you, all are so wearied with often seeing,
that no one thinks it worth while to look up towards the bright vault of heaven!*

³⁹ Ibid., p. 104.

we admire the *same* sky, wonder at the *same* stars as the Chinese, the ancient Sumerians, maybe even as some remote “Martians”. Beauty is for Santayana a more firm “ontological” basis of reality than thought, than “mere ideas” about the world, nature, the universe. In the numerous complicated and intertwined constellations of stars, in this biggest of all visible “patterns”, there lies a great beauty of complexity, for –

“the starry heavens are very happily designed to intensify the sensations on which their beauties must rest. In the first place, the continuum of space is broken into points, numerous enough to give the utmost idea of multiplicity, and yet so distinct and vivid that it is impossible not to remain aware of their individuality. The variety of local signs, without becoming organized into forms, remains prominent and irreducible. This makes the object infinitely more exciting than a plane surface would be. In the second place, the sensuous contrast of the dark background, – blacker the clearer the night and the more stars we can see, – with the palpitating fire of the stars themselves, could not be exceeded by any possible device.”⁴⁰

For the experience of the sublimity of the sky, it is essential its *sensuous* beauty which surpasses all human artefacts by its complexity and splendour. This sublimity is *not only* in the immense dimensions, not only in the infinite might and greatness – so that Kant’s formal dichotomy between “mathematical” and “dynamical” sublime is not enough for a complete understanding of the sublimity of the sky – since for Santayana, it is important to sense and feel the unconceivable *subtlety* of the universe which fascinates our souls with its *depth and mystery*. When we are mesmerized with the boundlessness of the sky, with thousands of starry lamps, we are not “lied heavily upon” by the unknown forceful might, by the unavoidable necessity of nature – on the contrary, we are elevated to the sublime beauty of the *whole*, to the totality of All that surrounds us and that we ourselves are: we don’t have to “overcome” nature with some other force, with mind distinct from nature, but we rather try to recognize ourselves as living, conscious minds *in nature*. And when we recognize *Thou art That* (*Tat Tvam Asi* from the Upanishads), then stems out of this highest recognition the elevated pathos, genuine ecstasy, excess of emotions, which is common to all diverse souls

⁴⁰ Santayana, *The Sense of Beauty*, p. 106.

and cultures, to all who see the stars “like impressive music, a stimulus to worship”.⁴¹ However, despite of this oneness of All, I as a human being retain my individuality and solitude in my personal soul, which is sublime in a different way – as a “single star [that] is tender, beautiful, and mild”,⁴² or as a single flower, a small earthly star amidst a vast landscape.⁴³

So, in what sense is Santayana’s philosophy a “platonic naturalism”? In his lovely treatise *Platonism and the Spiritual Life* he wrote that “those who think Platonism dualistic have simply not understood”.⁴⁴ Platonism is a philosophy of spirit and “why should [the spirit] quarrel with its earthy cradle?”⁴⁵ Spirit is light, “spirit is awareness, intelligence, recollection”.⁴⁶ – Of course, there is no guarantee that the spirit will, after some centuries of modern dualism, return into nature, maybe this is only one of our postmodern illusions, and there is a founded fear that the development is heading right in the opposite direction, towards an even harder absence of spirit, be it in nature as well as in the social world. But there is probably at least something, maybe even many things, that depend on ourselves? On our thoughts, conceptions, feelings, on the spirit of every individual, of me, you, her, all of us? I believe that many things are up to us, living minds, and that one of the essential factors

⁴¹ Santayana, op. cit., p. 104.

⁴² Ibid., 107.

⁴³ The beauty of the landscape is comparable to the sublimity of the sky. Santayana in paragraph 33 of *The Sense of Beauty* under the title “Example of landscape” writes: “The natural landscape is an indeterminate object; it almost always contains enough diversity to allow the eye a great liberty in selecting, emphasizing, and grouping its elements, and it is furthermore rich in suggestion and in vague emotional stimulus. [...] This is a beauty dependent on reverie, fancy, and objectified emotion” (Santayana, op. cit., 133). – This beautiful fragment induces us to think about the “architecture” of gardens, cultivated landscapes, about the difference between, for example, the French geometrical and English “landscape” garden in the 18th century. But the greatest masters of the harmony of nature and spirit are zen masters of gardens: the symbolic beauty of wavy sand surfaces, from which conical “mountains” rise here and there, those rocky “isles” and stony “stelae”, the minimalistic “graphic” of these structures, which connect the interior of the temples with the exterior of the landscape (the dividing line between them is almost erased but nevertheless it persists), the “shaped emptiness”, which is at the same time accomplished perfection, that uniformity-in-multiplicity, which pleases and frees the spirit – all this sublime beauty of temples-gardens in Kyoto impresses itself permanently on the visitor’s memory.

⁴⁴ Santayana, *Platonism*, p. 237.

⁴⁵ Ibid., p. 250.

⁴⁶ Ibid., p. 274.

that in our present determine the future is recognizing the eternal *spirit in the beauty of nature*.

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Why could we say that the starry sky is “the greatest museum of natural history”? Following Einstein’s theory of relativity, space and time are united into the four-dimensional continuum of space-time; and relativity is the founding stone of modern cosmology. So, when we look deep into space, when we see in our telescopes distant galaxies, which are millions, even billions of light-years away from us, we look into *past times* of our universe, since light – which only seems to travel with infinite speed – is indeed travelling quite slow in the vast cosmic distances. For example, the distant “quasars” (i.e., quasi-stellar objects), which are considered to be very bright cores of the ancient, then still “active” galaxies, appear and disappear within a certain “layer” of the cosmic space-time, not unlike the fossils of dinosaurs appear and disappear within the geological layers between the late Triassic period and the Cretaceous-Tertiary period: deeper in space means deeper in time. Besides that, in the expanding universe, everything that was once “very small” (of course, sizes of objects are relative, according to Einstein) is nowadays very big. Brian Greene, one of the best known writers of modern cosmology, wonders in his book *The Fabric of the Cosmos*: “According to [cosmic] inflation, the more than 100 billion galaxies, sparkling throughout space like heavenly diamonds, are nothing but quantum mechanics writ large across the sky. To me, this realization is one of the greatest wonders of the modern scientific age”.⁴⁷ And this is really a wonder! A *sublime* wonder, revealed by modern science. And if we continue our journey in space-time, coming closer and closer to the very beginning of our universe, we find (namely all around us, just everywhere) the oldest of all cosmic “fossils” – the “background radiation”, the *cosmic* radiation which is nowadays very cold (minus ~ 270 °C, i.e., only 2,7 degree above the absolute zero temperature), but which was very hot, brilliant as the sun’s surface, when it began its way in space-time: at *that* time,

⁴⁷ Greene, p. 308.

the whole of the sky was brilliant as the sun's surface is today! But this is still not the end of the cosmic "fossil story": on the "surface" of the cosmic background radiation, the "blueprint" of the big-bang itself (or at least of the cosmic inflation in the first second) is imprinted: from the patterns, tiny anisotropies in cosmic radiation science can "read" the very beginnings of the Story. Of course most of these "signs" still have to be deciphered, but the work is in progress. Paul Davies in his book *The Cosmic Blueprint* (1987, revised edition 2004) puts it more precisely, saying that "there is no detailed blueprint, only a set of laws with an inbuilt facility for making interesting things happen".⁴⁸ This was also Einstein's way of thinking when he remarked that the Lord was "subtle" <raffiniert>, but not "malicious".⁴⁹ So, we may conclude: when we gaze into the starry sky, we see God's creation, as theists believe, or, as pantheists (including myself) might say, we stand "face-to-face" to *Deus sive natura*. And that's why we indeed have to include this greatest view into our "Museum of Natural History" – we must *remember the sublimity of the sky* which inspired our ancestors with awe and wonder, and which may be the distant future of *homo sapiens*.

Translated by Peter Lukan

R e f e r e n c e s

1. Davies, P. (1995), *The Cosmic Blueprint. Order and Complexity at the Edge of Chaos*. London: Penguin Books.
2. Greene, B. (2005), *The Fabric of the Cosmos. Space, Time, and the Texture of Reality*. London: Penguin Books.
3. Kant, I. (1952), *The Critique of Judgement* (translated by James Meredith Creed). Oxford: Oxford University Press.
4. Lucretius, T. C. (1953), *De rerum natura – On the Nature of the Universe* (translated by Rouse, W. H. D.). Cambridge, Mass: Harvard University Press.
5. Santayana, G. (1955), *The Sense of Beauty*. New York: Random House.

⁴⁸ Davies, p. 202.

⁴⁹ See also: Uršič 2006, p. 276.

6. Santayana, G. (1957), *Winds of Doctrine & Platonism and the Spiritual Life*. New York: Harper and Brothers Publishers.
7. Uršič, M. (2006), "Einstein on Religion and Science", *Synthesis Philosophica* 42, Vol. 21, Fasc. 2, pp. 267–283 (also online, in the author's homepage: <http://www2.arnes.si/~mursic3/>).