Essay

Aesthetics as the cause for awakening the sciences in Charles Darwin

La estética como fuente del despertar de las ciencias en Charles Darwin

María Noel Lapoujade*

Canelones, Uruguay

The limit of man’s knowledge in any subject possesses a high interest, which is perhaps increased by its close neighbourhood to the realms of imagination.


The world is admired before being tested.

The world is beautiful before being true.

Gaston Bachelard (1943, p.216)

Abstract: In this article I propose a new perspective on Charles Darwin, needed because academic studies categorize his thinking into a spirit that is purely and exclusively scientific and ignore the aesthetic and poetic aspects which emerge throughout his works. The theme develops within the border of Philosophy and Psychology. Aesthetics works as a hinge between these two branches of knowledge through the aesthetic experiences in the heart of the logical functioning of Darwin’s mind. The method emanates from the premises of the research. Based on the purpose and the premises that underlie this article, the theme encompasses: firstly, Journal of Researches into the Natural History and Geology of the Countries Visited during the Voyage of HMS Beagle round the World, under the Command of Capt. Fitz Roy [Diario del viaje de un naturalista alrededor del mundo] (1831-1836), secondly, evidence of the presence of the Journal in On the Origin of Species by Means of Natural Selection [El origen de las especies por medio de la selección natural] (1859). The conclusion confirms the meaning of the headings as key for the meaning of the paper.

Keywords: aesthetics, Darwin, sciences, journal, species

Resumen: En el presente artículo propongo una nueva perspectiva sobre Charles Darwin, necesaria porque los estudios académicos encasillan su pensamiento en un espíritu pura y exclusivamente científico e ignoran las vertientes estéticas y poéticas las cuales afloran a lo largo de sus obras. El tema se desarrolla en la frontera de la Filosofía y la Psicología. La estética funge como articulación de estas dos ramas del conocimiento, a través de las experiencias estéticas en el seno del funcionamiento lógico de la mente de Darwin. El método parte de las premisas de la investigación. Con base en el propósito y en las premisas en las que se fundamenta el artículo, el tema recorre: primero, el Diario del viaje de un naturalista alrededor del mundo (1831-1836), segundo evidencia la presencia del Diario en El origen de las especies por medio de la selección natural (1859). La conclusión ratifica el sentido de los epígrafes, como claves del sentido del paper.

Palabras clave: estética, Darwin, ciencias, diario, especies

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*Correspondence: María Noel Lapoujade, e-mail: maría.noel.lapoujade@gmail.com*

**The title and its implications**

The title aims to place the reader on the development track of this article’s theme, on the boundary of Philosophy with Psychology. In this study I suggest Aesthetics acts as a hinge between the two areas, with connecting vessels.

First and foremost, I bring forward a new perspective on Charles Darwin, whose thinking has been categorized into a spirit that is exclusively scientific and whose aesthetic and poetic spirit is additionally ignored.

What do we understand by Aesthetics in this research?

Among the multiple and complex relationships between each individual and the surrounding environment, let us call it: *the world*, the aesthetic connections with beings, objects, situations, or phenomena, whatever they may be, are important. This is what we call *spontaneous aesthetics*, in other words, not systematic, methodical, or philosophical, but natural, with or without theories that substantiate it. Aesthetic connections in this context means connections of aesthetic enjoyment, pleasure, or displeasure, sensed, experienced, ways of living, in other words, experimenting beauty as an expression of healthy human, animal, vegetal, natural, and therefore, cosmic life. These experiences often culminate in generally exclamative affirmations about the beauty of the being or object in question. This impact is exposed through value judgements used to state the beauty of the object.

This situation in clearly emphasized in *presence of the unknown*, such as natural phenomena, beings, objects, or situations. This relevance is evidenced through the fact that direct knowledge of the being, object, phenomenon, situation is absent, as it were, there is no previous knowledge on the matter.

Why is thoroughly reading *Journal of Researches round the world* by Charles Darwin highly relevant?

Particularly, regarding our paper, the *Journal of Researches round the world* by Charles Darwin, 1831-1836, brings to light Darwin’s rich and complex personality. The *Journal* narrates the voyage during which the scientist sailed and disembarked in places unknown to him, where the first experiences were aesthetic. Finally, the *Journal* has incomparable value to test the premises that underlie my article and are fully confirmed by Darwin’s words.

What does the *Journal* consist of?

In this work, which I consider to be essential in every level of education, Darwin logs and narrates *hundreds of experiences with the unknown*: geographies, climates, natural phenomena, stones, plants, animals, human beings, with their customs, languages, cultures, religions…

The narration of these episodes is always carried out according to a spontaneous internal logic which I consider to be an undeliberate logic, born from his subjectivity, the logical structure of his thoughts embedded in the tissue of the psyche.
Premises of this research

First. The “stream” (W. James) of the mind, psyche, has its own source that drives it to burst into the most diverse processes. According to Gaston Bachelard I put forward the following thesis, based on my philosophical perspective: the aesthetic experience of the surrounding world, unknown or known, rooted in the imagination, is the force that impulases the awakening of knowledge of all kinds, among others, philosophical, scientific and artistic, of myths and religions (Lapoujade, 1988; 2008; 2011; 2014/1839; 2017a; 2017b).

Second. The psyche has its logics. Without getting into the implicit problem, I claim that the “psychology” of each individual, the “mind”, “spirit” or “subjectivity” of the human species, which I define as Homo imaginans, works assuming, bringing into play, different logics, in other words, logics are inherent (Lapoujade, 1988).

Third. It arises from comparing the aforementioned. The epistemic processes emerge from the heart of the aesthetic processes, in other words, knowledge emerges from the aesthetic experiences of what is “real”, according to its own internal logics, like vigil logics, dreamlike logics, “logics” of dreams, etc. [Homenaje a los 70 años de vida de María Noel Lapoujade, Priani Saisó (Coord.), 2018].

Objectives

My goal is to put these premises into action. My argument is to demonstrate, in other words, to show, evidence the viability and operability of the premises.

Method

The method covers one base work: Journal of Researches into the Natural History and Geology of the Countries Visited during the Voyage of HMS Beagle round the World, under the Command of Capt. Fitz Roy by Charles Darwin. I traverse through it based on a method that consist of the extraction of relevant excerpts, which prove the accuracy of the premises using the direct words of an inarguably scientific spirit. They are passages that reflect his attitude toward the world, a way of experimenting reality which is repeated hundreds of times throughout the work.

Outline


Chapter 1. The voyage

The leitmotiv of this paper is the Journal of Researches into the Natural History and Geology of the Countries Visited during the Voyage of HMS Beagle round the World, under the Command of Capt. Fitz Roy, a far-reaching non-fiction work. Between crossings and stopovers, the voyage lasted almost 5 years, from 1831 to 1836. The long crossings at sea and short trips along the coasts of South America in order to draw more precise maps meant Darwin was confined in a cabin with captain Fitz Roy for 5 years, where they coexisted in a reciprocal lack of freedom. The Journal is an invaluable document because it preserves the records of his spirit, of his personality and his future theories which would change the way we see the world and life itself.

The Journal is a lens that allows us to observe the processes and transmutations of his spirit. Furthermore, this document is a treasure that contains the seeds for his future Theory of
Evolution of Species, in its early stages.

Regarding my objective, the Journal is the eye that allows me to capture the logic of Darwin’s spirit. This shows surprising results regarding my own philosophical perspectives that are confirmed by the hundreds of experiences and situations lived by our protagonist.

Chapter 2. Analysis of the Journal

2.1 Nature and landscape

In a strict sense, by nature I understand the collection of everything that comprises planet earth without human intervention. From there on, every use of the word, by extension.

I define landscape in general as nature passed through the sieve that is human subjectivity. In particular, I call landscape the nature observed through an eye that judges it aesthetically.

The aesthetic gaze of any kind is the act of a contemplative eye. Far from opposing action, contemplation is a subtle but strong form of action. The observer’s external stillness allows an intense outburst of images, sensations, memories, desires, ideals, projects, longings, criticism, ideas to be lived in the individual’s subjectivity (Lapoujade, 2010).

An unknown landscape has an impact on the spirit of the individual, and it produces effects, resonances with different properties and intensities.

Aesthetic contemplation fuels the fire of the spirit because it ignites imagination. If the spirit is artistic, then the work is born, if the spirit is scientific, it detonates the hypothesis, theories, etc. The artistic or scientific responses reveal the repercussions the landscape has on the spirit (Bachelard, 1994).

When presented with new landscapes, Darwin acknowledges multiple resonances, some reiterated in his Journal. Among others, he encounters landscapes that are: “desolate”, “picturesque”, “lustful”, at times he feels “surprised by the curves” or finds “extremely uninteresting landscapes”, “inhospitable” landscapes, with “detestable”, “terrible climates”. Hundreds of landscapes inspire Darwin to be poetic: “Landscapes adorned with an air of perfect elegance: the scenery, if I may use such an expression, appeared to the sight harmonious”.

2.2 On the threshold of Aesthetics

The frontier of the aesthetic resonances of the landscape in its spirit, his mood, with the emergence of aesthetic connections, is a subtle limit. It is a different fold, one further step, that consists not only of realizing, logging, and showing the effects of the landscape on his own mood but also establishing, building a certain aesthetic connection with it. Almost unnoticeably we have crossed a faint boundary, we have entered the area of spontaneous aesthetics. That is to say, aesthetic connections and experiences that do not fit in a systematic and methodical aesthetic philosophy.

As for his style, Darwin combines the cruelest objectivity of pure scientific style, where the researcher ignores his subjective reactions, with a refine and beautiful poetic prose, where he lets the most profound resonances of the animals, plants, landscapes, nature blossom in his spirit, these are the profound aesthetic records of the naturalist.

In an excerpt where his aesthetic eye prevails, Darwin invokes the reader’s delight when he comments:

Bahia or San Salvador Brazil, Feb. 29 th.—The day has past delightfully. Delight itself, however, is a weak term to express the feelings of a naturalist who, for the first time, has wandered by himself in a Brazilian forest. The elegance of the grasses, the novelty of the parasitical plants, the beauty of the flowers, the glossy green of the foliage, but above all the general luxuriance of the vegetation, filled me with admiration. A most paradoxical mixture of sound and silence pervades the shady parts of the wood. The noise from the insects is so loud, that it may be heard even in a vessel anchored several hundred yards
from the shore; yet within the recesses of the forest a universal silence appears to reign. To a person fond of natural history, such a day as this brings with it a deeper pleasure than he can ever hope to experience again. After wandering about for some hours, I returned to the landing-place; but, before reaching it, I was overtaken by a tropical storm. I tried to find shelter under a tree, which was so thick that it would never have been penetrated by common English rain; but here, in a couple of minutes, a little torrent flowed down the trunk. It is to this violence of the rain that we must attribute the verdure at the bottom of the thickest woods: if the showers were like those of a colder clime, the greater part would be absorbed or evaporated before it reached the ground. I will not at present attempt to describe the gaudy scenery of this noble bay, because, in our homeward voyage, we called here a second time, and I shall then have occasion to remark on it (2014/1839, p.11-12)

2.3 Situated in the field of aesthetics

1. The field of aesthetics has diverse, broad, and far scopes. Not to be confused with the Theories of Art, History of Art or of the Arts. These are included within the field of aesthetics, but Aesthetics encompasses all kinds of aesthetic connections with any kind of object, real or possible, present, past, future, or utopic, natural, social, artificial.

It is possible to simplify the complexity of this topic if we establish, using I. Kant’s Aesthetics, two types of aesthetic judgements or assertions: he who judges the beautiful, and he who judges the sublime. This is how two radical aesthetic experiences are described. The experience of the beautiful, the experience of the sublime.

It is very surprising how clearly Darwin puts these radical aesthetic experiences into exact judgments, as if he had been explicitly applying Kantian Aesthetics.

According to Kant, in short, the judgment of *the beautiful*, with a formula [This is beautiful] is the final result by which the subject communicates the intense aesthetic experience of enjoyment, aesthetic pleasure, “lust”, that the subject feels during the perception, i.e., the mental image of an “x object”.

Pleasure arises from experimenting the harmony of the actions of the imagination (producer of images) and understanding (concept emitter function).

2.4 What does this harmony consist of?

It consists of the subject freely imagining whatever may cross their mind, without restrictions or rules. The understanding may also contemplate concepts just as freely. This is what Kant denominated “the free play of imagination with understanding”. It is clearly very pleasant to let the mental processes free of logic coherence, without prohibitions, censorship, true demands, it is experiencing fundamental aesthetic enjoyment or pleasure.

As for judging *the sublime* [This is sublime] is the final result where the subject attempts to communicate the enjoyment, pleasure, “lust” that is felt upon seeing extreme nature, a sea, a forest, a mountain, immense “seas of stone”, which inspire in him sensations of a nature whose immensity overwhelms him, either by the intensity, the quantity or by the intensity of the situation. Ultimately, it may also be an extreme, abnormal natural phenomenon of an overflowing, wild nature, which Kant denominated “feral”, because it is beyond the laws of nature, such as storms or others: hurricanes, volcanic eruptions, earthquakes, as long as they can be witnessed without being swept away by them.

In these situations, the imagination cannot produce images, configurations, because they are always limited. However, reason may propose limitless ideas such as the idea of totality, one that can never be grasped.

In this case there is a disharmony between imagination and reason. Paradoxically the subject feels pleasure, an aesthetic enjoyment in the experience of that disharmony.
Regarding aesthetic experience, the resonance of the images of an object which provokes a judgment of beauty is very different to the resonance of images that lawless, wild nature provokes in the viewer.

Beauty entails serene contemplation, a gentle enjoyment of the beings that normally inhabit nature, plants, animals, stones, mountains, rivers, skies.

The sublime expresses a feeling of enjoyment but with fear and respect for the magnificence of a nature that cannot be tamed, in a wild state, where the viewer feels small, helpless, at the mercy of those infinitely huge and powerful phenomena (Kant, 1968)

The majesty of these phenomena arises feelings of wonder and fear and respect for that “almighty” nature. The sense of respect connects this aesthetic experience with a moral experience because the moral law inspires respect. Respect is precisely what makes moral law a law. This is how aesthetic experiences merge with ethic experiences.

Darwin (2014/1839) describes sublime nature as follows:

If the eye was turned from the world of foliage above, to the ground beneath, it was attracted by the extreme elegance of the leaves of the ferns and mimosæ. The latter, in some parts, covered the surface with a brushwood only a few inches high. In walking across these thick beds of mimosæ, a broad track was marked by the change of shade, produced by the drooping of their sensitive petioles. It is easy to specify the individual objects of admiration in these grand scenes; but it is not possible to give an adequate idea of the higher feelings of wonder, astonishment, and devotion, which fill and elevate the mind. (p.26)

In another excerpt Darwin, the aesthete, exposes his feelings toward the sublime using the following words:

We obtained a wide view over the surrounding country: To the north a swampy moorland extended, but to the south we had a scene of savage magnificence, well becoming Tierra del Fuego. There was a degree of mysterious grandeur in mountain behind mountain, with the deep intervening valleys, all covered by one thick, dusky mass of forest. But it would be difficult to imagine a scene where he seemed to have fewer claims or less authority. The inanimate works of nature— rock, ice, snow, wind, and water, all warring with each other, yet combined against man— here reigned in absolute sovereignty. (2014/1839, p.197)

I evoke an excerpt where the abyssal quake of Darwin’s aesthetic experience is made clear (2014/1839):

When we reached the crest and looked backwards, a glorious view was presented. The atmosphere resplendently clear; the sky an intense blue; the profound valleys; the wild broken forms: the heaps of ruins, piled up during the lapse of ages; the bright-coloured rocks, contrasted with the quiet mountains of snow, all these together produced a scene no one could have imagined. Neither plant nor bird, excepting a few condors wheeling around the higher pinnacles, distracted my attention from the inanimate mass. I felt glad that I was alone: it was like watching a thunderstorm, or hearing in full orchestra a chorus of the Messiah. (p.301-302)

Darwin’s aesthetic experience takes a step further. The radical aesthetic experience is a mystical-aesthetic fusion experience, of termination of the self to achieve the beautiful and the sublime. Once this degree is achieved, aesthetic enjoyment leads to happiness.

It is an ethic-aesthetic-mystic experience of happiness. What Goethe experienced in Faust: “Beautiful moment, do not pass away” is an experience of the totality and the eternity of the moment.

2. The nuances of Darwin’s aesthetics possess surprising richness. The naturalist unfolds all his sciences from a previous, radical aesthetic experience. The transition goes from aesthetics to sciences and epistemology. Furthermore, the path leads to ethnology, as well as his interpretation
of myths and religions.

2.5 From aesthetics to sciences

Throughout Darwin’s Journal there is an abundance of passages where Darwin effortlessly traverses from aesthetics to the sciences that represent the core of his concerns.

The number of natural sciences evoked in his work is outstanding. It should be noted that Darwin the naturalist includes research for sciences that had not yet been identified at the time, which now constitute branches of natural science.

The transition from aesthetic experiences of the landscape to physical geography and geology flows seamlessly. The academic and detailed geological descriptions appear at intervals of a few pages. But the geologist observes in detail every habitat’s flora and fauna: terrestrial, aquatic and aerial. Thus, Darwin, botanist and zoologist, works without neglecting his accomplished entomologist side. Moreover, he studies the behavior, the customs, of the animals in their habitat, their umwelt (Uexküll), their surrounding world. Thus, ethology is omnipresent. Among his scientific adventures, Darwin exercises his passion for hunting.

The discovery, study, and collection of fossils deserves a separate chapter. The study of fossils and their interdependency with the geological stages, merged with the studies of the flora and fauna living in their physical geographies, constitute the plot of the future Theory of Evolution.

We are witnessing a seldom-recognized fact: the gestation in the spirit of its creator, of one of the greatest theories that would irreversibly change the historic curse of science, anthropology, philosophy. The Voyage has been to Darwin the highest school of knowledge.

Chapter 3. Presence of the Journal in On the Origin of Species

Nature’s clock not only bears witness to the stages of its history, but it also stirs profound observations in the theoretical scientist and leads him to question himself; the primary answers to those questions contain the seeds for the Theory of Evolution of the species titled: On the Origin of Species by Means of Natural Selection (1859).

In the context of this study there appear sufficient reference links between the two works, but it is not a detailed analysis of On the origin of species.

The work opens with a statement that confirms the importance of this study in terms of the presence of the seed of the Theory of Evolution in the Journal of the Voyage that we have analyzed. Darwin says (2019/1859):

When on board H.M.S. ‘Beagle,’ as naturalist, I was much struck with certain facts in the distribution of the inhabitants of South America, and in the geological relations of the present to the past inhabitants of that continent. (p. 63)

This work, continues the naturalist, is “a summary”.

3.1 What does the author mean by species?

The notion that Darwin (2019/1859) proposes is no more than a semantic agreement. To that effect he states:

I look at the term species, as one arbitrarily given for the sake of convenience to a set of individuals closely resembling each other, and that it does not essentially differ from the term variety, which is given to less distinct and more fluctuating forms. (p.122)

Moreover, the notion of variation implies the problematic premise of “community of descent” (Darwin, 2019/1859, p.109).

If a variation is useful for the survival of the species, favorable for the life of that species, then it is preserved. On the contrary, if it is harmful, it is destroyed. The variations accumulate, but the small changes are imperceptible, though continuous and progressive (Darwin, 2019/1859).

The mutations of a species, aftermath of a natural selection that entails the fight for life,
unfold with “extreme slowness”.

They occur throughout long geological times, continuously, states Darwin (2019/1859, p. 287) with the sentence, “nature does not make jumps”.

This fact is what Darwin calls “natural selection” and what Herbert Spence calls survival of the fittest, a more accurate expression, according to our author.

Both notions presuppose what Darwin calls “struggle for existence”, expression he uses, as he explains, in a broad and metaphorical sense. He concludes: “the vigorous, the healthy, and the happy survive and multiply” (Darwin, 2019/1859, p.150).

On my part, I consider that what was just put forward is what Baruch Spinoza called conatus, from a philosophical point of view and setting the differences aside, understood as the inclination of a thing to continue to exist (Spinoza, 1965).

In general conatus means the inclination to life, survival and to remain alive.

In other passages Darwin, the sensitive aesthete, reflects explicitly and profoundly on the aesthetic theme by essence: Beauty.

Firstly, he mentions and refutes the naturalists’ Theory which states that many natural formations were created with an aesthetic purpose, to enjoy beauty.

Secondly, Darwin (2019/1859), again very akin to Kantian aesthetics, states:

With respect to the belief that organic beings have been created beautiful for the delight of man,—a belief which it has been pronounced is subversive of my whole theory,—I may first remark that the sense of beauty obviously depends on the nature of the mind, irrespective of any real quality in the admired object. (p. 294)

However, it is possible to encounter natural beauty, for example, in seashells, flowers, fruit, birds and mammals, as well as many fish and reptiles and multicolored butterflies, to which I recall an excerpt that is in and of itself a gem of wisdom:

...have been rendered beautiful for beauty’s sake; but this has been effected through sexual selection, that is, by the more beautiful males having been continually preferred by the females, and not for the delight of man. So it is with the music of birds. We may infer from all this that a nearly similar taste for beautiful colors and for musical sounds runs through a large part of the animal kingdom. (Darwin, 2019/1859, p.295).

Darwin (2019/1859, p.296) expresses that: “How the sense of beauty in its simplest form—that is, the reception of a peculiar kind of pleasure from certain colors, forms, and sounds—was first developed in the mind of man and of the lower animals, is a very obscure subject.”

The survival of the species through their variations according to the scientist-aesthete “such modifications will add to the beautiful and harmonious diversity of nature” (Darwin, 2019/1859, p. 253).

To conclude, for there must be an end, we close the circle of our main thesis: the unarguable scientific spirit in Darwin, the multifaceted and wise scientist, displays its aesthetic and poetic side which is often overlooked by orthodox specialists in the pure sciences.

The complete text confirms Bachelard’s epigraph.

On my part, I consider that the proof of the correctness of my thesis and philosophical ideas can be found here, that we are on the right track. It is what I support with my philosophical perspective based on a conception of the species as Homo Imaginans, where the primary aesthetic thauma is the trigger for their character as human species.

To conclude, we shall read the last sentence of this monumental work: “whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved” (Darwin, 2019/1859, p.677).

Lastly, these works are a thesaurus of universal science and On the origin of species closes with a grand finale: a poetic and aesthetic passage, to confirm time and again, our proposal for a new hermeneutic of this genius of humankind.
Bibliography


