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Portraying the Victorian Era: The "Charles Darwin" photograph by Julia Cameron

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Abstract

Until the beginning of the 20th century, portraits and landscapes were the main subjects of photographic capture. In the period, such themes were prevalent due to technical and ideological concerns. Photography was considered a mimesis of reality. In this sense, science started to use photographs to reinforce time and place features. The portraits made in the 19th century by Julia Cameron fit this context. She registered figures of the Victorian intelligentsia, reflecting in her work the vision of the British Empire as the land of geniuses and intellectually virile men. Here, we discuss the portrait of Darwin made by Cameron in 1868 based on the reasoning of Peircean semiotics and photographic language (especially lightning, composition, photograph format, subject expression and gestures), establishing a parallel between Darwin as a person and scientist and his iconic representation. Cameron's portrait of Darwin employed lighting and composition to emphasize his intellect. Cameron's portrait of Darwin strengthens the constructed perception of 19th-century British scientists as self-assured men, knowledgeable and authoritative, who wielded leadership in their era. This portrayal aligns with the British imperial perspective of the time, emphasizing control over speech, language, and power.

***Keywords**: photographic language, portrait, Peirce, semiotics, evolution.*

Introduction

The photographic process *per se* is relatively uncomplicated: there is a dark chamber carrying a surface capable of recording an image – photographic film or, since the late 20th century, the digital CCD – and an optical lens that captures the light reflected by a referent (objects, people, landscapes, organisms). What underlies this process, however, is a world of possibilities for interpretation.

Before it became an artistic and cultural medium, photography was a scientific achievement (Sougez 2001). The history of photography begins with the optical studies of Aristotle, passing through Isaac Newton, and the discovery of chemical possibilities for capturing and fixing images on surfaces, culminating in the launch of the daguerreotype by Louis Daguerre in 1839. Daguerre is recognized as the inventor of photography and made the photographic practice effectively feasible (Sougez 2001). Other pioneers, such as Hércules Florence, William Talbot, and Hippolyte Bayard, concomitantly discovered the principles of capturing and revealing photographic images (Kossoy 2021; Schaaf 2000; Lerner 2014).

Until the beginning of the 20th century, portraits and landscapes predominated in photography. The reasons are both technical - as the registration of snapshots and moving images were not possible until the improvement of equipment - and ideological, since photography was still considered a mimesis of reality (Dubois 2012). In this sense, the intended goal of photography was to replicate the physical reality. Therefore, common photographic subjects were people and landscapes: individuals who would be immortalized and images of places that would be kept for posterity.

Although considered a reliable means of recording reality and understanding the world, the imagery produced by photography in the 19th century fell far short of realistic illustrations and paintings (Sougez 2001). Nevertheless, the scientific potential of photography was recognized from the outset. Scientists such as William Henry Fox Talbot, creator of the calotype, a photographic process using paper coated with silver iodide, and Charles Robert Darwin, who extensively used photographs to analyze expressions and gestures in different animals comparatively, saw in photography a powerful tool to study nature, including our species *Homo*

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sapiens (Tucker 2005). In science, photography allowed the freezing of a moment and the possibility of capturing details that often escape the human eye, even a well-trained one; microscopes, telescopes, and lucid cameras gave scientists a new extraocular way of observing the world (Wilder 2009).

In the 19th century, photography began to highlight the characteristics of a time and place. In this context, we find the work of Julia Margaret Cameron, a British photographer born in India. She portrayed many of the luminaries of Victorian Britain – from philosopher John Herschel to botanist Joseph Hooker and figures such as the playwright Robert Browning and the poet Alfred Tennyson. Her photographs, more than just records of great thinkers, reflected the perspective of a still resplendent British empire, supposedly the land of "geniuses" and virile intellectuality, creating allegories that sought to represent the national heritage and cultural identity of Great Britain (Browne 2002; Rosen 2016).

One of the subjects of Cameron's work was Charles Darwin, maybe the greatest iconoclast of 19th-century science, author of the seminal "On the origin of species by means of natural selection, or the preservation of favoured races in the struggle for life", whose first edition, published in 1859, laid the foundations for the evolutionary theory that would revolutionize studies of nature, question the creationist view of biological reality, and include the human species in a lineage of direct kinship with all the diversity existing on the planet (Darwin 1859).

The present paper analyzes the photograph "Charles Darwin" taken by Julia Cameron in 1868, discussing its potential for communication from the Peircean semiotics perspective (Peirce 2003) and highlighting the inherent staging condition of the photographic practice. We use the elements of Cameron's portrait of Darwin to compose a panorama of the meanings of photographic representation in the Victorian era and British science.

Methodology

The photographic language bears numerous codes (Kossoy 2007). According to Fontcuberta (2013), the photographic act results from decisions - such as choosing the entity to be photographed, selecting lenses, framing, and lighting – aiming for rhetorical construction. Hence, it is impossible to detach photography from manipulation.

The photographer has an active role in shaping the possible interpretants of his photographs. Wide-angle lenses, for example, create a sense of greatness or amplitude. Framing selects a part of reality and involves what will remain in the frame and what will be left out. Composition relates to how the visual elements will be arranged in the frame, reinforcing one or another part of the photograph. Lighting determines the exposure and can be used to create effects and evoke different moods and emotions in a scene or portrait. All these actions distance photography from the mimesis of reality.

The complex technical process underlying photography determines the basis of its language (Kossoy 2007). Through photographic language, the plastic aspects of the photographic discourse can be detected and analyzed in the images. Some identifiable elements of photographic language are plane, composition, lighting, perspective, angle, focus, movement, color, texture, and distortions, which are considered plastic signifiers; their discourse corresponds to the meaning (Joly 2002). Thus, a photograph is a combination of signs – the entity photographed, lighting, color, and composition – that create a message and an interpretant for the viewer. These can be revealed through a semiotic analysis of the images.

In this paper, we analyze from the perspective of Peircean semiotics the portrait of Charles Darwin made by Julia Cameron in 1868[1]. Peirce's semiotics (Peirce 2003)[2] is a theory of signs and signification processes applied to communication in general. It can be particularized for speech, writing, and other languages such as music, fine arts, and photography. In this sense, semiotics allows for verifying the procedures and resources used in constructing messages and communication processes of any language (Santaella 2002). Here, semiotics worked as a logical map that guided the analyses of Cameron's photographs and their meanings.

[1] Julia Margaret Cameron, *Charles Darwin*, 1868 < https://collections.vam.ac.uk/item/O1098326/charles-darwin-photograph-cameron-julia-margaret/>

[2] Stanford Encyclopedia of Philosophy, *Peirce's Theory of Signs*, https://plato.stanford.edu/entries/peirce-semiotics/

Peircean semiotics involves the identification of the object (what is being represented), the representamen (the sign representing the object), and the interpretant (the idea conveyed by the sign), followed by the analysis of the relationships between them, considering the historical, cultural, and social contexts (Peirce 2003).

Here, the subject of Darwin's portrait by Julia Cameron is Charles Darwin himself. The representamen is the visual image of Darwin as captured by Cameron. The identification of the interpretant in Darwin's photograph depends on the viewer and the context in which the photograph is presented. Some may see Cameron's portrayal of Darwin as the image of a thinker, as a renowned and authoritative science person, a historical figure of ancient times, an iconoclastic natural philosopher, or, apart from that, a representation of outdated manhood.

We used the elements of Peircean semiotics interrelated with the framework of specific visual language theory. We verified the constitutive elements and the relational procedures between them, i.e., every decision and action related to and interacting with the constitutive elements of photographic language.

The art of portraiture

As discussed earlier, in the 19th century, it was accepted that the photographic image was able to capture reality with incomparable accuracy, considering other visual arts, making photography an indispensable tool for investigating and understanding the world (Dubois 2012). Thus, through portraiture, the actual "truth" would be revealed. Moreover, the photograph would accurately record the identity and personality of the photographed person in a direct establishment of cause and effect: the person portrayed would be precisely how it was presented in their portrait.

It was common for the persons portrayed to dress in fine clothes. In addition, the photographers often positioned their subjects in front of a neutral background, creating an idealized image (Cox and Ford 2003). The emphasis on formality and the idea that photographic portraits captured an accurate representation, definitive, of the portrayed subject contributed to reinforcing the perception of the mimetic power of photography.

However, "spontaneity" in photographs is constructed through the photographer-portrayed relationship (Soulages 2010). For Avedon (1985), a photographic portrait is the image of a person who is aware of being photographed. That is the case of Darwin's image analyzed here. Darwin himself had recognized in photography great potential for documentation and study of the natural world, providing valuable visual evidence of the evolution of animal physiognomies (Darwin 1872). In this sense, Darwin attributes the character of representing reality to photographic images. The seduction of photographs lies in the fascination that faithfulness exerted on the taste of the 19th century (Fabris 2008).

The aesthetics of portraits always incorporate manipulation. As stated by Soulages (2010), replacing the portrait as "something that exists" with "something staged" is necessary. Photography has two irreducible tendencies: direct and staged photography (Lemagny apud Soulages 2010). On the one hand, direct photography refers especially to photojournalism, documentary photography, street photography and landscapes, emphasizing spontaneity and authenticity. On the other hand, staged photography is subjective and manipulated, without being necessarily related to the underlying reality. It involves the arrangement of the subjects and setting up scenarios deliberately to convey a message or story.

Remains whether the portrait captures the moment as it happens, without interference, or fits into staged photography. As aforementioned, portraits involve constructed representations shaped by elaborated poses, expressions, the technical peculiarities of the equipment used, and the process of producing and developing the image. We agree with Soulages (2010) that any photography is staged since every picture is always mediated by something or someone.

To Fabris (2008), the essence of a portrait does not consist in capturing the subject's identity but in revealing their unique otherness, the mask that distinguishes them as a "thing among things." Each individual remains both familiar and enigmatic, like a universe of subjects communicating without complete transparency.

The photographic eye of Julia Margaret Cameron

Julia Margaret Cameron was a British photographer, born in Calcutta (India) in 1815 and died in Sri Lanka in 1879 (Ford 2003). She is considered one of the first women to practice

photography, despite the stigma that 19th-century cameras, large and difficult to handle, were restrictive to the female photographers (Rosen 2016). Cameron's initiation into photography was due to her friendship with photography masters and the camera gifted to her by her daughter (Ford 2003).

Cameron's specialty was portraits; her main subjects were family scenes – capturing the emotions of Victorian women – and celebrities, including influential English artists and scientists (Rosen 2016). The polymath J.F.W. Herschel, the actress Ellen Terry, and the evolutionary biologist Charles Darwin were some of the individuals portrayed by Cameron (Ford 2003).

Cameron's portraits were firmly based on her notion of the male and female genders (Rosen 2016). In Cameron's female portraits, a romantic, melancholic, and fragile perspective, typical conceptions of femininity in the Victorian era, are visible. Women were considered delicate, domestic and dedicated to family and religion. In contrast, when portraying masculinity, Cameron sought to capture rationality and objectivity, mainly of the man of science. The expression of the portrayed man, the chosen angle and the lighting in her photographs collaborated to construct this pragmatic and rational, although unreal, ideal of masculinity.

As expected, Cameron's preconceived gender bias was evident in her photographs. She even managed to project into her portraits some characteristics that were not theirs – the picture of Darwin is a clear example (Desmond and Moore 1992; Browne 2002). Nevertheless, Cameron's images reinforced some misconceptions of the period regarding what it meant to be a man in Victorian Britain.

Fabris (2008) argues that Cameron was a clear example of an artist-photographer who chooses a situation to register and rationally uses light, shadow, perspective, harmony, and balance to obtain a result that tries to capture the interiority of the models, sometimes approaching pictorial results[3]. Cameron produces and directs the individuals portrayed, balancing the scene elements for harmonious composition, and using light to create a dramatic effect. These selected photographs unequivocally show Cameron's conception of femininity.

Cameron meets Darwin

Charles Darwin and his wife Emma met with the Cameron family (Julia Margaret and her husband Charles) in July 1868, on the Isle of Wight, in Freshwater Bay (Gernsheim 1975). The connection between Cameron and Darwin went beyond the portraits the photographer took of the evolutionist. The relationship was also based on their shared opinion on the importance of photography to the natural sciences. As previously mentioned, Darwin used photographic images in his studies on the evolution of expressions and emotions in animals (Darwin 1872). More than just visual contact, photography allowed the possession of objects and places that were previously inaccessible and could now be scientifically fixed on paper and shared with the world (Fabris 2008; Wilder 2009).

However, Cameron's gaze on Darwin had another focus beyond the natural sciences. According to Browne (2002, p. 644-645 of the digital version):

> "During this stay on the Isle of Wight, Mrs. Cameron fell on Darwin as a photographic subject. She had a sharp eye for a passing celebrity, welcoming the cream of Victorian society (...) the results possessed lasting impact. Not yet at the height of her fame, she depicted the giants of Victorian intellectual life as they had never been seen before, creating an indefinable aura that contributed materially to their widening public stature and added to the general preoccupation with national heroes permeating Victorian culture."

Cameron's images contributed to the dissemination of Darwin's image in the 19th and 20th centuries. His portrait is commonly featured in textbooks discussing the theory of evolution, biographical essays on Darwin, and book covers.

For Malcolm (2013), Cameron captured a certain beauty found among the middle-aged or older men of Victorian Britain's literary, artistic, and scientific worlds, turning her portraits into

[3] Julia Margaret Cameron, *The Echo*, 1868
https://collections.vam.ac.uk/item/O1423280/the-echo-photograph-cameron-julia-margaret/
Julia Margaret Cameron, *May Prinsep*, 1870
https://collections.vam.ac.uk/item/O1424737/may-prinsep-photograph-cameron-julia-margaret/
Julia Margaret Cameron, *Summer Days*, c. 1866
https://collections.vam.ac.uk/item/O83158/summer-days-photograph-cameron-julia-margaret/
Julia Margaret Cameron, *The Dream*, 1869
https://collections.vam.ac.uk/item/O72729/the-dream-photograph-cameron-julia-margaret/

monumental male biographical studies. That is the case for Darwin's photographs taken on the Isle of Wight. Cameron made three portraits of Darwin, two of which showed him slightly apprehensive and a third[4] one, the most famous, in which the evolutionist appears in a three-quarter profile, serene and thoughtful (Browne 2002).

Cameron's third photograph of Darwin is the portrait analyzed in the present paper. It is part of the series "3/4 face and bust" taken in 1868 (Gernsheim 1975; Browne 2002). Darwin distributed his photograph almost like an autograph, including a copy to Samuel H. Scudder, the first editor of *Science* magazine (Browne 2002; Wynne 2007). In the original image, Darwin's inscription reads, "I like this photograph very much better than any other which has been taken of me. Ch. Darwin." (Bonhams n.d.).

Analyzing Darwin's portrait

We reinforce here that the analysis below is a possible interpretant, which does not mean that Julia Cameron absolutely planned or was fully aware of what Darwin's photography could provoke in those who observed it.

The image of Darwin embodies one of the classical conceptions of a portrait: use of a medium shot; subject positioned in 3/4 view, not looking at the camera, but rather gazing into the distance with a severe expression, partially turned to the side; dark clothing; and neutral background.

Lightning

The dark background and clothing highlight Darwin's head, which is emphasized by the lighting falling upon it. The light source is artificial and comes from the right, slightly elevated with an inclination close to 45°. This technique lightens the subject's back while darkening their face. However, the top of Darwin's head, where lies the cerebrum and, thus, the rational mind, remains illuminated. Browne (2002) discussed how Cameron's use of ceiling light in her photograph of Darwin resulted in a composition that emphasized his massive forehead, creased brow, sunken eyes, and huge beard. The top-lit effect highlighted the vast dome of Darwin's skull, creating a visual of a wise and venerable figure akin to classical statuary. Browne also credited Cameron with creating the iconic visual image of Darwin as a powerful abstract thinker.

The image shows a blur effect in some areas, one of the characteristics of Cameron's style[5], which creates a sense of intimacy with the subject. Such softness and lack of sharpness suppressed some details and often gave her portraits an ethereal and dreamlike quality, reinforcing the overall artistic quality of the image. The blur effect in this Darwin's photograph draws the viewer's attention to the central figure and emphasizes his expressions and features. The effect was achieved through shallow depth of field, focusing on the figure portrayed while the background of the composition was blurred.

Composition

The composition of Darwin's portrait is balanced and proportional. The photograph is a portrait, with Darwin's face covering most of the frame. Darwin appears to lean to the left. His gaze, posture, and head area are in the left quadrant. He looks to the left of the frame.

A solid diagonal line runs across the image from the lower left to the upper right corner. This ascending diagonal line is created by the angle of Darwin's head and his jacket collar, creating a sense of dynamism and energy within the image, which adds to its emotional impact.

All the upper sides of the composition are more illuminated than the lower sides. This lighting direction, emphasizing the upper part of the subject, may have been used to imply the strong presence of rationality among the Victorian scientists, expressed here in the figure of Darwin. In addition, the composition makes heavy use of negative space. Finally, as the background of the photograph is almost entirely blurred, there is a sense of emptiness and isolation around the subject, almost as if Darwin were single-handedly carrying the entire burden of his revolutionary theory of evolution.

[4] Julia Margaret Cameron, *Charles Darwin*, 1868, https://collections.vam.ac.uk/item/O1098326/charles-darwin-photograph-cameron-julia-margaret/

[5] Julia Margaret Cameron, *May Prinsep*, 1870, https://collections.vam.ac.uk/item/O1424737/may-prinsep-photograph-cameron-julia-margaret/

Julia Margaret Cameron, *Summer Days*, c. 1866, https://collections.vam.ac.uk/item/O83158/summer-days-photograph-cameron-julia-margaret/

In 19th-century photography, medium shots and neutral backgrounds were typical and aimed to highlight the subject's appearance, directing the viewers' gaze (Sougez 2001). Darwin's sober clothing creates a sense of impartiality, neutrality and objectivity. His expression conveys a hardness of character, seriousness, and commitment to his transcendent scientific goals beyond worldly concerns.

For Kandinsky (1970), the sides of images hold important meanings: the left side would be related to tension towards the distant and the future. Darwin's position in the image suggests, even symbolically, this gaze toward what is to come and the progress that only science could project. This suggestion, denoted in Darwin's gaze, somehow converges with the mistaken view that organic evolution would inexorably lead to improvement and "progress" (Gould 1989; Santos et al. 2019). This distorted perspective is explicit in the most easily associated image of evolution, the "march of hominids," usually initiated by a chimpanzee or an *Australopithecus* passing through different species of bipedal primates until reaching a representation of a Caucasian *Homo sapiens*.

The "march" is the definitive imagistic representation of the colonizing and imperialist gaze on biological evolution, which would have started in elementary forms and would inexorably move towards the "pinnacle of evolution," the white European man. It is worth mentioning that Darwin does not directly advocate this perspective in his work. However, many of his defenders and popularizers in the 19th and early 20th centuries maintained that evolution is a synonym for progress (Bowler 2003; Santos et al. 2019; Browne 2022).

Photograph format

Regarding the format, the rectangle is commonly used in photographic portraits. The vertical rectangle suggests proximity. The triangular geometric shape implicit in the macrostructure of the composition, as in Darwin's image, indicates an upward movement, which in turn can propose, as an interpretant, an idea of superiority and ascent. The upright posture of the figure portrayed is contained in this triangular composition, with the head located at the triangle's top vertex.

Cameron positions "the mind" of Darwin – his highest portion and what would correspond to the core of the existence of the Victorian man of science, i.e., his rationality – in the upper third of the portrait. Here the comparison with the mistaken view of evolution as a linear sequence of transformations is also relevant: as represented in the "march of progress" referred to above, the oldest primates would have smaller brains, with limited cognitive capacity and intelligence, characteristics that would gradually increase during evolutionary history until the appearance of *Homo sapiens*. Darwin's head's positioning at the peak of the triangle in Cameron's recording is equivalent, by analogy, to the apex of the evolutionary process in the view of the "canonical iconography" (Gould 1989; Santos et al. 2019).

Subject expression and gestures

Regarding the subject's figure, his expression, hands, arms and gestures, posture, and artifacts placed in the setting can be analyzed from a semiotic perspective. In the image of Darwin, there are no artifacts, and it is impossible to see his hands since only half of the arm remains along the body without any gesture. The focus of this portrait is the expression and posture of the evolutionist.

In a classic portrait, the subject often poses for the photographer, who captures an artificial (and conventional) attitude. To interpret the expression, the regions of the forehead, eyebrows, eyelids, nose, eyes, and mouth are crucial to suggesting certain emotions and readings of the subject. For example, in Darwin's portrait, the eyebrows are furrowed, while the mouth and nose are stable. His closed countenance denotes a serious and focused person. This image is typical of the Victorian man of science, pictured in the period as a selfless thinker with moral authority, reasoning power, and extensive experience that made him able to draw conclusions and comprehensive interpretations of the world based on complex, sometimes contradictory evidence (Barton 2003).

Darwin's thick and bushy beard, covering much of his face and neck and reaching his chest, is another critical element of Cameron's composition. Oldstone-Moore (2005) pointed out that between 1850 and 1890, Englishmen adopted the beard as the appropriate display of manhood and the renewed face of masculinity that spread from social margins into the mainstream and high society. Beards were often worn by men who wanted to project an image of authority and respectability. In this sense, Darwin's beard had

symbolic and cultural significance, associated with strength, power, virility, and maturity deeply connected to the cultural values of Victorian Britain.

In Cameron's photograph, the beard had another relevant function: to portray Darwin as an authoritative figure in the scientific community. Browne (2002) noted that Darwin's beard served not only as a symbol of Victorian power but as an outward manifestation of the factors involved in sexual selection among humans, as he would soon describe. According to Browne (2002, p. 648 of the digital version): "Intuitively, Julia Cameron captured these elements of Darwin's emerging public persona far more eloquently than any other photographer of the middle years of the century."

Final remarks

According to Ford (2003), Julia Cameron refused to accept limitations and suppressions due to her gender. Instead, she demonstrated the power of photography to explore themes and motifs considered solely the subject of paintings, all without compromising herself or her medium. Cameron opened new paths for photography in the 19th century with her innovative and courageous vision. Although not a feminist *avant la lettre,* she was not intimidated by her time's social and cultural standards. Instead, Cameron effectively challenged them.

Cameron's photographic vision reflects the Victorian perspective and values on scientific thinking, logic and reason. These were crucial concepts for sustaining the belief, albeit unfounded, in the superiority of Western civilization and its institutions, which would be the only ones capable of understanding the world and ensuring the development of human societies. Based on a Victorian ideal, Cameron sought to represent in a well-delineated manner the instances of the feminine and masculine, considering both the socio-cultural views and photographic aspects.

The portrait that Cameron made of the British evolutionist Charles Robert Darwin reinforces the artificial image of the British 19th-century man of science as a confident male persona, a cultivator of knowledge in total control of his speech and language, and sure of his power as a leader of his time (Barton 2003; Ellis 2017) – such construction dialogues with the British imperial perspective of the period. However, contemporary science historiography has been presenting a much more nuanced perspective of Victorian science, and the idea of Darwin as a key and dominant figure in the history of scientific thought has been replaced by a broader view of the social and intellectual movements of which he was a part (Browne 2022).

Here, such considerations were demonstrated through elements of Peircean semiotics theory and the analysis of photographic language, allowing the signification process of Darwin's portrayal to be raised through instances of semiosis.

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