

# **(Dis)entangling Scientific and Poetic Discourse: Mathilde Blind's *The Ascent of Man* (1889) and Feminine Rewriting of Darwinian Evolution**

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*Tall ferns, washed down in sunlight,  
Beckoned with fingers green;  
Tall flowers nodded strangely,  
With white and glimm'ring sheen;*

*They sighed, they sang so softly,  
They stretched their arms to me;  
[...]  
(M. Blind, "Entangled")*

*Our spirits have climbed high  
By reason of the passion of our grief;--  
And from the top of sense, looked over  
sense  
To the significance and heart of things  
Rather than things themselves.  
(E. B. Browning)*

It seems that from the very first there has been a connection between evolutionary theory and poetry. Charles Darwin's grandfather, Erasmus Darwin, expressed his beliefs, in heroic couplets, that all warm-blooded animals may have descended from a single ancestral filament endowed by the First Causes (Darwin, 2009: 6).<sup>1</sup> In the Romantic Movement, far from science and poetry being at war, there were often alliances between them, as when Wordsworth claimed in Preface to *Lyrical Ballads* (1802) that "Poetry is the breath and finer spirit of all knowledge; it is the impassioned expression which is in the countenance of all science" (Foakes, 1968: 38).<sup>2</sup> Also, Tennyson's poetry shows knowledge of evolutionary theory well before Darwin's *Origin of Species* (1859), and he was obviously acquainted with the early scientific writing.<sup>3</sup> Evolutionary thought is explicitly referred to by Robert Browning in *Paracelsus* (1835), which describes a man fascinated by primal chaos and by the power

which shaped inchoate matter towards finished form.<sup>4</sup> But as evolution shifted from being a speculative hypothesis to a scientific doctrine, the natural world became for many Victorian poets a correspondingly more disturbing place. Tennyson's *In Memoriam*, Matthew Arnold's "Dover Beach" and the poems by Thomas Hardy all charge science with draining the natural world of spiritual and metaphysical meaning.<sup>5</sup> Other poets, such as Swinburne and Meredith, somehow managed to divest the concept of nature of most of its supernatural and transcendental character, at the same time retaining an intense interest in nature as a force surcharged with poetical possibilities.

Critics like Gowan Dawson and Sally Shuttleworth defend that Victorian poetry and science frequently employed the same metaphors, themes, images, and ideological orientations, and, far from being antithetical, the two forms were intimately related in the development of new philosophies of nature, such as the German *Naturphilosophie* (Dawson, 2003: 10).<sup>6</sup> But the enormous diversity of scientific and poetic discourses produced during the Victorian age also emphasises the different ways in which they negotiated the meaning of the natural world and the value of human life. As for the evolutionary prose epic, there were flamboyant calls from the secular wing, right from the beginning, for a panegyric on the ascent of man. The call came loudest from the proud atheists and positivists eager to begin the writing of the Gospel of Man and eager, too, to have an epic standing in the same relation to the *Origin* as does Milton's *Paradise Lost* to the Bible. But no one in the nineteenth century really rose to the challenge, with the possible exception of Mathilde Blind.<sup>7</sup>

In *The Descent of Man and Selection in Relation to Sex* (1871),<sup>8</sup> Charles Darwin paradoxically embraced a utopian moral norm of universal sympathy, shifting the locus of transcendence from the natural order (as he portrayed it in *The Origin of Species*) to the sphere of social relations.<sup>9</sup> Although Darwin convincingly situates human history

within the larger processes of natural selection, he appeals to a notion of ‘disinterested social sentiment’ and describes a human moral order that operates on principles, specifically derived from feminine qualities, which are also basically incompatible with those natural processes.<sup>10</sup> Darwin was, apparently, unable to tolerate the moral implications of the scenery he had created: a human world inescapably enmeshed in a process of conquest, assimilation and extermination – features closely associated to innate masculine traits. Recoiling from the idea of a human world as violent, cruel and wasteful as the world of nature, Darwin affirms that the disinterested love for all living creatures can serve as the dominant regulative power in human social relations. In Darwin’s transformative vision, the social and moral qualities would tend slowly to advance and be diffused throughout the world. In this sense, his moral idealism and ‘meliorism’<sup>11</sup>, as well as the notion of ‘sympathy’ as a specifically female virtue, are very similar to the ones found in women writers of the period, including George Eliot and Mathilde Blind.<sup>12</sup>

According to Isobel Armstrong, “as the powerfully held religious beliefs of women writers became less predominant, the extent to which women could create, or recreate, new myths for their culture becomes a pressing concern later in the century” (*Victorian Poetry*, 1993: 368). This was the case of George Eliot (1819-1880), who attempted to write the first humanist epic by a woman and who became an important influence on later writers, such as Mathilde Blind.<sup>13</sup> The massive *The Spanish Gypsy* (1868) is the narrative of a young woman of Gipsy origin, Fedalma, who takes up the mission of leading her race to unity in Africa. “At the heart of the poem”, Armstrong argues, “is a question about the extent to which women are capable of producing a powerfully imaginative national myth about unity and cohesion, a matriarchal myth” (*idem*, 370); the poem is an attempt to find out how the ‘feminine principle’ might be

the source of a new humanist myth. This concern relates Eliot's epic backwards to Elizabeth Barrett Browning's *Aurora Leigh* (1857) and forwards to the work of Mathilde Blind. The latter shares Eliot's intellectual grasp of theory as a tool for defining the world, and her poetry has Eliot's scientific sense of how the dense texture of external reality can be understood as part of a larger pattern.<sup>14</sup>

Mathilde Cohen was born in Germany (Manheim) in 1841 but, as a result of the 1848 European revolutions, her Jewish family fled into exile and took refuge in England.<sup>15</sup> She chose to take the name 'Blind' to represent her shared interest in her step-father's revolutionary interests (Karl Blind had been a leader in the Baden Insurrection) and positions on social and political matters. It was while attending a girl's school in London that she developed a curiosity for geology and mythology, which questioned and ultimately challenged her orthodox religious beliefs.<sup>16</sup> Blind chose to abandon religious faith and, consequently, was expelled from school for her atheism. In spite of this, she would become an accomplished poet, biographer, novelist, essayist, editor and translator.<sup>17</sup>

In 1867, Blind published her first volume of poems in dedication to the Italian revolutionary, Joseph Mazzini, under the pseudonym of 'Claude Lake'. Blind's love for the male Romantic poets heavily influenced her earlier writings and is responsible for the imaginative, mystical and exploratory component there present.<sup>18</sup> In 1886 Blind published a lecture entitled "Shelley's View of Nature as Contrasted with Darwin's", which foreshadows her growing interest in evolutionary theory. Moreover, Blind chose to explore such themes as antitheism, patriarchy, sexual liberty and the imprisoning space that women occupied in the Victorian society.<sup>19</sup> Blind's decision to express her social and political activism through a feminist perspective, present in her option to write biographies of strong women figures such as George Eliot and Mary

Wollstonecraft, was originally received with apprehension and her writings regarded as substandard in the literary canon. In 1889, Blind published her third lengthy poem that became her most accredited and accomplished one – *The Ascent of Man*, a poetic epic that summarises Charles Darwin’s evolutionary process.<sup>20</sup> Here, she uses the naturalist’s evolutionary theory as a means of reflecting upon various social issues, particularly gender relations.<sup>21</sup>

Blind begins by defining her work explicitly in relation to Elizabeth Barrett Browning, to whom the suffering of the weak and disenfranchised, resulting from the struggle for existence in an increasingly urbanised society was morally unacceptable. Although chronologically pre-Darwinian, this refusal originated, according to Helen Groth, “a desire to emphasize the mythic aspects of nature in poems that celebrate biological diversity, beauty, and the possibility of escaping from modernity into a harmonious state of imaginative and moral resolution” (1999: 325).<sup>22</sup> Aurora Leigh’s description of the role of the woman poet as the agent who brings about this humanising change, Groth argues, combines a vision of poetry’s attack on the more brutal aspects of the scientific advances of modernity with the conventional philanthropic role of the middle-class woman (*idem*, 328).

For Groth, “The ethical filter” through which later women poets like Greenwell, Rossetti, Webster and Blind “represent the natural world fulfils Aurora Leigh’s vision” (*idem*, 329). These poets celebrate the bringing together of science and philosophy, the material and the abstract, and their respective works foster a “sympathetic relation between the social and the natural, which they hope will lead to “an enlightened connection of a more scientifically and philosophical rigorous knowledge of nature with an acute awareness of the human condition” (*idem*, 330). As in Darwin’s *Descent*, the anxiety behind this desire for stability and harmony may evince the inevitable

contradiction and incoherence of the vision. The tensions that derive from the confrontation of science and poetry in later Victorian women's poetry will, thus, be made more visible or evident.

In his 1899 "Introductory Note" to Blind's second edition of *The Ascent of Man*, biologist and evolutionist Alfred Russell Wallace states that the poet's treatment of the subject of evolution is "not altogether satisfactory", implying that due to the author's gender the poem deals more with "the social and spiritual aspects of the subject than with those that are purely scientific" (v). But Wallace is also disturbed by the atheistic implications of Blind's text, which asserts the fragmentary and chaotic nature of existence – "*Life is but a momentary blunder / In the cycle of the Universe*" (my emphasis). He is particularly opposed to "The pessimistic view of the pain and misery thus arising" (*idem*, viii), stating that it does not coincide with his own view or Darwin's. Wallace is shocked by the images of "the most intense misery, want, and crime" that are presented "not as occasional incidents at more or less distant intervals, but perpetually present as a part of the regular order of human life." (*idem*, x).

Notwithstanding, he recognises that Blind's poem has "a fascination and completeness", expressing in "picturesque and forcible language many of those [contemporary] ideas as to the place of man in the great Cosmos, as to the fundamental cause of the terrible evils that disgrace our civilisation" (*idem*, xii).<sup>23</sup> Although Blind writes as an atheist and Wallace as a spiritualist, they share the conviction that human evolution is as much social as natural, and involves a triumph over rather than adherence to the basic instincts that justify competition and violence in a Social Darwinist model.

But, in her 1886 lecture on “Shelley’s View of Nature as Contrasted with Darwin’s”, Blind had already detected the main problem or contradiction in both moral idealism and Romanticism: excessive idealisation of both nature and human society.

But is it true that all things in Nature, where man is not, speak “peace, harmony, and love”? Why, if we open our Darwin, the very opposite fact meets us at every turn. Yes, in the very vegetable kingdom, amid the gentle race of flowers so dear to Shelley, precisely the same forces are at work, the same incessant strife is raging, the same desires and appetites prevail, which he so abominated in the world of man. [...] *from the lowest semi-vital organism to the highest and most complex forms of life battle is being waged within battle for the right to breath, to eat, and to multiply on the earth.* [...] So that the reckless competition, the selfishness, the cruelty to which to Shelley appeared as essentially the result of bad government, nay, as almost an accident of human society, might have been traced by him feature by feature throughout the animal kingdom (Blind, 1886: 14-15, my emphasis).

She criticises the lack of historical realism in *Prometheus Unbound*, lamenting that Shelley was “debarred from casting into poetic mould the modern scientific conception of evolution and the struggle for existence” (*idem*, 16).<sup>24</sup> Furthermore, Blind questions Shelley’s argument regarding the problem of good and evil; instead of stating like the Romantic poet that Man will gradually improve by returning to Nature and to his origins, rather she affirms that “Man himself gains in moral value, when [...] with infinite pain and struggle he has slowly risen above the thralldom of physical nature” (*idem*, 18-19).<sup>25</sup>

In spite of the differences that Blind detects between Shelley and Darwin’s views in regard to Man and Nature, also reflecting the cognitive conflict between poetry and science, she is able to discern a similarity in the two men’s optimistic prevision of the future: “in the glorious vistas they disclose of ever higher types of life replacing those that had gone before. For, judging by analogy, better, wiser, and more beautiful beings will inhabit this planet in the ages to come, according to the laws of evolution”

(*idem*, 20). Blind concludes her lecture by presenting Shelley as the future ‘higher type of man’, implicit in the progressive model of the ascent of civilisation which she celebrates and derives from Darwin.

In her own poetry, Mathilde Blind tries to imagine a form that might capture the resonances between human individuals and the natural world. “The poet only truly lives”, she writes in 1893, “when he feels the rapture of communion”, a flash of sympathetic confederacy (*apud* Rudy, 2009: 154). According to Jason Rudy, Blind’s poetry reflects on, and participates in, her lifelong desire to strengthen sympathetic relations among individuals, but the “pulse of a collective life” (*ibidem*) seems increasingly difficult to access in a world of violence and indifference. Blind’s complex ideal of rapturous communion from the perspective of Darwinian thought focuses in particular on the poet’s nuanced juxtaposing of poetic form and evolutionary thought (Rudy, 2009: 155).<sup>26</sup> Divided into three sections, each with a different style of versification and tone, Blind’s *Ascent of Man* became quite popular and notorious for its use of “varied metrical structures, driving rhythmic impulses, and vivid imagery to portray the drama of human evolution” (*ibidem*).<sup>27</sup>

The first section, entitled “Chaunts of Life”, deals with the evolution from inorganic matter, man’s development and the progress from savagery to civilisation, giving a sweeping outline of terrene history from geological and botanical through animal evolution, as well as three phases of human cultural development: primitive society, the cycles of empire to the fall of Rome and modern history from the Middle Ages through the French Revolution.

Blind, the poet exerts her structuring power over nature’s pulsating overflow in bold hexameter lines; her meter echoes Homer’s line (five dactyls followed by a spondee), emphasising the epic nature of the evolutionary scene:



Struck out of dim fluctuant forces and shock of electrical vapour,  
Repelled and attracted the atoms flashed mingling in union  
    primeval,  
And over the face of the waters far heaving in limitless twilight  
Auroral pulsations thrilled faintly, and, striking the blank heaving  
    surface,  
The measureless speed of their motion now leaped into light  
    on the waters.

(I. 1-5)

The section opens, as Helen Groth suggests, with images of “flux and frisson” as the earth and sky pulsate and the sea heaves with volcanic explosions (1999: 334). *Blind* depicts various forces, electrical and otherwise, that combine to form the world as we know it, referencing the field-theory hypothesis of scientists such as Faraday and Maxwell.<sup>28</sup> Through a sequence of birthing images, the poet compares the earth to a massive maternal body:

And lo, from the womb of the waters, upheaved in  
volcanic convulsion,  
Ribbed and ravaged and rent there rose bald peaks and  
the rocky  
Heights of confederate mountains compelling the  
fugitive vapours  
To take a form as they passed them and float as clouds  
through the azure.  
Mountains, the broad-bosomed mothers of torrents and  
rivers perennial,  
Feeding the rivers and plains with patient persistence,  
till slowly,  
In the swift passage of æons recorded in stone by

Time's graver,  
There germ grey films of the lichen and mosses and  
palm-ferns gigantic,  
And jungle of tropical forest fantastical branches  
entwining,  
And limitless deserts of sand and wildernesses  
primeval.  
(I. 8-15)

Groth states that “Blind offers a heavily feminized account of the creation myth charged with galvanizing images of natural power, modern electrical technology, and industrial machinery.” (*idem*, 335), in which life weaves herself into a web:

And vaguely in the pregnant deep,  
Clasped by the glowing arms of light  
From and eternity of sleep  
Within unfathomed gulfs of night  
*A pulse stirred in the plastic slime*  
Responsive to the rhythm of Time.  
Enkindled in the mystic dark  
Life built herself a myriad forms,  
And, flashing its electric spark  
Through films and cells and pulps and worms,  
(I. 22-30, my emphasis)

The beginnings of human life are signalled by a shift from free verse to lyric stanzas. ‘Man’ is here described as rising from the primordial slime in complete human form, entering the scene notably devoid of metrical regularity, with graphic dashes highlighting the rhythmic breaks:

And lo, 'mid reeking swarms of earth  
Grim struggling in the primal wood,  
A new strange creature hath its birth:

Wild--stammering--nameless--shameless--nude;  
Spurred on by want, held in by fear,  
He hides his head in caverns drear.

(I. 72-77)

This “new strange creature” has yet to learn its position within a metrical ordered universe. And only after considerable development, does the human race begin to discern structure behind the apparent chaos of nature.

For Man, from want and pressing hunger freed,  
Begins to feel another kind of need,  
And *in his shaping brain* and through his eyes  
Nature, awakening, sees her blue-arched skies;  
The Sun, his life-begetter, isled in space;  
The Moon, the Measurer of his span of days;  
The immemorial stars who pierce his night  
With inklings of things vast and infinite.  
All shows of heaven and earth that move and pass  
*Take form* within his brain as in a glass.

(I. 150-159, my emphasis)

The natural world begins to make formal sense as the periodical rhythms of sun, moon and sea are seen as belonging to a grander metrical scheme. Man’s “shaping brain”, Groth suggests, “evolves an androcentric vision of the world shaped by his own aesthetic tastes” (1999: 335). Thus, imagination becomes the civilising agent that expands man’s potential. Poets in particular represent the highest stage of development away from the reigning unruly spasms of violence and death, assuming messianic proportions:

The poet, in whose shaping brain  
*Life is created o'er again*  
With loftier raptures, loftier pain;

Whose mighty potencies of verse  
Move through the plastic Universe,  
And fashion to their strenuous will  
The world that is creating still.

[...]

From the depths of life upheaving,  
Clouds of earth and sorrow cleaving,  
*From despair and death retrieving,*

(I. 350-361, my emphasis)

Shelley, the poet whom Blind most admired, had trumpeted a similar vision of the poet as a ‘world-maker’ in his 1821 *Defence of Poetry* (Foakes, 1968: 135). But Blind, building on Victorian physiological science and evolutionary theory, takes Shelley’s premise one step further in her insistence on physiological, bodily foundations of rhythmic ‘truth’ and experience. Through its enlightened rhythmic fashioning, poetry will bring about the ultimate “ascent of man”. And Blind’s poem proves, for Herbert Tucker, that “its poet has indeed created life ‘o’er again’ in its ascending stages, and (...) has mimed that ascent through the metamorphosis of its successive verse types and narrative modalities” (2008: 504).<sup>29</sup> Tucker only detects an apparent contradiction between Blind’s statement of “Darwinian monism” that the creative imagination is continuous with the evolutionary process and her implicit conclusion that the “potencies of verse” escape this reality (*ibidem*).<sup>30</sup>

The second section of Blind’s *Ascent of Man*, entitled “The Pilgrim Soul”, is an allegorical representation of modern civilisation where the sympathy and love that are essential to happiness and peace have been banished by the pursuit of pleasure and wealth. These banished entities are personified by a homeless and destitute child, who is found and sheltered by the female ‘Pilgrim Soul’, herself a representation of the ‘feminine principle’ on earth. Using *terza rima* (swift flowing tercets), and in a sort of

Dantesque dream, the speaker recounts how Love is exiled from the strife, prostitution and violence of the metropolis (the “woe-clouded” Victorian city) and left to perish, only to be saved by the “passion of pity” of sympathy. The death-wish initially shared by both reverberates in a final sonnet, “Die – change – forget: to care so is a curse”, but it is checked in the end “Yet cursed we will be rather than not care thus” (Blind, II. 118).

In the final section of the poem, entitled “The Leading of Sorrow”, the soul is led by a veiled ghost-like figure through almost endless scenes of human suffering, proving that sorrow and death prevail universally. And, in fact, the pastoral harmony of the countryside appears destroyed by war, exploitation and misery.<sup>31</sup> In the face of such generalised suffering, the soul proffers a curse on the earth and loses consciousness. In this apocalyptic juncture, “a Voice comes from the peaks of time” (III. 216) reclaiming evolution on an ethical plane. At this point, Blind leaves Darwin and Spencer behind, seeming to align herself with her beloved George Eliot and proving the case T. H. Huxley would be making a few years later in “Evolution and Ethics” (1894).<sup>32</sup> The pain which is wrought into the evolutionary condition, and the resulting sympathy that it elicits, may somehow correct for the “blunder” of life and make some meaning of Time: “From Man’s martyrdom in slow convulsion / Will be born the infinite goodness—God” (III. 217). From this ethical recognition, emerges the change or metamorphosis that closes Blind’s narrative: “Love re-arisen / With the Eternal shining through his eyes” (III. 218). Blind’s equation of love with the desire to survive may resemble Darwin’s theory of sympathy, but he is known to treat love with extreme scepticism. Moreover, Darwin’s account of sympathy draws rather on Adam Smith’s definition in the opening chapters of his ‘theory of moral sentiments’ (*apud* Groth: 335).

For Herbert Tucker, “Blind’s threefold structure applies a moral leverage exerted from outside the cruel neutrality of the natural” to “the material mechanism of evolution, with its sheer unfolding process” (2008: 505), and he claims that her enlargement to prophetic ken of this narrative of human nature takes place “at a swift quantum clip”, that is, too swiftly.<sup>33</sup> He seems to state that in spite of Blind’s radical ideological progressivism and all her eccentricity of perspective, in her resolutions she still complied or subscribed to the Victorian mainstream epists and to the feminine ethics of affection. More than a decade before, Isobel Armstrong appears to have recognised this same tendency: “she [Blind] represents what this tradition could do at its best: [...] bring the resources of the affective state to social and political analysis and speculate on the constraints of the definition of feminine subjectivity” (1993: 377).

But, as Helen Groth suggests, it is also important to recognise the relevance of Christian ideology in *The Ascent of Man*, and more specifically “The idea of a feminine soul that transcends the body and earthly struggle” to offer “the only hope in Blind’s bleak Darwinian narrative.” (336). Although it may not be immediately evident, the focus of her criticism is really the brutality and orthodoxy of institutionalised religion, which together with political oppression is responsible for most human suffering. In her vision, the creative feature of the soul of man is symbolically rescued in the Greek island of Delos, a utopian *topos* where Man can reside and the female soul may be influenced by the confluence of thought and beauty in art. The boundaries of gender, identity, nation and form are removed and life is transformed into a harmonious temporal continuum. Rather significantly, it is human art (in particular, poetry) and not God that grants this eternal life.

*All life's discords sweetly blending,*

Heights on heights of being *ascending*,

Harmonies of confluent sound

Lift you at one rhythmic bound  
From the thralldom of the ground;  
Loosen all your bonds of birth,  
Clogs of sense and weights of earth,  
[...]

And no more a thing apart  
From the universal heart  
Liberated by the grace  
Of man's genius for a space,  
Human lives dissolve, enlase  
In a *flaming world embrace*.

(III. 220-34, my emphasis)

This art-inspired ascension of the human soul is obviously connected with the “Prelude” to the *Ascent*, in which Blind the poet had begun by exhorting her own soul to “Ascend [...] with the wings of the lark” and “of the wind” in “a rhythmical chain / Reaching from chaos and welter of struggle and pain / Far into vistas empyreal receding from time” (1-6, 16-17).

*The Ascent of Man* lays out what is required for human redemption, when humanist love, the animating force embedded in evolutionary processes, begs for a transfigured life, “Oh, redeem me from my tiger rages, /reptile greed, and foul hyena lust” (II. 237-8), and for an innovative poetic language that suggests a plastic transformation, through a “vocabulary of movement and coalescing vitality” (Armstrong, 1993: 376). To finalise and according to Susan Brown in “Reproductive Poetics”,

Blind’s ‘poeticisation’ of the political seeks to arrive at the ineffable possibilities of the future through a careful account of the past that produced it, charging poetry with the delineation of the delicate historical processes that shape human culture through a dialogue of natural processes and social agency (2003: 143).

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<sup>1</sup> Charles Darwin's grandfather was a man of science and a poet (although not a very good one). His fame as a poet rests upon his *Botanic Garden* (1789), a long poem with botanical notes and eulogies of scientific men added. This earliest evolutionary theory is developed in his *Zoonomia* (1794-96) and *Phytologia* (1799).

<sup>2</sup> The semantic separation of science from other branches of cultural activity, in which literature is included, seems not to have occurred until some time around 1840, when William Whewell coined the word 'scientist'.

<sup>3</sup> Tennyson's Cambridge tutor was William Whewell and he would have encouraged his pupil's interest in Laplace and Buffon. It is *In Memoriam* (1850) that we trace Tennyson's scientific attitudes most obviously, and although he is reluctant to embrace the full nihilism of science, he believes that far from being chaotic Nature was ordered and exhibited a satisfying correlation between macrocosmic and microcosmic forms.

<sup>4</sup> Paracelsus was a Renaissance alchemist, the father of modern chemistry but also a seeker after eternal wisdom, a traveller and a teacher connected with the hidden secrets of nature.

<sup>5</sup> The survival of the fittest, of "nature, red in tooth and claw" (*In Memoriam*), became a grim prospect, as was the thesis that man is but the fortuitous product of blind natural forces.

<sup>6</sup> Those critics think that science, no less than poetry, is a mode of discourse that is always to some extent conditioned by the social, linguistic and cultural contexts in which it is produced, a "cultural formation equivalent to any other", according to Michel Serres (*The Natural Contract*). Science, therefore, is intrinsically and inextricably textual, relying on the same rhetorical structures and tropes found in all other forms of writing.

<sup>7</sup> Winwood Read, in *The Martyrdom of Man* (1872), bellowed his affirmation that the biological history of man is "a splendid narrative, the materials of which it is for science to discover, the glories of which it is for poets to portray" (*apud* Morton, 1984: 32).

<sup>8</sup> Darwin's second work concentrates on racial diversity and sexual selection (above all in animals). Here we find the roots of his concern for the plight of enslaved races, as well as the emancipation of humanity from creationist bondage. Darwin is especially interested in the way racial expansion drives human

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progress, stressing the notions of ‘harmony’ and ‘sympathy’ in the tribe. We see him redirecting his theory of Malthusian competition towards a greater humanitarianism (Darwin, 2008: 231-333).

<sup>9</sup> According to Joseph Carroll, even “The *Origin* is framed imaginatively within a quasi-Leibnizian theodicy in which a personified Natural selection arranges all things for the best in the best of all possible worlds.” (*Literary Darwinism*, 2004: 351).

<sup>10</sup> Carroll believes that Darwin’s moral idealism “involves him in unresolvable contradictions” and that if the theory of natural selection is basically correct, then his idealism “must be rejected as theoretically untenable.” (*idem*, 352). For many other critics, Darwin’s handling in the *Descent* of the part played by man’s cultural, as opposed to biological, inheritance is grotesquely inadequate.

<sup>11</sup> Doctrine that the universe is becoming progressively and inevitably better. This may be for religious reasons involving the working out of some grand design, or for reasons connected with late 18th-century optimism concerning inevitable progress and the perfectibility of man, inspired by scientific and technological progress and revolutionary political ideas. In theology it can also refer to the doctrine that God is benevolent but not omnipotent, and that we must therefore co-operate with Him.

<sup>12</sup> Much current feminist theory (Dinnerstein, Chodorow and Rich), Carroll suggests, tends to propound a moral ethos almost identical to Darwin’s, namely the belief that women are more sympathetic and cooperative, men more selfish and competitive, and that consequently women should provide the moral standard for our social order (*idem*, 358).

<sup>13</sup> At the age of twenty-one, and as the result of her association with a group of freethinking intellectuals and her own studies of theology, Marian Evans (George Eliot) decided that she could no longer believe in the Christian religion.

<sup>14</sup> The only collected edition of Mathilde Blind’s poetry was compiled in 1900 by her literary executor, the poet and critic Arthur Symons (1865-1945). Blind emerges as both an original and intractable poet, deliberately ignoring the constraints of literary tradition.

<sup>15</sup> Blind grew up in St John’s Wood, among the lively intellects of revolutionary Europe in exile, namely Garibaldi, Mazzini and Marx. Later she found companionship among the freethinking intellectual circles where Aestheticism intersected with radicalism.

<sup>16</sup> She became obsessed by the strange discrepancies between the account of Creation in Genesis and the history our globe as revealed to us by the rocks and stones.

<sup>17</sup> In 1869 John Chapman invited Mathilde Blind to review William Rossetti’s edition of Shelley in *The Westminster Review*. Her lengthy article marks an important moment in establishing her intellectual credentials.

<sup>18</sup> Although Blind enjoyed editing Lord Byron’s letters (1886), her deepest love and admiration was for Percy Shelley. During her stay in Zurich as a youth she had also gained the sort of education that no English schoolroom could provide, studying philology, Latin and Old German and developing a knowledge of Goethe, Heine and Schiller.

<sup>19</sup> Specifically, her friendships with several gentlemen from the Pre-Raphaelites (namely, the Rossettis, Ford Madox Brown and Swinburne) exposed her to the ways in which the ‘female subject’ became the centralised focus for ‘adult art’. These influences became the impetus for Blind’s decision to explore sexual desire in several of her writings.

<sup>20</sup> In 1881, Blind had published *The Prophecy of St Oran* and, in 1886, *The Heather on Fire*. Both of these long poems signify Blind’s religious and political radicalism, exposing the patriarchal institutions of Christianity and marriage.

<sup>21</sup> Blind died in 1896, bequeathing her estate to the Newnham College, a women’s university, in the hope to increase educational opportunities for women.

<sup>22</sup> In her chapter on “Victorian Women Poets and Scientific Narratives”, Groth states that E.B.B.’s sustained interest in the issue of the scientist’s usurpation of the poet’s position as a cultural authority, from her earliest work in *An Essay on Mind* and *Aurora Leigh*, constructs a link between Romantic theories of the relation of science to poetry and mid- to later Victorian revisions of this dialogue in women’s poetry (Armstrong and Blain, 1999: 326).

<sup>23</sup> Alfred Russel Wallace, co-discoverer with Darwin of the principle of natural selection, put it positively in his *fin-de-siècle* work entitled *The Wonderful Century*: “This great principle enables us to realize the absolute interdependence of all the forces of nature ... All work, all motion [...]” (*apud* Gillian Beer, 1983: 1).

<sup>24</sup> Such realism, she argued, would depict humanity “emerging from semi-brutal barbarous condition, and continually progressing into higher stages of moral and mental development” (*idem*, 17).

<sup>25</sup> For Blind, “the true conflict consists in man’s struggle with the irresponsible forces of Nature, and the victory in his conquest over them, both as regards the subjection of his own lower animal instincts and his

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continually growing power through knowledge of turning these elemental forces, that filled his savage progenitors with fear and terror, into the nimblest of servants” (*idem*, 19).

<sup>26</sup> In his book chapter on “Rapture and the Flesh, Swinburne to Blind”, Jason R. Rudy proposes to use electrodynamic theory to analyse the ‘electric’ effects of Blind’s poetry.

<sup>27</sup> This eclectic lyric style led a critic in the *Athenaeum* (1889) to describe the poem as a dithyramb, rather than an epic due to its boisterous and celebratory style and tone.

<sup>28</sup> Michael Faraday developed the mathematical concept of the ‘electro-magnetic force field’ (1832) as a way of mathematically describing action-at-a-distance for charged particles (i.e. electrons and protons). When James Clerk Maxwell used this field theory to assume that light was an Electromagnetic Wave (1876), and then correctly deduced the finite velocity of light, it was a powerful logical argument for the existence of the electromagnetic force field, and that light was a wave-like change in the field (electromagnetic radiation) that propagated with the velocity of light through the ether.

<sup>29</sup> In his work on *Epic. Britain’s Heroic Muse*, Tucker states that “Blind’s” is a “formal mimesis of change” and that “Unity-in-multhood within the poetry denotes its holistic analogue within the global masterplot of vast yet measured change” (2008: 504).

<sup>30</sup> The problem is put in this way: “Given the long ancestral *Descent of Man*, as Darwin himself had sloped the question in 1871, what might entitle mankind’s history to be called an *Ascent* instead?” (Tucker, 2008: 504).

<sup>31</sup> Although Paul Crook makes no mention of Blind in *Darwinism, War and History* (Cambridge: Cambridge University Press, 1994), he assembles there an intellectual tradition of pacifist biology that, stemming from Herbert Spencer, clearly pertains to Blind’s ambition and predicament.

<sup>32</sup> Herbert Spencer has a few comments about ‘superorganic’ evolution in his *Principles of Biology* of 1864-7, but nothing more. For Huxley, all human refinement can only be temporary ground wrested forcibly from a recalcitrant nature, and the ethical struggle is now and forever in deadly conflict with the cosmic. He never anywhere gives cultural evolution its rightful due.

<sup>33</sup> The American Henry Drummond would present a similar story at his Lowell Lectures at Harvard, five years later, under the same title as Blind’s (*The Ascent of Man*). In Tucker’s words, this lecture was “a paen to the seamless emergence of cultural from natural evolution, along faultless lines laid down in the Creator’s master plan” (*idem*, 506). Drummond’s “effective deification of natural selection” was discussed by Peter Morton in *The Vital Science* (1984). While reserving a friendlier word for these twentieth-century successors in evolutionary prose fiction, as Tucker observes, Morton seems to reject Blind and the Victorian verse epic altogether.