

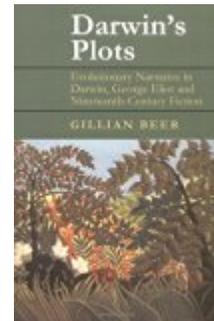
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in the Humanities & Social Sciences



Gillian Beer. *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*. Cambridge: Cambridge University Press, 2000. xxxii + 277 pp. \$95.00 (cloth), ISBN 978-0-521-78008-7; \$31.99 (paper), ISBN 978-0-521-78392-7.

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Published on H-Ideas (October, 2001)



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The divide between science and fiction is infinitesimally small in the realm of the written word. Fiction attempts to present a sense of awareness about a human condition. Scientific discoveries usually are the result of the demand for innovation in a society where the public realm is conducive to human creativity and change. It is after all a matter of the "presence of others who see what we see and hear what we hear" that assures us of the world and ourselves.[1]

But scientific theories, unlike fictional constructs, are not necessarily taken for granted outright. At the start of *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction* Dame Gillian Beer offers an explanation for this state of affairs. "Most major scientific theories," she states, "rebuff common sense. They call on evidence beyond the reach of our senses and overturn the observable world. They disturb assumed relationships and shift what has been substantial into metaphor... Such major theories tax, affront, and exhilarate those who first encounter them, although in fifty years or so they will be taken for granted... When it is first advanced theory is at most fictive. The awkwardness of fit between the natural world as it is currently perceived and as it is hypothetically imagined holds the theory itself for a time within a provisional scope akin to that of fiction" (p. 1).

In this well-written and thoroughly contemplated intellectual history of nineteenth century literature, which has been published for a second time since 1983, the accent is on Charles Darwin (1809-1882) and the effect his scientific observations had on writers of fiction. Darwin had set himself the task of understanding the roots of a past in which humankind hardly featured. Many scientific thinkers of his time felt as he did about the matter. He was however the one—in concert with the perceptions of many of his contemporaries—to outline one of the major theories of modern science. The fact that it had been absorbed into literary thinking is an interesting barometer for determining precisely how and when his theories started finding their home in popular and intellectual thinking.

Beer's work is an intellectual history of the cultural environment in which Darwin found himself in the 1860's and the 1870's. Her knowledge of the literature of the period enables the reader to come to a better understanding of how the craft of writing was progressing under conditions of creative construction. Apart from the language (written and spoken) there are numerous discussions of devices used by authors in their work. They were writing at a time when ideas were being shaped by thoughts about observations on things beyond the shores of the British Isles. It was an environment conducive to addressing universal tendencies.

The nineteenth-century author made use of specific

strategies in the process of writing. In fiction the plot is a radical form of interpretation: it fixes the relations between phenomena. "It projects the future and then gives real form to its own predictions. It is to that extent self-verifying: its solutions confirm the validity of the clues proposed" (p. 151). Much the same could be said of Darwin's style of writing. He was however far removed from the sophisticated craft of writing fiction. Yet this man who was to change the course of development in science had to construct his own metaphorical fiction in order to access the life of every day thinking in Victorian Britain.

Reading science and understanding it requires of the historian of literature clarity on precisely what the process of reading implies. Beer gives an indication of this ability early in the work (pp. 4, 27). The reader is then made aware of Darwin's reading tastes. Malthus and Milton had an impact on him. In his youth Darwin had an interest in fiction. Later it went into decline. It could quite well have been as a result of what George Elliot considered his preoccupation with expressing "life" (p. 34).

The reader is informed there was a driving force behind Darwin the writer to realize his objective of controverting attempts to distinguish meaning from matter. Meaning for him, Beer explains, inheres in all activity and in interrelations (p. 36). It has a bearing on the way in which he perceives the world around him and turns matter into an image of relevance. His sense of material implies a wide variety of meaning. It is a materialism that is sensuously grounded as a response to the world of forms and life. It is not an abstracting force (p. 37).

Beer points out that in Darwin's thought there is always a repetition of one movement: "the impulse to substantiate metaphor particularly to find a real place in the natural order for older mythological expressions" (p. 74). In the process he reminds the reader of the mysterious, explains the fact and discloses the marvelous (pp. 74-5).

There are considerations of a psycho-historical nature that deserve consideration if we want to understand Darwin the writer. Beer lets him come across as a somewhat enigmatic figure, the subject of what the written world of his youth and his maturity had to offer him. He was the creator of his own world in which a comprehensive theory of scientific reality was in the process of taking shape. According to Beer, Darwin's heuristic inclinations—the eagerness to discover—goes back to his youth. We take note of the child who had the habit of telling lies (fictionalizing) suggesting a hidden interest in power. It was one of the contributing factors in making Darwin the architect of ideas that profoundly unsettled the received re-

lationships between fiction, metaphor and the material world. Ultimately that sense of power was nurtured by his omnivorous and powerful reading (p. 27).

But what was he trying to accomplish? "Darwin was seeking to create a story of the world—a fiction—which would not entirely rely upon the scope of man's reason nor upon the infinitesimally small powers of observation he possesses, as they act within the world spread all about him, and as they enclose him through the shortness of his time span. Yet Darwin was not seeking a covertly metaphysical world not attempting an enthusiasm which would not extend the material into a form of mysticism. Throughout his use of metaphor and analogy one can feel the double stress - the attempt to create exact predictions and the attempt to press upon the boundaries of the knowable within a human order" (p. 92).

As a historian of literature Beer draws the interesting conclusion that her text is in fact an "extensive fiction" intent on exploring the boundaries of that which is literally unthinkable. What is accomplished in the process is the awareness that the absoluteness of man's power of reason as an instrument of measuring the world is displaced once and for all. The problem Darwin faced was to describe in words a process that he was convinced had been going on for a long time. Consequently he in turn had to be creative. In the process of creating a test he was "creating an argument." It was an argument aimed at emphasizing production. He could not fully rely only on a fully experimental method. Thus he was obliged to work within the terms of an "experimental history" (p. 95). In the process he became a creative artist, outside the confines of Baconian induction. His creative energy was dedicated to authenticating his account of the way species formed.

In a comprehensive discussion of Darwin's myths, Beer explains Darwin was still deeply under the influence of the Christian inheritance. The manifold contradictions he perceived in the natural world, the interplay between life and death and more, were integrated into forms representing controlling powers of opposites. It also included the concepts of "artificial" and "natural" selection. The powerful was always the more benign. Within this framework she perceives the influence of Christian tradition.

Darwin's description of the "survival of the fittest" at first appears to be one of the single direction stories in evolutionary thought. Its tautological structure however, makes of it a satire on organicism. Beer notes: "The survival of the fittest means simply the survival of those

most fitted to survive; this implies not distinction, nor fullest development, but aptness to the current demands of their environment - and these demands may be for deviousness, blueness, aggression, passivity, long arms, or some other random quality. So chance reenters the potentially determinist organisation of evolutionary narrative" (p. 109).

Between 1850 and the end of the 1870's ideas of degeneration and development were common in arguments about myth and language. Mythographers and anthropologists were well informed on evolution and natural selection. Language was considered a crucial distinguishing feature between humankind and animals. Darwin himself instead emphasized the ability of animals to communicate (pp. 111-2). Of necessity class, race and discrimination became an issue. Writing with a suggestive hint of post-colonial consciousness, Beer notes the "brutal ignorance" of Victorian writers on what constitutes "real culture" and "savage culture." It was generally considered that the decline of language was an indication of the degeneration of humankind. The anthropologist E.B. Tylor used the example of *The Water-Babies* by Charles Kingsley—an evolutionist thinker with interesting insights—to project an impression of decline.

Beer comes to the conclusion: "The idea of development harboured a paternalistic assumption once it was transferred exclusively to human beings, since it was presumed that the observer was at the summit of development, looking back over a past, struggling to reach the present high moment. The European was taken as the type of achieved developmental pre-eminence, and other races studied were seen as further back on the chart of growth. The image of growth was again misplaced from the single life cycle, so that whole races were seen as being part of the 'childhood of man', to be protected, led, and corrected like children" (p. 111).

Central to these assumptions were the conceptions of the development of language and the corresponding awareness of myth. E.B. Tylor and Max Müller, the Sanskrit scholar, were active in propagating a debate on the development of language. Müller studied the phenomenon of myth from the perspective of the organization and roots of language. Tylor in turn concentrated on the "'stiffening of metaphor by the mistaken realisation of words'" (p. 112). Müller, like Darwin, was a monogenist, who believed in the common stock of all races of the world. He argued in favor of the common origins in the "roots" of the Indo-Germanic languages. His premises were: the major divide between the brute

and man was language; second, he argued language had a common origin. He was a convinced supporter of Darwin and used the term "natural elimination" instead of "natural selection" to emphasize why some languages were able to make progress and others were subject to decline. The deterioration of language, he argued, is subject to the deterioration of metaphor and myth. Müller argued that myth was able to corrupt the relationship between language and thought. The changing nature of language, as a result of the agency of metaphor to act as agent of decomposition, represented for Müller the essence of the process of selection and elimination. The remnants of highly developed systems of myths in cultures were seated in what remained in the legends and fairy tales.

Darwin's descriptions of nature were more concerned with productivity than congress. It considered generation rather than sexual desire. His was a tendency to give another dimension to Victorian romanticism - this was a dimension that manifested in Virginia Woolf's characterization of fertility. Beer explains that in the idea of evolution there was an abundance of life, a profusion of multitudes. At the same time there was an awareness of the potential effect of over-abundance.

Is it possible that many authors missed what Darwin was driving at? The almost distanced perception of sexuality as an essential component of continuation is a romantic figment of the imagination. Beer explains: "The physical is prolonged through generations. In the methodology of life proposed by Darwin, production, growth and decay are equally needed for the continuance of life on earth" (p. 116). For Darwin development in great profusion was first and foremost a manifest reality that permeated everything he perceived. It was influenced by the awareness instilled by Wilhelm von Humboldt who accentuated the essential importance of human development.

The appropriation of Darwin's theory in children's literature is well described. Beer gives extensive consideration to Margaret Gatty and the Charles Kingsley (1819-75) children's classic, *The Water-Babies* (1863), in which a somewhat stark social comment is presented on the evolutionary process. Kingsley uses the theory to comment on the Malthusian order of things in which the identity and imaginary world, to which children are entitled, is dwarfed in the interest of progress. Beer explains that Kingsley wants to read the world with the transforming eye of the child. She sees in *The Water-Babies* a richness of rebirth, an alteration to the human cycle of

development. There are indications of an oceanic richness of pre-Freudian storytelling. Kingsley, a theologian and writer of fiction was a friend of Charles Lyell. He corresponded with Darwin and Huxley. It was an intellectual environment conducive to the creation of *The Water-Babies*.

The presence of George Eliot in Beer's book is ubiquitous. It is perhaps here that the reader is made most aware of the impact Darwin had on nineteenth-century fiction. Eliot's concern with Darwin and his theories were addressed in two of her major works *Middlemarch* and *Daniel Deronda*. Her first reading of Darwin's *Origin* did not impress Eliot. Yet it gradually started asserting an influence. *Middlemarch* starts with scientific experiments aimed at studying the history of man. "Experimental" becomes a free-ranging, exploratory, innovative project without any fixed conclusion. In science this stands to reason, but in art it has a bearing on the experimental novel and/or theatre. It is also here where it becomes evident that scientific and artistic concerns are closely related.

During the 1860's and 1870's the movement in scientific thinking was from description to narrative. It became an inherent part of theory. "This brings the objective insights of the scientist into accord with the procedure of the fiction writer and offers another kind of authentication" (p. 150). The emergence of fixed laws to explain the natural environment also had an impact on the artist. Law was in fact "the last fixed thing remaining in 'the theatre of reiterated change'" (p. 150). The novelist therefore had to explore an organization in which man's experience is traversed by laws, which took no account of humankind's presence.

The methodology of the scientist created new opportunities for the organization of fiction. In her references to the 'history of man' Eliot by implication refers to natural history. *Middlemarch* ostensibly deals with the 'web of affinities' determining the relations within a specific time and space. A sense of creation is present, of everything being knowable and eventually being subject to becoming known (p. 154). In Victorian times the word "web" was associated with woven fabric. The web as woven cloth expressed the process of coming to knowledge. In the case of Eliot's work: "The web exists not only as an interconnection in space but as succession in time. This was the aspect of the image emphasised by Darwin in his genealogical ordering" (p. 157).

The web is different from the chain, also from the tree. It has a comprehensiveness and a presence of interactiv-

ity in an environment of post-90's thinking. It constitutes an immediate response to knowledge and the art of knowing.

In *Daniel Deronda* (1871) Eliot is concerned with the future - a project she had been contemplating for a long time. The link-up with Darwin is to be found in his *The Descent of Man* and particularly the concept of selection in relation to sex, which shifted the evolutionary debate towards humankind's specific inheritance and future. Eliot, who had lost faith in the survival of the individual, now looked at the development of the race, culture and the mind. The latter, Beer states, was a favorite occupation in the 1870's. The development of the mind was considered as the possibility of exploring a better future—with generalized laws and perceptions of self as part of a greater pattern of things. Evolutionary theory had brought along with it a sense of being able to shape the future. However it is Eliot the novelist who is faced with the problematic situation of moral and emotional awareness.

The eugenics of Francis Galton proposed to create an environment where it would be possible to predict the nature and the quality of the offspring to come. Social planning, the thought of being in a position to predict the shape of the future and its people, suggested in Darwin's work that it was possible to go somewhat beyond the randomness of moral selection. The interaction between Galton and Darwin in the work of Eliot, Beer suggests, is that Galton in his eugenics applied evolutionary theory to the future. In *The Descent of Man* Darwin accentuates acts of choice and will in sexual selection. "In *Daniel Deronda* past and future are dubiously intercalated: the order of telling and the order of experience are confused and can never be thoroughly rearranged. The work brings to the centre of our attention the idea of a future life" (p. 173).

Beer notes that in all Eliot's previous novels time is end-stopped. In *Daniel Deronda* there is the prospect of a future, a tomorrow. Cause and effect and prediction are brought into play. For Eliot it meant a lot. There is no longer a critical unwritten gap of time between material and author.

The fascination of many Victorian writers with race was in fact actually with class. Race and class raise identical questions of descent, genealogy, mobility, the possibility of development and transformation. According to Beer Darwin adopted the genealogical metaphor in heraldic terms in *The Origin*. In *Daniel Deronda*, Eliot took into consideration the peculiarity of the Jews and

their place in British society. They were a wandering tribe, came from Asia and were not like the *Homo asiatica*. The Jews were also a favored nation.² In both Darwinian and biblical terms they occupied a special position in the struggle for life. The recognition in Jewish culture that the principle of growth is situated in human choice makes the divine principle action, choice and resolved memory. It is these elements that Beer explores in Eliot's *Daniel Deronda*. They are then applied in an evolutionary sense. She explains: "The relationship of will and choice to change, the confusion between change and necessary progress, are issues much of whose intensity comes from their urgent testing of evolutionary ideas in their possible application to human life" (p. 193).

Eliot did not rely exclusively on Darwin for her insights. She had already read Hegel in the 1840's. She was also aware of Schopenhauer and Fichte. In the 1850's she read Lamarck and Spencer. By the 1870's she had changed the content of the anthropological debate in her works. There was the challenging relativism and the pessimism about the possibility of advance in English national life. The debate that influenced her was concerned with race and class. It had been sparked off by *The Descent of Man*. Eliot chose to explore further the relations between men and women, thereby responding to Darwin's views on sexual selection.

By the 1870's Darwinist theories were contemplated within the context of their psychological and social implications. In particular it had a bearing on relations between men and women. In *The Origin* Darwin was of the opinion that true classification was of a genealogical nature. It is true that succession within the natural order of things had an egalitarian character. In human society it was however inheritance that organized society and sustained hegemony. It was however in *The Descent of Man* (1871) and *The Expression of the Emotions in Man and Animals* (1872) that Darwin brought humankind squarely within the debate of evolution. The accent now fell, not only on natural selection, but also on sexual selection.

Questions were now being asked with a bearing on what emotions values reflect. Actions could help the individual and race to survive. In the process medical theory became integrated with social and psychological theory. In his interpretation of Schopenhauer, Darwin came to the conclusion that the process of sexual selection had a bearing on the anticipation of the future generation—the future human race. The male was however intended to dominate in the matter of choice. Physically the male is more dominant. In a savage state of existence the fe-

male is kept in greater bondage than would otherwise be the case. The emphasis is on beauty generation, in itself a debate in the domain of aesthetics with reference to the process of sexual selection. In bio-political discourse by the late twentieth century this awareness suggested the re-translation of individuality, authenticity by repainting and remodeling the self.³

In Chapter 7 Beer gives attention to the role portrayed by the female in *Daniel Deronda*. She chooses the long route to come to that essence perhaps the result of caution in an Eighties' intellectual environment. First there is the focus on Deronda's mother. Then follows the acknowledgement that the famous opera singer does not conform to the Darwinist conception of the female deriving her status from her genetic role. Elsewhere in the work there are very interesting insights. For example, what Darwin had done was to intensify the unsettled and long-used themes in relations between men and women by placing courtship, sensibility, the making of matches, women's beauty, men's dominance and inheritance in all its forms, squarely into the arena of a new set of problems. The consequence was that authors like George Eliot and Thomas Hardy started with the rereading of traditional fictional topics. This process was constructive in the sense that it led to a new fictional energy. It also paved the way for new perceptions of the art of writing fiction.

Beer points out that in her last three works i.e., *Felix Holt*, *Middlemarch* and *Daniel Deronda* Eliot took the phenomenon of sexual selection and the role of the woman to its full extent. The role of the woman in these works included that of the vessel of continuity. They bear children and thereby pass on the inheritance of the race. At the same time women also represent a critique of culture. George Eliot was aware of the manner in which sexual selection became an instrument of oppression in a strong patriarchal order.

Darwin's Plots is an excellent work of great depth and significance for readers in a variety of disciplines. For historians it can open new insights in narrative, fiction and the construction of historical identity. For the student of literature it offers a unique insight into the Darwinian impact on nineteenth-century literature. Even for the scientist it would be interesting to take note how theory can influence the thinking of laypeople in a world where the exciting features of scientific discovery frequently become the material of interesting fiction. Ultimately the study makes the reader aware of dimensions where fiction and science share the stage. Together they

light up a world in which contrasts are too frequently diminished because readers of science and readers of fiction too seldom care to indulge in new journeys of exploration.

[1]. H. Arendt, *The Human Condition* (University of Chicago Press, Chicago, 1958), p. 50.

[2]. For interesting insights on the Jewish experience

in nineteenth century Britain, see H. Arendt, *The Origins of Totalitarianism* (Meridian Books, Cleveland and Ohio, 1958), pp. 68-79.

[3]. See P. György, "The order of bodies" in A. Heller and S.P. Riekman (Eds.) *Biopolitics: The politics of the body, race and nature* (Avebury, Aldershot, 1996), pp. 42-3.

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Citation: Johann W. Tempelhoff. Review of Beer, Gillian, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*. H-Ideas, H-Net Reviews. October, 2001.

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