

**Anna Neill, “The Machinate Literary Animal: Butlerian Science for the Twenty-First Century.” *Configurations* 22.1 (Winter 2014): 57-77.**

Anna Neill’s essay sets out to demonstrate how Butler’s writing – both his fiction and his evolutionary writings – connects to modern thinking about evolutionary influences, particularly his perspective on evolutionary development. Neill focuses on Butler’s evolutionary interests, including the idea of language as “a machinate extension of the mind” that reaches through the generations as a transformative power (57). She also examines his use of fiction as a means of communicating particularly challenging scientific ideas, thereby enabling them to be assimilated into culture. These ideas are explored through readings of the revised edition of *Erewhon* (1901), and *The Way of All Flesh* (1903).

Neill offers a well-supported and thoughtfully constructed investigation into the influence of Butler’s scientific ideas (which were shaped by the influence of Lamarckian theories of genetic change) on the argument for environmental impact on gene “triggers” and also the idea of machinate extensions of the human form. She positions Butler’s perspective concisely, signposting relevant and useful further sources of information, while providing a clear outline of his early interest in Darwinism and his subsequent change of view in later years.

From here the essay examines the compatibility of Butler’s standpoint with present enquiry into non-genetic impact factors on evolutionary development, as well as his consideration of the impact of learned behaviour on environmental change. Neill notes that Butler recognized that the latter shapes genetic change through the reconfiguration of the Darwinian/Mendelian environmental “niches” which organisms inhabit, an idea she returns to later in the essay (58). A crucial point in understanding Butler’s position, Neill argues, is that he “did not distinguish between physical traits and mental events” and thus “cultural inheritance was for him fundamentally a biological process” (59). Butler recognized that language and communication were key in shaping the human cultural environment, a stance, as Neill acknowledges, he was predisposed to take given his occupation. Moreover, Butler recognized that the written word, as an extension of language, enabled communication across generations, influencing the line of descent. Neill ties this back to twenty-first-century scientific theories and experiments through contemporary cognitive science, arguing that what Butler was describing would now be referred to as “*extended cognition*,” the idea that mental activity derives from external bodies as much as from internal events, thus softening the boundaries between internal and external (59). In consequence Neill asserts that “it is the *interweaving* of inherited biological nature and inherited human culture – that represents the truly development-centred nature of Butler’s evolutionism” (63).

Butler’s theories provided a basis from which to approach his fiction: he writes from what Neill calls his “*extensionist evo-devo*” position, which she suggests gives his fiction an added dimension (60). Behind Butler’s use of science in his fictional writing was the idea that science needed to become more like art in order to engage individuals with its premises and thus to assist in the development of the human race. He saw fiction, Neill suggests, as a means to help the mind adapt to particularly outlandish or unrealistic ideas. Neill explores Butler’s interpretation of scientific ideas via an examination of the updated *Erewhon*. Concentrating on the additional material,

the article offers a discursive exploration of the use of machines and the integration of humanity and machines, using “satiric defamiliarization – the uncanny estrangement and distortion of the everyday that thrusts the reader into a remote and often topsy-turvy, yet oddly recognizable world” (69). This approach is rewarding, firmly tying Butler’s fiction and popular science writing together and lending focus to his ideas of the machinate as an extension of the human form, interrogating his use of satire and opening the reader to new and, as it turns out, prescient ideas. Neill’s reading of *The Way of All Flesh* explores the development of the human mind over successive generations; specifically the conflict between the mind (genetically shaped by characteristics ingrained over generations of cultural influence) and the environmental niche which that mind presently occupies (shaped by current cultural expectations). Butler even provides a solution to this conflict, via psychotherapy. Ideas of inherited characteristics shaped by previous generations and the influence of the cultural environment on the individual are embedded deeply in the novel. But, as Neill notes, Butler provides an examination of these ideas using the conventions of the *Bildungsroman*, offering his readers access by using a familiar structure.

Neill’s essay offers an engaging and enlightening reading of the works of Butler in relation to his scientific ideas and, by linking them to modern scientific theories, demonstrates the cultural relevance of his ideas, particularly in relation to twenty-first-century science. By connecting these theories with Butler’s fictional writing, she shows the extent to which Butler offered his novels as a combination of art and science, challenging readers with ideas that appeared outlandish in an approachable and engaging format. Neill offers convincing evidence not only of the contemporary relevance of Butler’s writing, but also that novels themselves can become machinate extensions of the human.

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