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Conciliatory Approaches in Literary Studies

Erica Moore*

* Cardiff University

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Erica Moore
Cardiff University

The humanities in general, and literary studies in particular, can establish a framework through which consilience with scientific research and theory is made feasible. Recent anxiety within the humanities generated by the introduction of the 'impact' agenda has opened a debate about the efficacy and relevancy of humanities scholarship.[1] Consilience, it should be noted, is not an attempt to justify the existence or continuance of literary studies in academia. Rather, it acknowledges that the present situation calls even more robustly for a consiliative approach to be enacted. The shift towards a more integrated knowledge base for academic pursuits would be called for despite the demands of an impact agenda and an economic policy based on 'austerity measures'. The fundamental dilemma plaguing the humanities has less to do with economic pressure and more to do with theoretical deprivation and detriment.

In order to demonstrate how literary studies can move towards consilience, this essay addresses three main topics: first, the parameters of consilience will be discussed, drawing on E.O. Wilson's identification of the issue as outlined in *Consilience: The Unity of Knowledge* (1998); second, recent interdisciplinary scholarship will be identified, including Literary Darwinism and posthumanism; third, an example of a consiliative approach in literary studies will be provided in the form of an analysis of a science fiction novel, J.G. Ballard's *High-Rise* (1975).

In a recent publication entitled *What Science Offers the Humanities: Integrating Body and Culture* (2008), Edward G. Slingerland discusses how 'the ever-present gap between theory and practice causes much of the work being produced these days in the humanities to be enveloped in a kind of intellectual miasma'.[2] He notes that

> After decades of embracing increasingly radical forms of postmodern relativism, this miasma has become so thick that humanists are having more and more trouble explaining the nature of their work to outsiders, and are therefore finding themselves increasingly isolated from both other areas of the Academy and normal canons of intelligibility.[3]

As Slingerland intimates, the space between the 'humanities' and the 'sciences'—those 'two cultures' famously spoken of by C.P. Snow in 1959[4]—has been widened in recent years. In the twenty-first century—amidst a poststructuralist reign initiated during the 1960s and 70s—literary studies appears to be renegotiating its boundaries, seeking interdisciplinary interactions. Joseph Carroll's book *Literary Darwinism: Evolution, Human Nature and Literature* (2004), is an example of such an attempt and has assisted in forging a new field in the study of literature: Literary Darwinism. Another is the scholarly attempt to theorize 'posthumanism'. In her book *How We Became Posthuman* (1999), N. Katherine Hayles' outlines the relationship between texts, information, virtuality and cybernetics, and follows through to utilise scientific theories in her analyses of literature. In addition, another progenitor of posthumanism, Neil Badmington has published in conjunction with the discipline of geography[5] and, through posthumanism, has also attempted to forge a more wide-reaching vantage point that can be adopted by scholars working from within the humanities. In terms of both Hayles and Badmington, like Literary Darwinism, posthumanism seeks to establish connections between literary studies and scientific research.

One of the fundamental hurdles to constituting consilience, however, has to do with the divergent opinions that, generally speaking, underpin the humanities on the one hand, and the sciences on the other. The dispute, when simplified to its most fundamental level, is the reiteration of an ongoing debate that plagues academics: 'nature versus nurture', or, as it is often referred to in contemporary academic contexts, 'determinism versus social constructivism'. With this conflict occupying the centre of the divide between the 'two cultures', it is unsurprising

that theories generated from scientific research often threaten established thought patterns within humanities scholarship. As will be demonstrated in the final section of this essay, interdisciplinary approaches to literary events can bridge the gap between the 'two cultures' by way of allowing multivalent analytic approaches.

Brian Baxter comments that 'in various ways the arrival of biology at the door of the social sciences and humanities poses a serious threat to much that human beings have come to hold dear'.[6] Without a consiliative approach to knowledge acquisition and exchange within academia, the humanities in general risk falling further into Slingerland's 'intellectual miasma', a situation in which interest in, and wider application of, ideas from literary studies, in particular, will be overlooked by other academic disciplines. With academic stances such as those of Wilson, Slingerland, Carroll, Hayles and Badmington, however, literary studies can pioneer a path via which literature departments can abandon an exclusive reliance on poststructuralist theory and constructivist approaches, and create interpretations that address the discoveries of other academic cultures, possibly integrating these theories into their knowledge base, if and where possible.

Editor of *Times Higher Education*, Ann Mroz, identifies the apprehension that has been generated in the US and theUK about how the impact agenda will affect literary studies, arguing that the consequent impact on society resulting from devaluing the humanities might have broader and more detrimental effects than we realise. Mroz's final comment, however, brings the debate to the intersection between literature and science in a manner reminiscent of Slingerland's. Mroz comments: 'Although the humanities may feel that they have been betrayed by philistines and politicians, they themselves must shoulder some blame: through academic navel-gazing they have failed to live up to their true mission and potential, often making themselves irrelevant'.[7] Though the specific connotations of Mroz's statement are not made explicit in her brief editorial, a semblance of what she might have been implying relates directly to the concerns of this essay. By concerning itself only with research generated from the

methodologies and practices of qualitative, humanities-based scholarship, literary studies and its counterparts have gradually removed themselves from the sphere of intellectual exchange that should, ideally, characterise academic pursuits at higher education institutions.

Consilience

Wilson's 1998 book describing consilience, while not without faults, offers a rubric for establishing a relationship between academic disciplines. *Consilience* provides a vision of how to abridge the knowledge gap between disciplines. Wilson starts from his own field, the natural sciences, to construct his argument:

> Trust in consilience is the foundation of the natural sciences. For the material world, at least, the momentum is overwhelmingly toward conceptual unity. Disciplinary boundaries within the natural sciences are disappearing, to be replaced by shifting hybrid domains in which consilience is implicit. These domains reach across many levels of complexity, from chemical physics and physical chemistry to molecular genetics, chemical ecology, and ecological genetics. None of the new specialities is considered more than a focus of research. Each is an industry of fresh ideas and advancing technology.

> Given that human action comprises events of physical causation, why should the social sciences and humanities be impervious to consilience with the natural sciences? And how can they fail to benefit from that alliance?[8]

Brian Garvey notes that the term 'consilience' was 'brought into modern currency' by Wilson.[9] To reiterate the parameters of consilience, Garvey summarises that 'Consilience requires that what one science says should be consistent with what the others say, one example that is often emphasised being that sociology and psychology should be consistent with evolutionary biology and neuroscience'.[10] This, in turn, could apply to scholarship within the

humanities. If a scholar in literary studies, for instance, wishes to discuss 'evolution' or 'technology', knowledge and integration of theories from beyond the humanities is necessary to this discussion. Without acknowledgement of other disciplines, 'knowledge' becomes relative to a specific discipline, rather than quantifiable and understandable by scholars across the 'two cultures'.

Wilson's call for consilience is not an attempt to eradicate humanities scholarship, or fortify the position of the sciences at the forefront of 'truth' judgements. Rather, his concern seems to be with working together to think through and provide theories and solutions to current local and global predicaments. Wilson comments that

> Most of the issues that vex humanity daily—ethnic conflict, arms escalation, overpopulation, abortion, environment, endemic poverty, to cite several most persistently before us—cannot be solved without integrating knowledge from the natural sciences with that of the social sciences and humanities'.[11]

What is highlighted by this statement relates also to what Garvey stresses; that 'to be merely consilient we do not need to abandon psychological or sociobiological levels of description or explanation as long as they are consistent with what the other sciences say'.[12] In other words, a conciliatory approach does not relegate the humanities to a realm of ineffectualness and redundancy. Instead, it opens up a sphere of knowledge formerly inaccessible to humanities scholars due to methodological limitations. As Brian Boyd defends in his mention of consilience: 'Everything must be *compatible* with a physical explanation of the world, but this does not preclude new properties emerging at higher degrees of organization and interaction: chemistry, life, thought, and art'.[13] Consilience seeks to *unite* knowledge, as the subtitle of Wilson's book indicates. This requires an awareness of what is occurring in other fields, which is where lessening the divide between the 'two cultures' enters the academic equation.

An oversight of Wilson's involves the supposition that consilience will always begin with the sciences. Wilsonaddresses this when he states that

> I admit that the confidence of natural scientists often seems overweening. Science offers the boldest metaphysics of the age. It is a thoroughly human construct, driven by the faith that if we dream, press to discover, explain, and dream again, thereby plunging repeatedly into new terrain, the world will somehow come clearer and we will grasp the true strangeness of the universe. And the strangeness will all prove to be connected and make sense.[14]

Herein lies a hurdle to utilising Wilson's approach within literary studies. First, Wilson presupposes that science will be the definitive determiner and marker to which all disciplines must conform. Second, Wilson's assumptions about the quest for knowledge and progress run counter to several schools of thought within the humanities that challenge 'universality' and 'progress' as positive goals. Attempting a unifying approach comprising consilience would take a great leap of theoretical faith for scholars within the humanities. Another fundamental problem, as identified by Snow, Wilson, Slingerland and Mroz is that the language used to communicate within each academic culture is often untranslatable into other disciplines. Wilson asserts that '[…] the line between the two domains can be easily crossed back and forth, but no one knows how to translate the tongue of one into that of the other. Should we even try? I believe so, and for the best of reasons: The goal is both important and attainable. The time has come to reassess the boundary'.[15] A similar call to action was made by Snow in 1959:

> Closing the gap between our cultures is a necessity in the most abstract intellectual sense, as well as in the most practical. When those two senses have grown apart, then no society is going to be able to think with wisdom. For the sake of the intellectual life, for the sake of this country's special danger, for the sake of the western society living precariously rich

among the poor, for the sake of the poor who needn't be poor if there is intelligence in the world, it is obligatory for us and the Americans and the West to look at our education with fresh eyes […] The danger is, we have been brought up to think as though we had all the time in the world. We have very little time. So little that I dare not guess at it.[16]

Consilience in Literary Studies: Literary Darwinism and Posthumanism

Already, academics from within the humanities are consenting to the concept of consilience, primarily those who fall under the remit of Literary Darwinism, a term first coined by Joseph Carroll. Posthumanism, too, has the potential to span the divide between the 'two cultures' and enact an integrated approach to knowledge. It is these fields of literary studies that have the greatest potential to intersect with other disciplines—specifically in the sciences—in a sustained and meaningful way.

It is a task beset Literary Darwinism to demonstrate that 'culture' is not the exclusive shaper of meaning and experience, and that biology and culture together influence and formulate individual and group experience. For this task, Carroll calls upon Wilson's sociobiological theories as a means of understanding literary themes and structures.[17] He refers to Wilson's urge for literary studies to integrate scientific knowledge, as discussed in *Consilience*. Carroll claims that

> If we can formulate a theory and a methodology that links our deep evolutionary history, our evolved psychological structures, our cultural history, and the formal structures of literary texts, we shall have made a major contribution to the advancement of scientific knowledge. This is a goal worth working toward, and it is within our reach.[18]

For the most part, however, Carroll's approach remains concerned with the formal aspects of texts. He summarises that

> If the purpose of literature is to represent human experience, and if the fundamental elements of biological existence are organisms,

environments, and actions, the figurative elements that correlate with these biological elements would naturally assume a predominant position within most figurative structures. Evolutionary theory can thus provide a sound rationale for adopting the basic categories, and it can also provide a means for extending our theoretical understanding of how these categories work within the total system of figurative relations.[19]

Carroll is concerned predominantly with how and why literature has come to be a meaningful occupation and presence in human societies, as well as with tracing the impact of Darwin's theory on literary themes. Nonetheless, Carroll's use of evolutionary theory in terms of literature plays a pivotal role in constructing an interdisciplinary bridge between the 'two cultures', while also adhering to Wilson's idea of consilience. Carroll serves as an example of how scholars within the humanities, and its subsection of literary studies, can integrate and acknowledge scientific disciplines in their approaches to humanities subjects.

Brian Boyd also works towards the goals of Literary Darwinism, advocating the integration of evolutionary ideas from the sciences in his approach to literary studies. Reviewing a book on the topic,[20] Boyd highlights how interdisciplinarity is made possible through reference to Wilson's theory, stressing that 'neither consilience nor an evolutionary approach to literature imperils pluralism'.[21] Instead, according to Boyd, consilience might release literary theory from a realm that relies solely on constructivist thinking, and into a potentially emergent field where there would be 'a *return* to literature *as* literature and to a discriminating, evidence-based and consilient pluralism'.[22]

Scholars such as Boyd demonstrate the potential present within interdisciplinary approaches to literature, in this case focusing on interpretations that take into account evolutionary research from the sciences. In the preface to his article entitled 'Literature and Evolution: A Bio-Cultural Approach', Boyd summarizes:

> Many now feel that the "theory" that has dominated academic literary
> studies over the last thirty years or so is dead, and that it is time for a

return to texts. But many more *outside* literary studies—in fields as diverse as anthropology, economics, law, psychology, and religion—have recently come to recognize that the deep past that shaped our species can help to explain our present and recent past. Since a bio-cultural model of the human can only be richer than a solely cultural model, and since it implies neither genetic determinism nor limitation to the status quo, I want to argue for a bio-cultural or evolutionary approach to literature, first in very general terms, and then through a few aspects of a single familiar example, *Hamlet*. Such an approach, I suggest, can offer both a more comprehensive theory of literature *and* a closer investigation of literary texts.[23]

In this article, Boyd constructs an argument that takes into consideration both culture and biological and evolutionary principles in order to comprehend a literary text. Once again, the divide between 'culture' and 'nature' that perpetually segregates scholars in the sciences from those in the humanities can be breached by adopting consilience.

Such acts of accordance, however, sometimes arrive only after violent collisions with painful, or even crippling, consequences. In Carroll's quest to construct consilience, he forthrightly lambasts specific theoretical stances within the humanities. In summary, Carroll highlights the problematic presumption that underlies poststructuralist theory; namely, that meaning is exclusively located in and generated by linguistic and cultural codes.[24] In his discussion of poststructuralism, Carroll makes the following incendiary comment regarding those who adhere to what he refers to as the 'poststructuralist doctrine':

> The initiates of this doctrinal order must take a vow of intellectual poverty. They necessarily renounce positive, objective knowledge. But in compensation, they automatically occupy a critical perspective that is always already superior to the objective findings of science and that is

always already morally superior to the social order in which they themselves participate.[25]

Carroll's point highlights the rift that literary studies faces when attempting interdisciplinary approaches that incorporate the sciences. If literary studies continues to be dominated by poststructuralist theory, then a quest for objective perspectives on literature, that take scientific research into account, will continue to be counteracted by the presence of non-realist, relativist thinking.

In his review of Brian Baxter's book, *A Darwinian Worldview*, Brian Garvey identifies what 'evolutionary psychologists call "the standard social science model", or human-exceptionalism—the still reasonably common view that humans have left their evolutionary past behind, and consequently that human behaviour is to be explained in terms of culture only'.[26] It is this division between approaches that seems to perpetuate a lack of consilience at the most basic and fundamental theoretical levels within academia. Wilson identifies the significance of this structural alignment as a hurdle to consilience, noting that

> The two cultures share the following challenge. We know that virtually all of human behavior is transmitted by culture. We also know that biology has an important effect on the origin of culture and its transmission. The question remaining is how biology and culture interact, and in particular how they interact across all societies to create the commonalities of human nature […] That, in my opinion, is the nub of the relationship between the two cultures. It can be stated as a problem to be solved, the central problem of the social sciences and the humanities, and simultaneously one of the great remaining problems of the natural sciences […] At the present time no one has a solution.[27]

Wilson admits outright that the issue is a complex and, at this point, unresolved dispute, while also identifying features that contribute to the perpetuation of the dilemma within literary studies. There is an inability to step beyond the realm of 'culture' and to consider the possibility that other factors might serve as

contributors to the human condition in the twenty-first century. At the most fundamental level, Literary Darwinists, for example, would urge the integration of scientific ideas regarding evolution into the study of literature, at the level of both form and content, meaning that the question of *why* 'humans' create literature stands alongside the question of what the literature means within 'human' society.

On a similar note, certain strands of posthumanism advocate a comparable shift. At the fundamental level, posthumanism seeks to redress the limited definition of the 'human' as proffered by seventeenth-century thinkers and proliferated in the Western mindset. Neil Badmington outlines the problematic concerning the 'human' and its place in the world, as classified by René Descartes' influential tome *Discourse on Method* (1637). Badmington identifies the ongoing influence of Cartesian philosophy in contemporary society by commencing with a critique of Descartes, whom Badmington identifies as 'one of the principal architects of humanism, for, in the seventeenth century, he arrived at a new and remarkably influential account of what it means to be human'.[28] *Discourse on Method* identifies the 'human' as both non-machinic and non-animal, conclusions based upon the conceit that 'reason' is solely possessed by the 'human' and, therefore, not accessible to the 'machine' or the 'animal'. Badmington explains how Descartes establishes this distinguishing 'human' quality in a summary of the work, noting that

> Descartes asserts that if there were a machine with the organs and appearance of a monkey, "we" would not be able to distinguish between the real monkey and the fake—at the level of essence—precisely because, as far as Descartes is concerned, the fact that neither animal nor machine could ever possess reason means that *there would be no essential difference*.[29]

The idea that the Cartesian version of what it means to be 'human' has constructed 'humanist' philosophy, and survives and penetrates understandings of the 'human' to this day, informs the motivation for forging a revised outlook, one

that has come to be known, in academic practice, as 'posthumanism'. Badmington is not alone in recognising the impact of Cartesian philosophy on Western approaches to the 'human'. In his book *Enlightenment Contested*, for example, Jonathan Israel comments that 'Reason and mind, for both Descartes and Poulain, are what give men their superior status to animals and define their ultimate spiritual status; reason is also what ensures a person's capacity for moral action and understanding religious doctrines'.[30] Erica Fudge, too, sustains a discussion of Descartes in relation to the animal:

> Put simply, for Descartes, animals were machines. They lacked the thing that made a human distinct from an automaton: they lacked mind, and because mind and soul were absolutely inseparable in his thought, animals did not possess souls. Language is evidence of a rational soul, whereas an animal's bark, moo, mew or roar was mere instinct, signifying nothing.[31]

The impact of Descartes' philosophy plays a role in discussions of the 'human' in relation the animal and the machine, subjects that also intersect with theories and knowledge generated from the 'science' side of the 'two cultures'. It is at this precise intersection that viewpoints from beyond the humanities become essential to constructing an integrated knowledge base and to establishing consilience, rather than perpetuating the production of incompatible theoretical stances.

Apart from Badmington, several scholars have worked towards bridging the divide. In his discussion of posthumanism, Jeff Wallace raises the following questions: 'what if we are dependent upon a materialist science to take us where literary cultures refuse to go? What if materialism itself is, in this light, both an imaginative and a humanizing doctrine?'[32] N. Katherine Hayles, too, identifies the role that the scientific text might play in relation to the literary. Hayles iterates that

> The scientific texts often reveal, as literature cannot, the foundational assumptions that gave theoretical scope and artifactual efficacy to a particular approach. The literary texts often reveal, as science cannot, the

> complex cultural, social, and representational issues tied up with
> conceptual shifts and technological innovations. From my point of view,
> literature and science as an area of specialization is more than a subset of
> cultural or a minor activity in a literature department. It is a way of
> understanding ourselves as embodied creatures living within and through
> embodied worlds and embodied words.[33]

Both Wallace and Hayles, in their explicit discussions of posthumanism, envision a space in which interaction between literature and science can occur in a conciliatory manner. Conversely, if one persists in posing theories and questions based upon a distinct and deliberate dismissal of scientific discovery or theory, what develops is the potential to obscure the possibility for constructive conclusions, as well as fuelling the ongoing 'war'[34] between the sciences and the humanities.

Perspectives from scholars urging posthumanist thinking encourage an interaction between the 'two cultures' that might serve to endow each side of the debate with a sufficient space for knowledge exchange and accordance. Posthumanism is a pivotal juncture for literary studies, as the poststructuralist 'theory' that has dominated the act of reading texts in literature departments can be utilised in a new light within the parameters of posthumanism. Instead of treating theory as the sole analytic avenue, posthumanism encourages an interaction with fields beyond the humanities, and, as a result, a conciliatory approach is often established.

Richard Dawkins comments that

> Today the theory of evolution is about as much open to doubt as the theory
> that the earth goes round the sun, but the full implications of Darwin's
> revolution have yet to be widely realized […] Philosophy and the subjects
> known as "humanities" are still taught almost as if Darwin had never
> lived. No doubt this will change in time.[35]

Snow pinpoints this theme as well: when speaking of literary intellectuals, he comments that 'They are impoverished too—perhaps more seriously, because they are vainer about it. They still like to pretend that the traditional culture is the whole of "culture", as though the natural order didn't exist. As though the exploration of the natural order was of no interest either in its own value or its consequences'.[36] As the above statements indicate, the misunderstanding that continues to characterize the 'two cultures' debate revolves around errors in representation and misperceptions of information, as well as a lack of consilience in methodological approach and construction of knowledge.

Consilience in the literary studies would, as discussed above, call for corroboration with information and discoveries garnered from other disciplines, so that knowledge would move in conjunction with other academic disciplines, rather than risk creating a separate unsustainable branch. This means that when literary critics and scholars discuss issues that have also been examined and discussed in other disciplines, an interdisciplinary approach that aligns this knowledge should be fostered. Ideally, this exchange would operate in the opposite direction as well.

Consilience in Action: J.G. Ballard's *High-Rise*

In addition to being consistently included in discussions of contemporary, post-World War II literature, since the appearance of his first publication, J.G. Ballard has often been labelled a science fiction writer. The novel *High-Rise* falls under this remit, portraying a twentieth-century dystopic vision.

Science fiction is a pertinent place to begin highlighting the intersection between the sciences and the humanities in literary studies, as the genre demonstrates consilience through its very form and content. Though not bereft of critical stances towards 'science' itself, generally speaking, the genre overtly demonstrates an awareness of scholarship extending across the boundaries of the 'literary' and the 'fictional', and into the realm of scientific theory. A well known and often utilised theory of 'science fiction'—Darko Suvin's *Metamorphoses of*

Science Fiction (1979)—presupposes a relationship between the 'two cultures'. Suvin distinguishes science fiction from other imaginative genres, such as fantasy and folklore, by asserting science fiction's place within a rational framework based on rules derived from scientific practice. Suvin identifies the science fiction genre as defined by what he terms 'cognitive estrangement'. Roger Luckhurst's explicates the significance of Suvin's concept

> "Cognitive estrangement" is the shorthand term that defines Suvin's stance: the reader enters an imaginative world different (estranged) in greater or lesser degree from the empirical world around the writer or reader, but different in a way that obeys rational causation or scientific law (it is estranged cognitively).[37]

It is this definition of science fiction that has come to dominate the field. Furthermore, and more pertinent to the discussion herein, Suvin acknowledges the ability of science fiction to sit comfortably on the complex border between the 'sciences' and the 'humanities', commenting that 'Significant SF denies thus the "two-cultures gap" more efficiently than any other literary genre I know of […] It demands […] that the critic be a Darwinist and not a medicine-man'.[38] Suvin's definition of the genre, then, also intersects with the growing concern of scholars known as 'Literary Darwinists', as well as with posthumanism. The question of how the gap between the two cultures might be ameliorated can be addressed in literary studies, in part, by considering evolutionarily-derived theories in conjunction with cultural theories.

J.G. Ballard's *High-Rise* is the bizarre tale of an apartment building inhabited by a spectrum of characters whose social level corresponds to their floor level, and who, as the building deteriorates, slowly descend into a class war for resources and survival. What is at stake in Ballard's fictional illustration involves and interests both the sciences and the humanities. At the fundamental level, an infamous debate rages within Ballard's *High-Rise*: 'nature versus nurture'. Ballard's text demonstrates the interaction between the socially-

influenced behaviour of the characters as they are determined by cultural and environmental factors, while also highlighting the inherited, evolutionary behaviour of the human as it navigates the socially-constructed high-rise. In *High-Rise*, the fictional apartment building is compared to a zoo full of human-animals, an analogy which is intensified by the propensity of the characters to behave like animals. How the characters navigate the space of their confinement thus becomes an intriguing topic within the high-rise, and one that intersects with theories from beyond the humanities, most notably ethological theories, including Desmond Morris' *The Human Zoo* (1969) and Frans de Waal's *Our Inner Ape* (2006). Ethology, the study of animal behaviours and the relation of behaviour to environment, becomes a useful interpretative model through which to view depictions of the human in Ballard's *High-Rise*.

As the text proceeds, notions of 'normalcy' in the building vanish and the tenants resort to animalistic behaviours. The first example demonstrating the 'animal' is the distinct marking of territory via bodily odours. Significantly, the characters first begin marking territory via their pets: 'On more than one occasion elevator doors were sprayed with urine' and 'the dog-owners habitually transferred to the lower-level elevators, encouraging their pets to use them as lavatories'.[39] Yet the human quickly moves through a displacement period that uses the pet as a buffer, and the characters begin to incorporate the use of human odour as a means of identifying their place within the social hierarchy: 'Like their garbage, the excrement of the residents higher up the building had a markedly different odour' (p. 131).

Odour is used to mark territory, that is, to keep outsiders out, but also to establish the identity of the high-rise within, and thus as a means of dismissing the outside world, that is, anything that lies beyond the borders of the 'zoo'. Laing specifically highlights this point when, despite persevering with his duties as a lecturer in anatomy at the nearby university, he pointedly refuses to shower and even hopes someone will take notice of his newly-cultivated odour identity. Indeed, the narrator speaks of the strong scent of the residents of the

high-rise, a feature that seems to be developed in order to strengthen tribal bonds. Laing notices that 'The absence of this odour was what most unsettled him about the world outside the apartment block, though its nearest approximation was to be found in the dissecting-room at the anatomy school' (p. 107). Laing's affinity with his own odour as well as that of the high-rise attests to the relevance of the zoo metaphor, as each character delineates his or her own 'cage' with distinct odours. These elements work together to create a sense in which the tenants have become members of a human zoo: animals ensnared within their own cells, their own enclaves; amongst their own scents and amid their own refuse. This is illustrated when Laing reflects on the opposite building and thinks of his own apartment as a return to safety and comfort: 'Laing remembered the stale air in his apartment, tepid with the smell of his own body' (p. 103). Activities usually relegated as 'animalistic' are here performed by the human and illustrated prominently in the narrative.

As the connection to territory grows stronger, phobias relating to the external world abound. Standing in the centre of the empty lake outside the high-rise, Laing is assaulted by feelings of menace: 'The absence of any kind of rigid rectilinear structure summed up for Laing all the hazards of the world beyond the high-rise' (p. 104). After his trepidated response to the outside world, Laing is convinced that 'he would never again try to leave the high-rise' (p. 104). Indeed, this description further explains one reason why, after the inception of civil war within the building, almost none of the characters continues with their lives outside of the high-rise. The narrative thus presents an ambiguous, indefinable notion of both the human and its habitat. Are the characters rebelling against the high-rise, or embracing it as a productive environment? In a sense, both reactions occur within the text, as the high-rise provides an isolated space, an island, in which normative modes of behaviour can be challenged.

The character of Wilder, for instance, experiences what might be considered a reversion or regression towards animality, but can also be viewed as a means of acknowledging the presence of 'wayward' impulses within the human. For

Wilder, specifically, an acknowledgement of 'the animal' arrives via his physical sexuality. Like an animal intent on conveying dominance, Wilder continually uses his sexual body as a means of asserting command. At one point, Wilder is even calmed by the sight of his own penis in a mirror, 'a white club hanging in the darkness'; and the narrator tells us how 'He would have liked to dress it in some way, perhaps with a hair-ribbon tied in a floral bow' (p. 128). Issues of differentiation are raised in such descriptions, implicating, in part, that the 'human' does not occupy a supreme position in relation the bodily substrate. In other words, the 'human' utilises aspects of its 'animal' body—those constituents of the body that address what is conventionally considered inappropriate, or below, the human capacity for expression. By relying on the body as a means of communication, the characters in high-rise begin to address the 'animal' as an undeniable element in the human equation.

Constantly depicting a shifting humanity—one that is continually redressing its relationship to the 'animal'—the narrative conveys the human inhabitants in a communicative transaction that rejects the 'human' quality of language, and instead reverts to a bodily expression of meaning and information. A posthumanist interpretation of the text thus corresponds to this theme. Cartesian distinctions between the 'human' and the 'animal' are called into question; consequently, a reformed category for the 'human' is necessitated. In *High-Rise*, the 'animal' intersects with the evolutionary human, as the history of the human is conjured via the 'animal' body that the human characters use to convey meaning in the text. *High-Rise* raises the issue of the biological body that evolutionary theory takes as its starting point. By calling upon the animal as a site of experience, boundaries are realigned. It is via the non-linguistic, animal body that the transmutation of the human occurs in*High-Rise*. Descartes' assignation of language as an indicator of what is 'human' is complicated by the characters' reversion to anti-dialectal qualities. The biologically and evolutionary inherited aspects of the human characters come to exert an influence just as significant as that enacted by the social construction of the high-rise itself, as well as the

cultural interactions that occur amongst residents. Via these processes, an evolutionary, and a posthumanist, subjectivity is constructed.

Social culture and evolutionarily-derived behaviour interact via the narrative illustration of class conflict. Violent altercations in the high-rise align with the levels of the building, which, incidentally, tend to correspond to class affiliation, a class-consciousness largely dictated by the job one holds in society. Michel Delville comments that via the three main protagonists— Wilder, Laing and Royal—three social groups are represented.[40] The narrator relates that:

> an apparently homogeneous collection of high-income professional people had split into three distinct and hostile camps. The old social subdivisions, based on power, capital and self-interest, had reasserted themselves here as anywhere else. (p. 53)

Thus, due to the proximity of a large number of similar co-residents, the characters base their affinities on the radical exclusion of those of a different 'class', In this fictional scenario, the evolutionarily-derived explanations provided by de Waal offer intriguing perspectives on the text. De Waal alleges that:

> no ape can afford to feel pity for all living things all the time. This applies equally to humans. Our evolutionary design makes it hard to identify with outsiders. We've been designed to hate our enemies, to ignore the needs of people we barely know, and to distrust anybody who doesn't look like us. Even if within our communities we are largely cooperative, we become almost a different animal in our treatment of strangers.[41]

Here, de Waal does not justify or excuse exclusionary tendencies characterising the human animal; he only provides an evolutionary lens through which to view the human animal. Similarly, theories on the human animal offered by Morris coincide with fictional events from Ballard's novel. Speaking from an ethological perspective, Morris published several texts of popular science during the 1960s and 70s, the most famous of which is *The Naked Ape* (1967). Written as a follow-

up to this infamous publication, *The Human Zoo* (1969) contains several pertinent perspectives that relate to Ballard's *High-Rise*.

Morris' theories about what he refers to as the 'supertribe' illuminate themes present in Ballard's text. Similar to de Waal, Morris speaks of the situation of the large community, wherein the human is 'not biologically equipped to cope with a mass of strangers masquerading as members of our tribe'.[42] The events depicted in *High-Rise* attest to the relevancy of Morris' ideas, as group affiliations are constructed around common factors within the fictional building, such as floor level, class and gender. Morris continues, commenting that: 'Trapped, not by a zoo collector, but by his own brainy brilliance, he has set himself up in a huge, restless menagerie where he is in constant danger of cracking under the strain'.[43] The 'restless menagerie' is illustrated by Ballard and the danger of deterioration is pictured as a potential reality via the narrative events.

The most significant connection between Ballard and Morris, however, arises via the concept of the zoo. Morris states that

> The comparison we must make is not between the city-dweller and the wild animal, but between the city-dweller and the captive animal. The modern human animal is no longer living in conditions natural for his species.[44]

Notable elements of the above quotation come from Morris' insistence that the twentieth-century technological and urban environment is not conducive to the survival of the human animal. The events of *High-Rise* complement Morris' theory, as the narrative depicts what happens when the residents of the high-rise-zoo emerge from their caged dwellings. As discussed above, the novel repeatedly utilizes the zoo metaphor, illustrating the idea that the human animal is entrapped within the concrete and steel bars of its architectural habitat, a scenario in which the biological is in conflict with the cultural milieux.

High-Rise can be read as a text that draws upon an evolutionary framework comprising adaptation and change; it is instead the speed and direction of such

changes that constitute the foundation of the argument. In other words, the human is considered less advanced, evolutionarily speaking, than its systems of 'technology' and 'progress'. Speaking from a sociobiological perspective, John and Mary Gribbin remark:

> mankind [*sic*] has begun to change the environment to suit himself, instead of adapting, through natural selection, to fit in with the existing environment…There has not been time for this new factor to play a significant part in determining our genetic makeup, although it has, of course, enabled us to spread across the world and to increase the total population of human beings on our planet dramatically.[45]

Desmond Morris, too, highlights this theme:

> The human animal appears to have adapted brilliantly to his extraordinary new condition, but he has not had time to change biologically to evolve into a new genetically civilized species […] Biologically he is still the simple tribal animal depicted in scene one.[46]

By viewing the characters from the perspective of evolutionarily-derived theories, Ballard's text entertains the possibility that dystopia lies not in the animal body that invokes a violent revolution, but in the already existent society that built the high-rise. Furthermore, technology is highlighted as enacting an impact upon the 'human animal'—in this case, the technologically-saturated environment of the high-rise. The late-twentieth century landscape depicted in Ballard's concrete and steel narratives comprises a system in which the majority of survival problems have been eliminated—food, clothing, shelter are available and predators are non-existent. The events of texts like *High-Rise*, however, consist of resistances against systems of immediate provision. The residents of the fictional *High-Rise* destroy the luxuries of their skyscraper existence, instead preferring a reformed social order constructed on tribal affiliations.

As the rectilinear space of the building revokes its formerly-imposed social order, the inhabitants resort to a non-linguistic, 'animalistic' identity and means of

organisation. The situations depicted closely resemble structures and behaviours corresponding to the evolutionary antecedents of the 'human'. Taking into account this shift, and this reformed relationship between 'human' and 'animal', a thoroughly posthumanist subjectivity is conveyed in Ballard's text. From the perspective of posthumanism, not only is the 'human' re-assessed, but the 'humanities', too, undergoes a critical overhaul. Ethological thinking—taking into account the influence of both culture and biology—emerges from the text and overrides strictly constructivist interpretations of the 'human'.

The theories of de Waal and Morris advocate a belief in the incompatibility between the organism and the contemporary environment that is based upon a theory that biological evolution has accelerated at a rate distinct from evolutions of the social, cultural or machine. For instance, de Waal asserts that 'Given that humanity cannot pin its hopes on continued biological evolution, it needs to build upon its existing primate heritage',[47] suggesting that the moment the human species overtook evolution with technological intervention, biological evolution ceased to have a bearing on our trajectory of evolutionary change. Hence, according to de Waal, the only option for the present human is to acknowledge and build on an animal past.

In terms of Ballard's novel, however, it is the external, socially and culturally-derived forces that impact upon the human category, as well as the notion of an internal, evolutionary influence passed through the generations by the genes. Baxter, referring to the sociobiological theories of E.O. Wilson, notes that

> Wilson asks the questions that have become the hallmark of sociobiological investigation. How far have human beings developed genetic traits that are adapted to our contemporary world, and how far are they carry-overs from earlier stages of human development?[48]

Along a similar line of thinking, John and Mary Gribbin comment that 'what matters is that we should try, through sociobiology, to understand what our animal inheritance predisposes us for, so that we can decide whether that predisposition is

good or bad and can take suitable steps to overcome it where necessary'.[49] *High-Rise* provides a habitation for these debates.

Texts like *High-Rise*, whether science fiction or not, demonstrate the possibility that theories of the human written from beyond the margins of both fiction and literary studies are applicable to literary texts. In constructing the above analysis, the intention is not to suggest that Ballard supports or propagates ethological or sociobiological sentiments. The debates surrounding these stances are complex and multivalent. The purpose instead is to demonstrate the possibility of constructing an ongoing path towards consilience. Given the content of *High-Rise*, a viewpoint derived from scientific principles provides a useful and engaging lens through which an innovative reading of the narrative becomes possible. Literary Darwinism often operates on a metatextual level, but as demonstrated in the above analysis of *High-Rise*, the integration of scientific thinking into literary studies can occur also at the level of close textual analysis.

Conclusion

In 'The Core Connection', Reisz interviews Patricia Waugh, who comments:

> English now includes the study of film, folk tales and stories from around the world […] It thinks about what it is to be human and of the pictures that humans build of themselves in stories around the globe. It engages with the history of science and intellectual thought, with evolutionary biologies and their meanings, the medicalisation of culture, ecocritical awareness, narrativisation in philosophy and science, globalisation and terror.[50]

Reisz identifies an approach such as Waugh's as evidence of interdisciplinarity in literary studies. Interdisciplinarity can arrive from various angles of approach, 'Literary Darwinism' and 'posthumanism' being only two of many options and attempts at consilience.

The transition from a literary studies cut off from the rest of academia, and the sciences in particular, to a wider, incorporative approach should not be viewed as an attempt to justify the disciplines that fall under the remit of 'humanities', or as a view to eliminate humanities scholarship altogether. Nor should it be seen as an economic strategy to boost funding by subjecting humanities scholarship to an influx of 'impact'-laden, scientific research. Though each of theses points could be supported by adopting 'consilience' as a theoretical model, what is called for, rather, is an intellectual transparency and exchange between disciplines, and a much needed acknowledgement of results garnered from methodologies beyond the qualitative. Without implementing and expanding the potential of consilience, however, the humanities may well find themselves theoretically, intellectually and economically disadvantaged.

Endnotes

[1] See, for instance: Matthew Reisz, 'The Core Connection', *Times Higher Education*, 7 January 2010, pp. 32-37; and, Donald L. Drakeman, 'Solid Grounding: The Humanities Roots that Support our STEMs', *Times Higher Education*, 20 May 2010, pp. 30-31.

[2] Edward G. Slingerland, *What Science Offers the Humanities: Integrating Body and Culture* (Cambridge; New York: Cambridge University Press, 2008), p. 75.

[3] *What Science Offers the Humanities*, p. 75.

[4] C.P. Snow, *The Two Cultures and the Scientific Revolution* (Cambridge: Cambridge University Press, 1959).

[5] Neil Badmington, 'Mapping Posthumanism', in 'Mapping Posthumanism: An Exchange', *Environment and Planning A*, 36 (2004), 1344-1351 (p. 1345), <www.environment-and-planning.com/epa/fulltext/a36/a37127.pdf> [Accessed 16 April 2011].

[6] Brian Baxter, *A Darwinian Worldview: Sociobiology, Environmental Ethics and the Work of Edward O. Wilson* (Aldershot; Burlington, VT: Ashgate, 2007), p. 91.

[7] Ann Mroz, *Times Higher Education*, 7 January 2010, p. 5.

[8] E.O. Wilson, *Consilience: The Unity of Knowledge* (London: Little, Brown, 1998), p. 11.

[9] Brian Garvey, 'Review of Brian Baxter: *A Darwinian Worldview* (Ashgate, 2007)', *Environmental Values*: 18.1 (2009), 1-5 (p. 2).

[10] 'Review of Brian Baxter', p. 2.

[11] *Consilience*, p. 13.

[12] 'Review of Brian Baxter', p. 3.

[13] Brian Boyd, 'Literature and Science: Doomed Reductionism or Evolutionary Literary Pluralism?, A Review of Jon Adams' *Interference Patterns: Literary Study, Scientific Knowledge, and Disciplinary Autonomy*', *Evolutionary Psychology* 6.1 (2008), 80-84 (p. 81). Emphasis in original

[14] *Consilience*, p. 12.

[15] *Consilience*, p. 136.

[16] *The Two Cultures*, p. 48.

[17] Sociobiology argues that behaviour is, in part, the result of evolutionary events and principles and seeks to study human behaviour in this context. E.O. Wilson founded the field with the publication of *Sociobiology: The New Synthesis* (1975). Sociobiology is often referred to in relation to ethology, the study of animal behaviour.

[18] Joseph Carroll, *Literary Darwinism: Evolution, Human Nature and Literature* (New York and London: Routledge, 2004), p. 84.

[19] *Literary Darwinism*, p. 19.

[20] Here, Boyd is discussing Jon Adam's book: *Inference Patterns: Literary Study, Scientific Knowledge, and Disciplinary Autonomy* (2007), which he generally finds lacking in scope and extensive research.

[21] Brian Boyd, 'Literature and Science: Doomed Reductionism or Evolutionary Literary Pluralism?, p. 82.

[22] Brian Boyd, 'Literature and Science', p. 82. Emphasis in original.

[23] Brian Boyd, 'Literature and Evolution: A Bio-Cultural Approach', *Philosophy and Literature* 29:1 (2005), 1-23 (p. 1). Emphasis in original.

[24] Paraphrase of Carroll's detailed argument in *Literary Darwinism*, pp. 17-18.

[25] Joseph Carroll, *Literary Darwinism*, p. 16.

[26] 'Review of Brian Baxter', p. 2.

[27] *Consilience*, p. 137.

[28] Neil Badmington, 'Introduction: Approaching Posthumanism', in *Posthumanism*, ed. Neil Badmington (Basingstoke: Macmillan, 2000), pp. 1-10 (p. 3).

[29] 'Introduction: Approaching Posthumanism', p. 3. Emphasis in original. This point is also mentioned in different terms in Neil Badmington, 'Theorizing Posthumanism', *Cultural Critique*, 53 (2003), 10-27 (p. 17). Emphasis in original.

[30] Jonathan Israel, *Enlightenment Contested: Philosophy, Modernity, and the Emancipation of Man, 1670-1752* (Oxford: Oxford University Press, 2006), p. 573.

[31] Erica Fudge, *Animal* (London: Reaktion Books, 2002), p. 98.

[32] Jeff Wallace, *D.H. Lawrence, Science and the Posthuman* (Basingstoke: Palgrave Macmillan, 2005), p. 5.

[33] N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), p. 24.

[34] It should be noted that the 'two cultures' debate is presently often referred to as the 'science wars' and takes place primarily between sociologists and physicists.

[35] Richard Dawkins, *The Selfish Gene* (1976: Oxford: Oxford University Press, 2006), p. 1.

[36] *The Two Cultures*, pp. 13-14.

[37] Roger Luckhurst, *Science Fiction* (Cambridge; Malden, MA: Polity, 2005), p. 7.

[38] Darko Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven: Yale University Press, 1979), p. 36.

[39] J.G. Ballard, *High-Rise* (1975; Harper Perennial, 2006), p. 23. All further references to this text are to this edition and will be provided parenthetically.

[40] Michel Delville, *J.G. Ballard* (Plymouth: Northcote House in association with the British Council, 1998), p. 49.

[41] Frans de Waal, *Our Inner Ape: The Best and Worst of Human Nature* (London: Granta, 2006), p. 235.

[42] Desmond Morris, *The Human Zoo* (1969; London: Vintage, 1994), p. 6.

[43] *The Human Zoo*, p. vii.

[44] *Ibid*, p. vii.

[45] John and Mary Gribbin, *The One Per Cent Advantage: The Sociobiology of Being Human* (Oxford: Blackwell, 1988), p. 27.

[46] *The Human Zoo*, p. 1.

[47] *Our Inner Ape*, pp. 228-229.

[48] *A Darwinian Worldview*, p. 24.

[49] *The One Per Cent Advantage*, p. 93.

[50] 'The Core Connection', p. 37.

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First Response

I enjoyed this stimulating and thought-provoking overview of Consilience. The topic is clearly one with wide-ranging implications, and is refreshingly far-removed from the more narrowly aesthetic dimensions of some literary criticism. This paper is one which does indeed show the potential to offer 'Impact' and to engage the intelligent general reader.