

Excursions

Volume 4, Issue 1 (June 2013) **Science/Fiction**



Image credit: Tangi Bertin (www.flickr.com/photos/tangi_bertin/) CC by 2.0

Zac Rowlinson, “Conference Report: Science and Literary
Criticism”,

Excursions, vol. 4, no. 1 (2013)

www.excursions-journal.org.uk/index.php/excursions/article/view/94

Reviews

Zac Rowlinson

University of Sussex

Conference Report: Science and Literary Criticism

St. John's College, Oxford, 12 April 2012

Over twenty years have passed since Mark Turner, prophetically noting the rise of cognitive science and its potential impact upon the study of literature, called for “a reframing of English so that it comes to be seen as inseparable from the discovery of mind, participating and even leading the way in that discovery.” This wholesale reframing has, thankfully, not occurred, and Turner certainly went too far in claiming that the “coming age will be known and remembered ... as the age in which the human mind was discovered” (1991, vii). Nevertheless, the intersections between cognitive science and literature are providing a fertile area for research, through what has come to be termed the ‘Cognitive Turn’. Recognising this trend, St. John's College, Oxford, hosted a symposium on 12 April 2012 on Science and Literary Criticism. Bringing together psychologists, cognitive scientists, literary critics, linguists, narrative theorists, and philosophers of mind—though, in the spirit of the day, many of the speakers and attendees would no doubt identify with more than one of these monikers—the conference convenors Dr. Emily Troscianko (Junior Research Fellow in Modern Languages, St. John's) and Dr. Michael Burke

(Associate Professor of Rhetoric and English, Utrecht University) sought to create an environment in which creative and productive dialogue between these various disciplines could emerge.¹ Without question, it did.

The day began with a plenary session in which Raymond Gibbs (Professor in Psychology at the University of California, Santa Cruz)—who is, it should be noted, a very charismatic, highly engaging speaker—sought to argue against the conventional understanding of metaphor as an abstraction away from the bodily, through what he terms the Embodied Simulation Hypothesis. Essentially, Gibbs argued—building on the influential work of George Lakoff and Mark Johnson, *Metaphors We Live By* (1980)—our understanding of metaphor is rooted in the body’s projection into language, with simulations being run in the mind which structure our comprehension. Indeed, Professor Gibbs’ paper could be seen to be an empirical investigation into the claim made by the French philosopher Gilles Deleuze regarding the language of the Marquis de Sade and Leopold von Sacher-Masoch in his essay on masochism, ‘Coldness and Cruelty’: “Words are at their most powerful when they compel the body to repeat the movements they suggest” (1989, p.18).

By way of introductory illustration, Professor Gibbs noted how when we talk about our future, we tend to lean forward a little, with the inverse being true of the past. Utilising a passage from Nicholson Baker’s *The Anthologist* (2010), in which a ladder can be read as a metaphor or allegory for life (as 95% of the participants in one of Gibbs’s tests noted), Professor Gibbs suggested that our understanding of the ‘life is a journey’ metaphor is rooted in the body. We imagine ourselves climbing Baker’s ladder, projecting ourselves into the fictional world by way of an embodied simulation. Here, we see ourselves ascend, climbing the ladder to progress, to fulfil ourselves, such that up is understood as good, down is bad; we attempt to ‘move up in the world’. We reach a crucial juncture in Gibbs’ argument here; for it to work, the embodied simulation must also apply to abstract things. We know that we cannot literally ‘swallow our pride’, for example, but with this expression, so the argument runs, we make pride into a metaphorical object and—automatically and unconsciously—simulate ourselves swallowing it, enacting what is physically impossible. Professor Gibbs then outlined the details of two experiments he had undertaken to investigate his hypothesis, producing some stimulating

results that, unfortunately, I do not have the space to cover in greater detail here.

Perhaps the more pressing question is whether the notion of embodied simulation explains our experience of literature. Certainly, Professor Gibbs did not want to go so far. He was clear that he did not want to reduce literature to the work of neural activity, the greatest fear literary critics have when cognitive science gets involved. Other factors are always at work: social and linguistic contexts, evolutionary and cultural backgrounds, and so on. Indeed, we may wonder: is up always good? Don't some of us make attempts 'to be down with the kids' by 'letting our hair down' at the weekend? Can't someone who 'looks down' on others be said to be, well, 'up their own...!?' And what of the ladder? Could it not be Jacob's, as well as Baker's, suggesting that cultural forces—such as the Christian notion of the ascent to heaven—remain deeply engrained in our conceptual understanding? In contrast to the response offered by Gibbs to the reading of Nicholson Baker, for example, we could consider the following from Charles S. Prebish's *Buddhism: A Modern Perspective* (1975, p.95):²

The doctrine of the two truths is the expression of a metaphorical ladder upon which one progresses (up the ladder) by climbing different metalanguage levels until one realizes the reflexive turn at the top of the ladder. Hence one realizes that the ladder one has been climbing (metalinguistically) is itself as empty as the shadow it casts from the sun.

So, whilst cognitive science may enable us to start to understand how a reader actually processes a text, it can too often be neglectful of the processes at work both in a text and a reader; the social, political, economic and cultural forces that mean we cannot see the text, nor the reader, in isolation.

As a further example, one of the experiments Gibbs detailed indicated that the participants interpreted 'moving along in a good direction' as forwards. But is 'moving along in a good direction' cross-culturally forwards, or is the notion of moving forwards—one can almost hear the corporate drone here—relative to a cultural narrative of progress, to a wholly linear conception of time? The question remains: can cognitive science account for wider social, cultural, and political forces? I mean no disservice—far from it, in fact—to Professor Gibbs in asking these questions, which were outside the remit of his paper; that his talk provoked them is valuable in itself, causing us to reflect on the intersections and divergences across disciplinary study.

It was here that the day progressed into some important, and welcome, metatheoretical considerations. Marcus Hartner, (Lecturer of English at Bielefeld University), sought to outline the potential reasons for the continuing suspicion with which the cognitive study of literature is treated in the majority of literature departments. Ultimately, this comes down to what Hartner noted as the “epistemological and methodological uncertainties surrounding the intersection of empirical (cognitive) and (non-empirical) literary studies.” Indeed Hartner drew attention to one of the most pressing, and most difficult questions, for the field: How does one—without falling into reductionism, on the one hand, conjecture, on the other—test literature empirically?

The following papers focused upon the problematic intersections between science and literature. Gregory Currie (Professor of Philosophy, University of Nottingham) asked the question “What can science tell us about literature?” Whilst I would take issue with the one-way directionality of this question—surely truly interdisciplinary work must ask too: What can literature tell us about science?; or better perhaps, how can literature inform scientific study?—Currie suggested that the sciences, particularly the biological and psychological, are integral to the contextualisation of literature. Further, he asked why we should not consider sociology, anthropology, and economics as sciences, too. Though Currie was perhaps too quick to dismiss the physical and chemical sciences—Susan Strehle’s *Fiction in the Quantum Universe* (1992), for example, is an interesting study into the impact of quantum physics upon the literary imagination of such authors as Thomas Pynchon, William Gaddis, and Donald Barthelme, among others—he raised one crucial distinction, which he termed “explaining the aesthetic” and “explaining *within* the aesthetic.” Is this the key point of divergence between cognitive scientists and literary critics? Do cognitive scientists attempt to explain the aesthetic—how a mind is able to construct aesthetic experience—whereas literary critics investigate the formal interplays of a work? Is one investigating how the mind can come to understand literature, whereas the other explores what the mind can understand *through* literature? Can these two modes of inquiry meet?

Whilst Currie crucially noted that formalism is most definitely not enough for a literary critic, with various historical and social contexts being integral to a sensitive work of criticism, he wanted to make it clear that biological and psychological contexts are important to consider as well—indeed, the literary

critic cannot afford to ignore them. His talk was followed by Frank Hakemulder, whose paper diverged from, and could well have heeded, Currie's; his emphasis was upon the formalist notion of foregrounding, which is the idea that there are certain places in a text where the text draws attention to its literariness, thus causing the reader to pause, contemplate, and reassess their worldview. This may well provide a point for empirical study, a definable place to test a reader's response to literature—but how much sway does formalism really hold amongst literary critics these days? Can a text really be seen in isolation in this way? Are the key theories of literature to which cognitive scientists can turn to empirically test their ideas—Russian Formalism, New Criticism etc.—theories that, to the literary critic at least, may well have been surpassed, or are recognised to be, at the very least, decidedly limited? If literary critics must be aware of cognitive science's developments, as Currie argued, must not cognitive scientists stay alert to developments in literary criticism too?

Catherine Emmott (Senior Lecturer in English Language, Glasgow) followed Hakemulder with an interesting talk on pronouns, in which she outlined her scientific tests on theories of narrativity and the different effects on the mind that a shift in pronoun can induce. Whilst I would perhaps dispute the ability she said the second person pronoun has to draw the reader into a text—indeed, were this the case, would not more novels be written in the second person pronoun? Is 'you' not more often jarring, rupturing and drawing the reader's attention to a constructed, fictional world, rather than enveloping the reader more thoroughly in the text?—she raised one of the most interesting issues of the day: the difficulty she has faced in her own practical experience of getting psychologists to work with longer materials. Indeed, much empirical study of literature focuses only upon selected passages, rather than, for example, the entirety of a novel. How might we study *Ulysses* empirically? Does the focus upon the immediate processing of a short textual excerpt neglect both the wider context from which the passage has been taken and the lasting impact the most affective texts can have upon us? Do we not sometimes reflect after the event of reading?

It was here that two of the problems facing the cognitive study of literature came into sharp relief. The first, as Marcus Hartner had suggested, was how to reconcile the empirical study of cognitive science with a non-empirical,

aesthetic text. Is it possible to be at once sensitive to a literary text's workings yet garner empirical results? Second, and related, can the need for empirical results actually hold back the cognitive study of literature? If a reader's response is only ever tested in relation to short passages, then how much can we really learn about the workings of the mind when confronted with a text as formidable as *Ulysses*? The cognitive study of literature faces pressure, then, from literary critics on the one side, who feel that the empirical study of literature is far too often reductive, and, on the other, the pressure from a results-based culture that prevents it exploring the further outreaches of its potential. Ironically, its own desire for empirical verification seems to be at times, as Catherine Emmott was intimating, holding it back. Is the empirical study of literature symptomatic of a wider cultural denigration of the value of the humanities in the quest for that which is measurable, quantifiable, and falsifiable? Or is the empirical study of literature actually victim to this culture, with the desire for results restricting ventures into the cognitive unknown?³

Were I to have one main criticism of the day it would be this: the use of science was too monolithic. Only Gregory Currie really alluded to sciences outside the cognitive and psychological, and I think the conference perhaps could have been better titled 'Cognitive Science and Literary Criticism'. The remaining papers of the day primarily focussed, therefore, on the empirical study of literature and the intersections between cognitive science and literature. I do not have the space here to outline the contents of all the seven papers that followed, however, I will highlight two that had an interesting relationship to each other.

The first of these was Francesca Stregapede's paper on haiku. Stregapede certainly didn't shirk the major question—indeed, she made it the title of her paper; "Can Poetry Be Investigated Empirically?"—and deserves credit for this. Measuring the different times and eye movements of her participants' readings of both an original haiku and one that had been modified by Stregapede to be less symbolic, she gave an example of an original haiku and its altered version. The original was:

a bitter rain—
two silences beneath
the one umbrella

Attempting to reduce the symbolic nature of the haiku, Stregapede changed “bitter” to “loud” so that it corresponded more directly with the “two silences” of the second line. Without doing a disservice to Stregapede’s hard work—indeed, I mention it only to highlight the pitfalls of this method of study—is this change not problematic? Given that, as Stregapede noted in her paper, one of the defining features of a haiku is the 5-7-5 syllabic structure, don’t we lose something by changing a two syllable word, “bitter,” to a single syllable, “loud”? To be sure, as Michael Burke, one of the conference organisers, notes in his monograph *Literary Reading, Cognition, and Emotion*: “readability and comprehension rely to a large extent on something far more fundamental than merely counting up the number of syllables in a word or the words in a sentence” (2011, p.4). But I feel that within the space of a haiku, so reliant as it is on the weight of each syllable, losing one altogether could not only be said to be reductive, but also lacking in methodological rigour; it’s neither literary nor scientific. We were back to the issues raised by Marcus Hartner: How is it possible to empirically study a text? Stregapede was undeniably right to draw attention to the special case of poetry in this question, particularly haiku. It remained unclear, unfortunately, whether her methods answered it.

Perhaps more successful was Emily Troscianko’s paper on “Testing the Kafkaesque.” She gave details of the results of tests she had carried out investigating readers’ responses to different excerpts from Kafka. Most interestingly, all edits and modifications were Kafka’s, as the tests used different manuscript drafts, thereby exploring the different effects of the most miniscule changes in the writer’s constant edits and re-edits. Troscianko was able, therefore, to stay sensitive to the workings of the text, with her methods being both qualitative and quantitative, the latter answering the demands of an empirical study. Of course, she did not claim to have overcome all the quandaries with which the empirical study of literature is confronted. However, her paper certainly gestured towards a methodological procedure that could attempt to navigate what Hartner had earlier termed “the Scylla of simplification and the Charybdis of conjecture.”

Can the paths of cognitive science and literary criticism cross, or are both their modes and objects of investigation distinct, as Gregory Currie had suggested? There would be no answer to this question, but that it was being discussed and grappled with from across disciplinary divides made this a day

of vibrant intellectual exchange. Indeed, the thirst for interdisciplinary discussion was evident; the organisers' had had to extend the capacity just to fit everyone in. Though this put a certain amount of strain upon proceedings—we were in one long, narrow room, which stretched auditory capacity to its limit—perhaps this can be seen in a more symbolic light. Voices are being raised. Attempting to bridge seemingly wide and insurmountable disciplinary divides, discussion and interaction, albeit with some difficulty, is emerging. Let us not forget that cognitive science is still in its nascent stages, and the cognitive and empirical studies of literature are still fields very much in the process of self-articulation. If these studies are to find their voice, however, I expect we will be hearing more from this conference's speakers in the years to come.

Notes

1. A summary of each paper can be found here:

http://www.sjc.ox.ac.uk/4073/Science%20and%20Literary%20Criticism%202012_v4.pdf.
[download](#). A similar version of Raymond Gibbs's talk can be found here:

<http://www.youtube.com/watch?v=4q22v23u-Uc>

2. To be clear, the author here is Douglas D. Daye, a contributor to Prebish's edited volume, not Prebish himself.

3. Liz Sage's conference report in an earlier volume of this journal (Vol 2., 2011) noted a similar complaint from neuroscientists, who bemoaned the restrictions enforced by the need for practical results.

Bibliography

- Baker, N., 2010. *The anthologist*. London: Pocket Books
- Burke, M., 2011. *Literary reading, cognition and emotion: an exploration of the oceanic mind*. London: Routledge
- Deleuze, G., 1991. *Masochism: coldness and cruelty & Venus in furs*. 6th ed. London: Zone Books
- Lakoff, G., and Johnson, M., 1980. *Metaphors we live by*. Chicago: University of Chicago Press
- Prebish, C., 1975. *Buddhism: a modern perspective*. Pennsylvania: Pennsylvania University Press
- Strehle, S., 1992. *Fiction in the quantum universe*. Chapel Hill: University of North Carolina Press
- Turner, M., 1991. *Reading minds: the study of English in the age of cognitive science*. Princeton: Princeton University Press