Cognition and Evolution in London's Before Adam and Golding's The Inheritors

Caracciolo, Marco

Published in:
Orbis litterarum

DOI:
10.1111/oli.12089

Publication date:
2016

Orbis Litterarum 71:3 215–239, 2016

Published by John Wiley & Sons Ltd

Published by John Wiley & Sons Ltd
ORBIS Litterarum
ISSN 0105-7510

Literary Proto-Humans

Cognition and Evolution in London's *Before Adam* and Golding's *The Inheritors*

Marco Caracciolo, University of Groningen, The Netherlands

Scholars working in different areas of literary studies have recently developed an interest in how literature deals with the 'deep', evolutionary history of humankind. Cross-fertilizing this line of enquiry with accounts of consciousness representation in cognitive narrative theory, my essay explores literary figurations of prehistoric mentalities and their interpretive ramifications. Through two case studies, Jack London's *Before Adam* (1906) and William Golding's *The Inheritors* (1955), I examine how fictional texts may convey the difference between modern-day cognition and the psychological life of our hominid ancestors. By investigating the narrative strategies employed by London (first-person narration, embedded narrative) and Golding (internal focalization), I advance hypotheses about how such devices may guide readers' engagements with the two novellas' protagonists and shape their interpretations. I argue that, while London renders the cognitive specificity of proto-humans in purely negative terms – that is, by subtracting capacities that we tend to associate with *Homo sapiens* – Golding stages a complex trade-off between archaic and modern mentalities. In different ways, both London's and Golding's novellas can prompt reflection on the cognitive evolution of the *Homo* genus, potentially involving readers in the challenges of thinking about evolutionary phenomena.

Keywords: consciousness representation, narrative strategies, proto-humans, cognitive difference, reading experience.

I. Introduction

In *How to Think like a Neanderthal* (2012), Thomas Wynn and Frederick Coolidge, an archaeologist and a psychologist, undertake an in-depth investigation into various aspects of Neanderthal minds. Wynn

and Coolidge combine evidence from the fossil record with interspecies comparisons to advance hypotheses – many of them admittedly speculative – about the mentality of our evolutionary 'cousins', who coexisted with modern humans in Eurasia for several thousands of years before becoming extinct around 30,000 years ago. This article looks at how literary fiction can also explore mental processes that deviate from modern mentalities. Needless to say, Wynn and Coolidge's scientific account and the literary exploration of premodern mentalities are different projects and should not be judged by the same standards. While literary fiction *can* represent realities that are compatible with a given scientific theory or model of cognition, it should not be valued less if it builds on outdated or even bad science. This much seems relatively uncontroversial. What can literary explorations of proto-humans' minds achieve, then? What knowledge do these texts offer, and how does it differ from *scientific* knowledge of the kind sought after by Wynn and Coolidge? I shall suggest in this article that these fictions can help us negotiate in interpretive terms the evolutionary divide between ourselves and our ancestors. They enable readers, or willing readers at least, to confront the incredibly large scale of human evolution, challenging our familiarity with modern minds and, possibly, destabilizing assumptions about cognition and the evolution of life itself.

In two seminal articles, Mark McGurl (2011, 2012) calls attention to the uneasy tension between literature and the 'big scale' of evolutionary, geological or cosmic phenomena. Literature, a human practice with barely 3,000 years of recorded history, looks quite small in front of the millions of years over which life on Earth evolved. The question, then, is how literature (or some forms of literature at least) can engage with realities that transcend the human scale. McGurl's essays bring together several lines of enquiry in literary studies, from evolutionary accounts to work in the field of 'literature and science', raising a number of stimulating questions at the intersection of literary investigation and scientific knowledge. Taking as a point of departure two twentieth-century novellas dealing with premodern mentalities, this article expands the research programme outlined by McGurl by exploring literary representations of the 'deep history' of the human mind.[1]

The two novellas in question are Jack London's *Before Adam* (1906) and William Golding's *The Inheritors* (1955). The first recounts the

adventures of a group of early ancestors of modern humans, living a partly arboreal life and lacking sophisticated tools. Tentatively, we may see these creatures as australopithecines – proto-humans living in East Africa more than 3 million years ago – but this identification is not entirely unproblematic, because australopithecines never coexisted with the much more technologically advanced humans London calls 'the Fire People'. Golding's novella takes place more recently in the timeline of evolutionary history, centring on a group of Neanderthals. Both texts explore the *difference* between the mentality of proto-humans and the psychology of modern readers, and I shall be making the case that this difference, whether it is explicitly thematized from the beginning (in London) or only implied (in Golding), can serve as a probe into the large scale of evolutionary phenomena. To put this point otherwise: the gap between the audience and the novellas' protagonists can become a catalyst for readers' meaning-making, prompting them to reflect on the 'depth' of human evolutionary history. Hence, this article zooms in on the stylistic and narrative strategies through which London and Golding convey the cognitive difference of their protagonists.

I shall begin by discussing a few conceptual tools from the fields of cognitive literary studies and cognitive narratology, building – in particular – on recent accounts of consciousness representation in literary narrative (e.g. Palmer 2004). In the words of Uri Margolin, one of the pioneers of cognitive narratology, these accounts presuppose 'a basic affinity between actual and fictional minds when it comes to information processing' (Margolin 2003, 281). A number of scholars (McHale 2012; Richardson 2012) have taken issue with this position, arguing that it sidelines the 'synthetic' (i.e. artificial) and conventional nature of fictional minds, thus effectively committing a mimetic fallacy.[2] But the problems with the 'continuity thesis' (Korthals Altes 2014, 128) between real and fictional minds do not end here. First, as argued by Maria Mäkelä (2013), this assumption tends to downplay the ways in which fictional representations of mind can challenge readers' expectations about mental functioning, as literary rendering of proto-human cognition can certainly be expected to do. Second, and perhaps more importantly, Margolin's 'affinity between actual and fictional minds' does not spell out *what aspects* of actual minds would be reflected in the literary representation of characters' minds. Depending

on how we conceptualize 'mind' we end up with different versions of Margolin's affinity. Perhaps the continuity between real and fictional minds has to do with phenomenology, or the 'phenomenal mind' in David Chalmer's phrase (Chalmers 1996, 12). As I argued at length in past work (Caracciolo 2012, 2014a), readers tend to see characters as conscious beings – that is to say, beings for whom there is a way in which they can experience the world.

But phenomenology does not account for every aspect of our mental life. Indeed, the standard assumption in cognitive science is that most of what goes on in our minds never rises to conscious experience.[3] Phenomenology is concerned with the *what* and the *how* of first-person experience (i.e. its qualitative contents and modes), but it has little to say about *why* people behave in certain ways. In order to understand people's reasons for action, we need to ascribe mental states and causes. This is a notoriously unreliable process, especially in complex social situations where we cannot straightforwardly infer other people's thoughts and emotions from outward, bodily signs such as facial expressions (see Gallagher & Hutto 2008). Whenever embodied modes of intersubjectivity break down, we have to make sense of other people's overt behaviour in terms of (what we understand to be) 'invisible' reasons and causes. Philosophers of mind use the term 'folk psychology' to talk about this intuitive (pre-scientific) understanding of mental functioning (Ravenscroft 2010). Folk psychology includes beliefs about mental faculties (e.g. perception, emotion, motivation) and the cultural templates surrounding psychological processes such as falling in love or grieving over a friend's death.[4] *Scientific* psychology stands in opposition to these beliefs and templates insofar as it attempts to produce methodologically sound, and empirically grounded, knowledge about mental functioning and mental causation. Yet folk psychology and scientific psychology have something in common: they both posit the existence of unconscious mental states that play a causal role in determining behaviour, but can neither be experienced in a first-person way nor directly observed from the outside.

Note how these distinctions complicate Margolin's idea of an affinity between real and fictional minds. This affinity can be grounded in phenomenology: when I read that 'character A was afraid of the dark', I assume that A's fear of the dark has qualitative properties analogous to

fear in the real world. But this assumption is distinct from folk-psychological affinity. Character A will be lifelike in a folk-psychological sense if a text depicts him in accordance with widely shared models of human psychological functioning, even if these 'folk' models have been superseded in scientific psychology. Emily Troscianko (2014, 3–4) refers to this folk-psychological approach to characters under the heading of 'psychological realism'. Finally, a fictional text may represent character A's mental processes in terms that are compatible with (or possibly inspired by) a given model or theory in contemporary cognitive science. This is what Troscianko calls 'cognitive realism' (pp. 2–3). In short, Margolin's 'affinity between actual and fictional minds' can be broken down into three different dimensions: phenomenological, folk-psychological and cognitive.

The upshot is that, in engaging with fictional characters, readers may perceive them as analogous to real minds under these three aspects, depending on both textual cues and their own interests and predispositions. Likewise, the gap between modern humans and prehistoric mentalities that is – on my reading – at the heart of London's and Golding's novels can be approached from each of these perspectives: readers may take this gap as a fundamental difference in how proto-humans and modern humans experience the world, or they may explain it by falling back on folk-psychological notions, or – finally – they may connect it to scientific findings about cognition and the evolution of the human mind. These perspectives can, of course, be combined, just as folk-psychological and scientific viewpoints are in constant dialogue: scientific models develop and change over time, possibly influencing – through what Ian Hacking (1995) would call 'looping effects' – folk-psychological templates for understanding human behaviour.

Incidentally, this explains why psychological realism and cognitive realism, to use again Troscianko's notions, are flexible, interpretive concepts rather than labels that we may attach once and for all to specific texts: what is considered 'realistic' always varies with the interests of particular readers (or interpretive communities) and how they tie in with particular textual cues.[5] In this article I shall be focusing on how judgements informed by either folk psychology or scientific knowledge underlie readers' interpretation of the premodern minds dramatized by *Before Adam* and *The Inheritors*. I shall also consider

whether the cognitive divide between modern readers and premodern protagonists manifests itself experientially – that is to say, through lived feelings of puzzlement and strangeness. For each of my case studies, I shall look into the textual strategies that are responsible for creating this cognitive divide and discuss its possible effects on readers, insisting on continuities and discontinuities between the two novellas. In particular, I shall argue that the gap between prehistoric and modern mentalities is rendered in *Before Adam* mainly by way of explicit folk-psychological subtractions, while in *The Inheritors* it involves a more complex – and potentially more destabilizing for today's readers – trade-off at a phenomenological level. We shall see that Golding's depiction of Neanderthal minds anticipates contemporary 'enactivist' models of cognition (see Varela, Thompson & Rosch 1991) in that it foregrounds kinesthetic experience and sensorimotor patterns of interaction between embodied subjects and the physical environment. Finally, in the last section I shall have something to say about how the experienced sense of being cut off from our evolutionary ancestors can give rise to a specific form of epistemic dizziness. While both literary fiction and scientific accounts (Mithen 1996; Wynn & Coolidge 2012) leverage imaginative hypotheses in investigating the difference between modern and premodern mentalities, literary depictions seem uniquely able to connect human evolution with interpretive (thematic and/or experiential) concerns.

Before moving on, a caveat is in order: throughout this essay I shall refer to readers' responses and how they are likely to be guided by textual cues and strategies. These should be seen as thought experiments on how the two case studies *may be read* by readers, as I cannot provide any direct empirical evidence for the validity of my hypotheses. Nevertheless, I am less interested in general conclusions than in how *some* readers (and, at the very least, myself) could respond to these novellas and negotiate in interpretation the evolutionary divide between themselves and the protagonists.

II. Evolutionary memory in London's Before Adam

First published in serial form between 1906 and 1907, London's *Before Adam* is a short novel combining elements from science fiction and the

adventure genre. Apart from a frame narrative told by a modern-day narrator (on which more soon), the bulk of *Before Adam* is set before the birth of modern humans, when the Earth – according to London's imaginative vision – was populated by three species of proto-humans: the Tree People, arboreal hominids with ape-like features; the Fire People, a more 'modern' species capable of crafting complex tools and handling abstract language; and the Cave People, an evolutionarily intermediate species possessing only rudimentary language and technology. *Before Adam* thus dovetails with London's well-known interest in the theory of natural selection (see Berkove 2004), with the frame narrative introducing London's evolutionary ideas and serving as a hinge between the twentieth-century world and prehistory. More specifically, the connection is provided by the novel's narrator, who claims to relive, in his dreams, the adventures of a prehistoric alter ego. The classic narratological polarity between 'narrating I' and 'experiencing I' (Stanzel 1984) is thus stretched over aeons of evolutionary history. Dreams are the medium through which the narrating I is able to communicate with the prehistoric experiencing I, as spelled out by the novel's opening lines: 'Pictures! Pictures! Pictures! Often, before I learned, did I wonder whence came the multitudes of pictures that thronged my dreams; for they were pictures the like of which I had never seen in real wake-a-day life' (London 2000, 1).

Two elements provide a diegetic motivation for the intersubjective link between the narrator and the prehistoric protagonist. First, the narrator's extravagant dreams are explained in terms of mental illness: '"The child is ill," said my mother. "He is hysterical," said my father. I never told them [about my dreams], and they never knew. Already had I developed reticence concerning this quality of mine, this semi-disassociation of personality as I think I am justified in calling it' (London 2000, 9). But while most 'mad' narrators in nineteenth- and twentieth-century fiction – for instance, those of Poe's short stories – are famously unreliable, no connotation of unreliability is attached to London's character.[6] What guarantees the reliability of his dream visions is a second explanatory strategy, involving a lengthy detour through (London's version of) the theory of natural selection and centring on the concept of 'racial memory'. The narrator starts from the common experience of falling through space in one's dreams. This

experience, the narrator argues, is merely a remembrance of 'what happened to our arboreal ancestors [...] stamped by cerebral changes into the heredity of the race' (p. 14). In particular, the shock of almost falling to one's death impressed itself in our ancestors' minds, being transmitted to modern humans by way of 'molecular changes in [our] cerebral cells' (p. 14) and leaving a trace in our dream experiences. The narrator thus uses an almost universal dream pattern – one likely to be shared by most readers – to open a window onto the deep history of humankind. This strategy aims at creating a bond between the narrator and readers, as if – despite the suggestions of mental disorder – his racial memory were only an enhanced version of an 'evolutionary unconscious' he has in common with the audience: 'You and I are descended from those that did not strike bottom; that is why you and I, in our dreams, never strike bottom' (p. 15).[7]

This appeal to the reader's own familiarity with falling-through-space dreams aims to take the edge off a potentially unsettling experience. After all, references to dreams and mental disorders are a common 'naturalizing' strategy in antimimetic texts, since they recuperate the strange and disquieting in terms of relatively familiar experiences, where the antimimetic is – in a sense – the 'norm' (Alber 2009). Through this careful set-up, the frame narrative creates a buffer between the audience's world and the prehistoric world where most of the novella is set, allowing the narrator to take the reader by the hand and gently guide him or her across the gap between the twentieth century and the protagonist's Pleistocene. The audience is asked to go through the narrator's own childhood experiences as he tried to cope with his disturbing dreams, which results in an explicit parallel between the reader and the narrator: 'It would be better, I dare say, for you to make your approach, as I made mine, through my childhood' (London 2000, 3). The narrator does not mince words when it comes to describing his prehistoric dreams, which were pervaded by 'a fear so strange and alien that it had no ponderable quality. No fear that I experienced in my waking life resembled the fear that possessed me in my sleep. It was of a quality and kind that transcended all my experiences' (p. 3). Yet the bulk of London's narrative seems to sideline completely the unsettling quality of the narrator's dreams: paradoxically, it is as though calling attention to the narrator's emotional responses in this initial frame

narrative served to forestall readers' own acknowledgment of the strangeness of the protagonist's experiences.

Nor is this the only strategy through which the narrator seeks to reassure and lure the reader into this prehistoric world. We may expect the narrator's prehistoric dreams to be confused and fragmentary, and indeed we are told that they were 'a jumble'. But the narrator hastens to add:

> [This] jumble I shall not inflict upon you. It was not until I was a young man and had dreamed many thousand times, that everything straightened out and became clear and plain. Then it was that I got the clew of time, and was able to piece together events and actions in their proper order. (London 2000, 24)

The narrator's memories are conveniently arranged into a chronological narrative for the audience's benefit, allowing them to follow the protagonist's story in a reassuringly linear fashion. The narrator's overall tone is playful, and his narrative reflects many of the stereotypes of the adventure genre: we are introduced to the protagonist's long-time friend and companion, Lop-Ear, and to a brutish villain known as Red-Eye, with whom the protagonist – Big-Tooth – engages in constant skirmishes. We also learn about the threat posed by the technologically advanced Fire People, who end up pushing back the protagonist's own Cave People to a thin strip of land. But, more importantly for our purposes, we are exposed to the mentality of a caveman.

The first-person narrative situation, with its clear-cut line between narrating and experiencing I, clearly serves an important function in this respect: since the narrator is familiar with both modern human cognition and prehistoric minds, he consistently 'flags' the key differences between them for the contemporary reader's benefit. Such differences can be grouped under five headings: embodiment, extended cognition, creativity, linguistic competencies and social cognition. Going against the grain of computational approaches to the mind, cognitive scientists have argued that mental structures are informed by the physical make-up and evolutionary history of the human body (Gibbs 2005). Moreover, the mind is partly extended into the world through material objects and cultural practices, including language (Menary 2010). These positions, known respectively as 'embodied' and 'extended mind', resonate with many passages of *Before Adam*.[8] The narrator dwells on how his

conspecifics' embodied skills are different from those of modern humans: 'believe me, we were amazingly simple. But we did know a lot that is not known to-day. We could twitch our ears, prick them up and flatten them down at will. And we could scratch between our shoulders with ease. We could throw stones with our feet' (London 2000, 41). In discussing the technological superiority of the Fire People, the narrator calls attention to how tools can augment the body/mind by comparing their bows to 'an enormous extension of their leaping and striking muscles, so that, virtually, they could leap and kill at a hundred feet and more' (p. 196). By contrast, the narrator comments repeatedly on the Cave People's inability to build and use complex tools. In describing a rudimentary 'roof' meant to provide shelter from the rain, he remarks: 'Oh, not a roof such as modern man makes! Nor a roof such as is made by the lowest aborigines of to-day. It was infinitely more clumsy than the clumsiest handiwork of man – of man as we know him' (p. 44).

The difference between the Cave People's use of tools and modern humans is more than a matter of incremental changes: it reveals a fundamental shortcoming in the Cave People's ability to interact with material objects and tools. The lack of creativity is another theme emerging from the novella: 'To show the stage of the mental development of the Folk, I may state that it would have been a simple thing for some of them to have driven us out [of a cave] and enlarged the crevice-opening. But they never thought of it' (London 2000, 115). Technological progress is depicted as sluggish due to the Cave People's incapacity to find innovative solutions to practical problems, or even to perceive the need for such solutions: 'the one big invention of the horde, during the time I lived with it, was the use of gourds [to carry water]' (p. 98). The picture emerging from the novella is fundamentally cognitively realistic insofar as it reflects the extremely slow pace of cognitive and technological changes in proto-humans, compared to the cultural boom that took place among our direct ancestors between 60,000 and 30,000 years ago (see Mithen 1996, chap. 9).

The narrator also highlights the shortcomings in the Cave People's linguistic skills compared to the Fire People, who throughout the novella serve as a foil to the Cave People's inferior minds: 'I call them *sounds*, rather than *words*, because sounds they were primarily. They had no fixed values, to be altered by adjectives and adverbs. These latter

were tools of speech not yet invented' (London 2000, 40, emphasis in the original). These limitations severely hamper collective action and social interaction, as if what the narrator characterizes as 'the impulse toward cooperation' (p. 181) were held back by insufficient linguistic resources. Interestingly, the narrator links the emergence of art with the Cave People's social cognition, and more specifically with their rhythmic vocalizations in communal contexts, thus anticipating contemporary accounts of the development of human culture (see Dissanayake 2011, 63–66): 'we Folk of the Younger World lacked speech, and whenever we were so drawn together we precipitated babel, out of which arose a unanimity of rhythm that contained within itself the essentials of art yet to come' (London 2000, 183). But despite these early signs the narrator stresses that the Cave People were mostly shut off from the realm of cultural expression, living only in the here and now: 'We had no germs of religion, no conceptions of an unseen world. We knew only the real world, and the things we feared were the real things, the concrete dangers, the flesh-and-blood animals that preyed' (p. 185).

In short, across a wide gamut of cognitive domains the evolutionary gap between the protagonist's and modern mentalities is rendered in purely negative terms, by subtracting capacities that – either through our folk psychology or, possibly, through familiarity with scientific models – readers would tend to associate with contemporary humans. This 'privative' account is compounded here by the lack of psychological differentiation between the protagonist and his conspecifics. Most of the narrator's psychological descriptions concern both his experiencing I and the other Cave People: their cognitive patterns are described in an almost didactic fashion, and with only sporadic references to the protagonist's first-person experience or phenomenology. The audience is 'told' about the cognitive difference between archaic and modern minds without any attempt at 'showing' how this difference concretely plays out in experience. Readers may thus step back imaginatively from the protagonist, developing a sense of complicity with the modern narrator. Considered together with the naturalizing frame narrative, such strategies call attention to the evolutionary divide between australopithecines and modern humans while downplaying the defamiliarizing potential of this divide: previous stages of human cognitive evolution are presented in terms of a relatively linear 'loss' of

traits, with the text favouring the folk-psychological and scientific – and therefore external – axes of characterization over the exploration of phenomenological difference. *Before Adam* raises intriguing questions, in particular through the notion of racial memory and through the oneiric dimension of its frame narrative, but stops short of facing readers with the most unsettling aspects of our ancestors' cognitive difference. The large scale of evolutionary history is thus made more parochial, as if the evolution of humankind were in itself an adventure narrative – exciting, perhaps, but also fundamentally reassuring in its linear trajectory.

III. Reading The Inheritors*: From kinesthetic empathy to Neanderthal cognition*

Published half a century after London's *Before Adam*, Golding's 1955 novella presents us with a more destabilizing picture of human evolutionary history. The framework here is not the adventure novel but literary modernism, of which Golding has often been seen as a late exponent. Particularly pertinent is the modernism of 'challenging fictions' (Mahaffey 2007), which resist narrative understanding and pose constant interpretive riddles to the reader. Golding's internal focalization, which traps the audience into the eyes (and mind) of an uncomprehending Neanderthal man, can be compared to William Faulkner's adoption of Benjy, a mentally disabled man, as the narrator of the first section of *The Sound and the Fury*. In reading both novels, readers must not only realize the inherent limitations in the protagonists' understanding of what happens around them, but are more or less strongly encouraged to 'make up for' those limitations by way of inferences. For instance, the focalizing character of *The Inheritors*, Lok, does not realize that bows are offensive weapons, and experiences a mixture of surprise and fascination at seeing 'twigs' miraculously appear on the trees around him (when in fact they are arrows being shot from afar – or so we infer; see Golding 1955, 106). In both Faulkner's and Golding's novels, we engage with the protagonists by sharing their experiences – mostly at the sensory level – while complementing them through our 'own reasoning powers', as two Golding critics put it (Gregor & Kinkead-Weekes 2002, 48). This cognitive 'teamwork' between readers and the protagonist (cf. Caracciolo 2014a, chap. 5) leads to a radically different reception dynamic than the one we

have seen at work in *Before Adam*, with its frame narrative and sharp distinction between narrating and experiencing I. Further, the purely privative model of cognitive difference that characterizes London's novella is here turned into a trade-off of cognitive faculties: while the Neanderthals appear inferior to modern humans in some cognitive domains, Golding endows them with unique abilities that complicate readers' negotiation of the evolutionary divide between themselves and the protagonist.

The novella's first paragraph establishes one of the main dimensions of readers' engagement with Lok – namely, the kinesthetic one:

> Lok was running as fast as he could. His head was down and he carried his thorn bush horizontally for balance and smacked the drifts of vivid buds aside with his free hand. Liku rode him laughing, one hand clutched in the chestnut curls that lay on his neck and down his spine, the other holding the little Oa tucked under his chin. Lok's feet were clever. They saw. They threw him round the displayed roots of the beeches, leapt when a puddle of water lay across the trail. (Golding 1955, 11)

While, as we have seen, the opening of *Before Adam* deploys a naturalizing frame narrative, Golding's novella throws us right into the middle of the action, with Lok nimbly making his way through the thick underbrush. Notice the dynamic, almost impressionistic element of these lines, which strongly imply an egocentric frame of reference (i.e. one centred on the perceiver's body): the description of both Lok's and Liku's bodily posture and actions runs through the whole passage, being punctuated only by quick references to concrete external objects, such as the 'vivid buds', the 'displayed roots' and a 'puddle of water'. Golding's style seeks to render a runner's consciousness, where these stimuli barely have time to register due to the rapidly shifting attention. Nor is this kinesthetic style specific to this opening passage. A similar effect is produced by this account of Lok's fall in a cave:

> His body was a dead thing and he could not make it work. He stumbled after Fa and then they were through the crack in the wall and the gully led down in front of them and another crack was the new arrangement of the gap. He fled past Fa and began to fight his way downward. He fell and rolled, stumbled, leapt clumsily among snow and stones. (p. 84)

Again, this passage combines proprioceptive sensations – in this case, Lok's loss of control over his body – with motion verbs and noun phrases

denoting concrete objects, creating a dynamic picture which reflects – in a phenomenologically accurate way – Lok's unsteady motion.

The whole novel is rich in internally focalized references to bodily actions and movements, which may invite readers to engage with Lok through a process of kinesthetic empathy – that is, by imaginatively enacting the character's sensorimotor experiences (see Reynolds & Reason 2012). This point echoes Golding's own discussion of kinesthetic empathy in an essay entitled 'Intimate relations':

> There is a cave in the Auvergne where if you peer into a pool you can see a single footprint and by it the mark of a stick in what was once soft mud. That capacity we all have called kinaesthesia, a sympathetic identification with someone else's body movement, interprets the signs instantly. (Golding 1982, 104)

In *The Inheritors*, kinesthetic empathy works at two levels: on the one hand, it can be elicited in readers whenever they take Golding's prose as a 'footprint' for enacting the protagonist's movements; on the other hand, it is *thematized* by the novella through passages calling attention to Lok's kinesthetic empathy for other subjects. For instance, upon his first encounter with *Homo sapiens*, Lok appears to 'take on' the other man's body imaginatively through a process of kinesthetic mimicry:

> There built up in Lok's head a picture of the man, not by reasoned deduction but because in every place the scent told him – do this! As the smell of cat would evoke in him a cat-stealth of avoidance and a cat-snarl [. . .] so now the scent turned Lok into the thing that had gone before him. (Golding 1955, 77)

Lok's empathetic response is depicted here as automatic ('the scent told him – do this!') and lacking in what philosopher Amy Coplan would call 'self-other differentiation' (Coplan 2004, 144): the man's smell is said to turn 'Lok into the thing [the man] that had gone before him', as if the character had lost any awareness of the distinction between self and other – a distinction that, according to Coplan, underlies ordinary empathetic responses.

Golding's stylistic emphasis on kinesthetic experience, along with the character's tendency toward kinesthetic mimicry, reinforce each other and make readers' responses at this level even more likely. More importantly, however, they point to a first difference between the protagonist and folk-psychological models of human cognition: in

Golding's Neanderthals, kinesthetic empathy is an immersive, totalizing experience of becoming other rather than a partial 'feeling with' another human being. This kinesthetic mode of engagement goes hand in hand with the salience of raw sensory data in Golding's narrative. The characters are capable of fine sensory discriminations, going far beyond what we take to be the perceptual abilities of human beings:

> [Lok] flared his nostrils and immediately was rewarded with a whole mixture of smells, for the mist from the fall magnified any smell incredibly, as rain will deepen and distinguish the colours of a field of flowers. There were the smells of the people too, individual but each engaged to the smell of the muddy path where they had been. (Golding 1955, 25–26)

Just as Lok and his conspecifics appear immersed in their kinesthetic experience of otherness, their consciousness overflows with sensory stimuli. Through its internal focalization, Golding's novella thus projects a highly detailed perceptual tapestry, enriching readers' kinesthetic engagement with the protagonist and possibly encouraging them to attend to the cognitive difference between themselves and the Neanderthals. Crucially, this difference manifests itself in phenomenological as well as folk-psychological terms.

Two more aspects of Golding's depiction of premodern minds should be emphasized here – and these are probably the most significant discrepancies between folk-psychological templates and Golding's Neanderthals. First, Lok and his companions appear to engage in extended imagistic thinking. Part memories, part mental images, the 'pictures' that continuously emerge in Lok's consciousness are instrumental in his understanding of people and situations. In a scene from the beginning of the novel, for instance, the Neanderthals are trying to cross a river, but the tree trunk that they had previously used as a natural bridge is no longer there. Lok contemplates the absence of the trunk by attending to an internal 'picture':

> He shut his eyes and frowned at the picture of the log. It had lain in the water from this side to that, grey and rotting [. . .] So sure was he of this log the people always used that he opened his eyes again, beginning to smile as if he were waking out of a dream; but the log was gone. (Golding 1955, 12)

Just like the Neanderthals' perceptual sensations, these inner pictures are described as incredibly vibrant and detailed, almost as if they were able

to bring back to consciousness absent objects in all their perceptual richness. In another episode, Lok's imagistic abilities, combined with his keen sense of smell, enable him to infer what happened when his group's camp was raided by *Homo sapiens*: 'A confusion of pictures flickered through his head: here was Nil, bewildered, frightened, here the other [*Homo sapiens*], here came Ha, moving fast' (p. 74). While in *Before Adam* the initial reference to 'pictures' served to open a channel of communication between the modern-day narrator and his prehistoric alter ego, in Golding's novella pictures make up the texture of proto-humans' experience, marking a departure from folk-psychological models of human cognition. Modern humans are, of course, capable of imagistic thinking, but the salience and richness of the mental imagery experienced by Golding's Neanderthals appear to have no parallel in modern mentalities.

The same applies to the Neanderthals' remarkable ability for what cognitive narratologist Alan Palmer would call 'intermental thinking' (Palmer 2004, chap. 4) – that is, the capacity to engage in shared thought patterns through coordinated social action. In modern humans, bodily expressions and speech acts play a key role in making intermental thinking possible. But in Golding's Neanderthals, this capacity seems to require no language or external signs at all, becoming a quasi-telepathic 'sharing' of pictures. In this passage, for example, the Neanderthals jointly experience an image of their dying leader, Mal, and even see the pictures in his mind:

> Quite without warning, all the people shared a picture inside their heads. This was a picture of Mal, seeming a little removed from them, illuminated, sharply defined in all his gaunt misery. They saw not only Mal's body but the slow pictures that were waxing and waning in his head. (Golding 1955, 38)

Golding's combination of rich kinesthetic and sensory experience, imagistic thinking, and social cognition projects a more complex model of cognitive difference than London's purely negative account. In terms of abstract thinking, linguistic skills and cultural creativity, Golding's Neanderthals appear indeed inferior to their *Homo sapiens* 'inheritors'. But these underdeveloped features are compensated by *other* qualities, which Golding's style places at the forefront of the reading experience. These qualities are, as we have seen, fundamentally embodied and

kinesthetic. In discussing the specificity of Neanderthal cognition, philosopher Maxine Sheets-Johnstone argues: 'To know [Neanderthals] "in their own terms" means to be able to imagine on the basis of fossil, artifactual, taphonomic, and related kinds of evidence [. . .] what it is like to be a body we are not and to draw out the kinetic and conceptual implications of being that body' (Sheets-Johnstone 2011, 32). The difference between modern humans and Neanderthals is thus shown to depend on their different physical make-up and sensorimotor possibilities – a point in which Sheets-Johnstone's account of Neanderthal cognition and Golding's depiction seem to converge. More generally, in placing a premium on sensorimotor patterns of interaction between the Neanderthals and the external world, *The Inheritors* ties in with contemporary 'enactivist' models of cognition (see Varela, Thompson & Rosch 1991), according to which basic experience – perception and emotion – is kinesthetic through and through, being based on, or otherwise bound up with, bodily movements.

All in all, in engaging with Lok, readers may enact his sensorimotor experiences and therefore 'become Neanderthal' in a way that is at least in part similar to Lok's own 'becoming other' when he attempts to make sense of *Homo sapiens*.[9] Again, a comparison with London's *Before Adam* may help bring into sharper focus this reception pattern. In London's novella, the frame narrative has the effect of aligning the reader with the narrator right from the start, thanks to their shared familiarity with the modern human mentality. The upshot is that readers will tend to experience the protagonist's cognitive difference from an observer position. This tendency will be reinforced by the fact that the narrator focuses on the more 'external' aspects of prehistoric cognition, such as the use of tools or the rudimentary language – all aspects that can be seen to deviate from folk-psychological templates about modern humans without requiring privileged access to the protagonist's phenomenology.

By contrast, through its internal focalization *The Inheritors* foregrounds kinesthetic and sensory experiences that are unlikely to be accessible from an outsider's perspective. It thus places our engagement with the protagonist firmly in the realm of phenomenology rather than folk psychology or scientific models of cognition. Folk psychology still plays a role in assessing the cognitive difference between modern

humans and Golding's Neanderthals, but it becomes ancillary to an experiential form of engagement with the protagonist, which reflects what Sheets-Johnstone characterizes as the 'primacy of movement' (see Sheets-Johnstone 2011, chap. 3). The audience's responses are likely to change as they become acquainted with the specificity of Lok's embodied mind: after the novel's estranging beginning, readers – or at least some readers – may learn to work through the difficulty of Golding's style, gradually establishing an empathetic bond with Lok and starting to share his perspective on the storyworld.[10] This learning process is unlikely to take place in *Before Adam* due to the narrator's constant presence and mediating function, which will tend to *preserve* the cognitive gap between readers and the protagonist rather than invite the audience to span this gap imaginatively. In short, even as readers may acknowledge the limitations of archaic minds compared to modern humans, reading Golding's novella may give rise to an illusion of sharing a Neanderthal's experience down to its minutest sensory details.

This illusion is thrown into sharp relief by the sudden perspective shift that takes place in the novella's last 25 pages. Towards the end of the penultimate chapter, a blank line marks a break in Lok's attempt to rescue Liku, who has been captured by modern humans. The new paragraph reads: 'The red creature stood on the edge of the terrace and did nothing. The hollow log was a dark spot on the water towards the place where the sun had gone down' (Golding 1955, 216). Readers, and especially readers who have developed an empathetic connection with Lok while reading Golding's novella, may not immediately realize that 'the red creature' is not an as yet unknown character, but Lok himself seen through the eyes of a modern human. These readers may continue reading the text *as if* it were still oriented by Lok's perspective, through what is known in cognitive psychology as a 'recency effect': the most recent interpretive frame, in this case Lok as the focalizing character, is retained until it is directly contradicted by incoming information (see Jahn 1997).[11] After the line break, the text follows the red creature's movements and actions for a while, offering a detailed description of his appearance and physical make-up. As we read these lines, the realization that the red creature *is* Lok may gradually dawn on us, possibly as a result of the fact that Golding's style becomes far less obscure in this final section of the novella. The storyworld, one could say, starts making

complete sense, and this effect of intelligibility is of course a sign (or can be interpreted as a sign) that we have made the leap from a Neanderthal's mind to a more familiar modern mentality. But at this point we may become aware of what we have lost as much as of what we have gained in the process.

The next chapter, focalized through a modern human named Tuami, offers an account of the character's emotions and thoughts as his group sails to distant lands. Compared to the Lok sections of the novella, these pages are remarkably precise and articulate. But they also lack the rich sensorimotor experiences that defined Lok's consciousness; there is no mention of 'pictures' or intermental thought. There is, of course, a strong ethical undercurrent to these cognitive differences – an aspect on which Golding critics have had much to say (see, e.g., Gregor & Kinkead-Weekes 2002, 60–62). Golding's Neanderthals appear fundamentally extraneous to violence: in an episode from the novella's first part, for instance, Lok and his companions find a deer's corpse and determine that it can be eaten because, one of them declares, a 'cat has killed the deer and sucked its blood, so there is no blame' (Golding 1955, 37). But as soon as we switch to a modern human's perspective in the novella's last chapter, violent feelings of envy and hatred emerge: '[Tuami] looked at Marlan, hating him, and thought of the ivory dagger that he had been grinding so slowly to a point' (p. 226).

In this respect, Golding's depiction of the Neanderthals is unlikely to be scientifically accurate, of course: the Neanderthals were big-game hunters who engaged in close and violent battles with animals, at least judging from the widespread signs of injury and trauma in their skeletal remains (see Wynn & Coolidge 2012, 15–19). But while Golding's depiction of the Neanderthals' moral life is idealizing, it magnifies the psychological divide we have been exploring in this section. Where Golding succeeds is not in offering a scientifically plausible account of the cognitive difference between modern humans and Neanderthals, but in creating an *experiential* correlate of this cognitive difference through its focus on kinesthetic modes of interaction with the world. Indeed, Golding exploits the discrepancy between readers' folk psychology and the mental processes they attribute to the protagonist to create a specific experience of engaging with proto-human cognition 'from the inside'. With the perspective switching to *Homo sapiens* only at the end of the

novella, *The Inheritors* facilitates the readers' empathetic projection into the body (and mind) of the protagonist; by contrast, the frame narrative of *Before Adam* inhibits such projection by favouring a complicity between the audience and the modern narrator. In the next, concluding section we shall see how these devices may offer different perspectives on the deep past of human evolution.

IV. Conclusion

In an article on the difficulty of reconciling the evolution of life on Earth with narrative representation, Porter Abbott writes that 'there is no unencumbered way of packaging [Darwin's theory of natural selection] in narrative form without serious distortion' (Abbott 2003, 144). Abbott's conclusion points to the radical challenges to narrative and literary practices raised – as noted by McGurl (2011, 2012) – by phenomena that go beyond the 'human scale' of everyday experience: phenomena that take place over millions or even billions of years and feature no distinct anthropomorphic agency or teleology. But fiction, and particularly fiction of the literary variety, has other strategies for coming to terms with the 'deep' history of humankind than direct representation. On the one hand, literary texts may attempt to thematize evolutionary phenomena, discussing them in conceptual terms and explicitly staging the puzzles involved in making contact with our deep past. On the other hand, literature may explore evolutionary realities by evoking feelings that are, in interpretation, taken as a stand-in for the 'distance' between ourselves and our evolutionary past. Thematic and experiential strategies need not be mutually exclusive, and may go hand in hand in engaging with certain texts. But the two novels I have analysed in this article do seem to stand at the opposite ends of the spectrum. In *Before Adam*, London's frame narrative introduces the concept of 'racial memory', which enables the narrator to share the experiences of a hominid ancestor. This set-up can inspire thematic readings focusing on the cognitive divide between modern humans and australopithecines, but these readings – as we have seen – are made less forceful by London's purely negative account of proto-human cognition: the novella suggests that the mentality of premodern humans was an impoverished version of modern mentality, with the 'missing features'

appearing in a relatively linear process that culminates in *Homo sapiens*. Besides being untenable from the perspective of contemporary evolutionary theory, this account ends up making the cognitive gap between us and our ancestors more familiar and reassuring than we might have supposed. By the end of the novella, the extreme 'fear' the narrator associates with his childhood dreams has been completely eclipsed by more conventional narrative strategies. In short, through its frame narrative *Before Adam* begins to explore how the representation of cognitive processes can open a window onto our deep past, but the thematization of such 'dialogue' across aeons of human evolution remains partial and tentative.

Golding's *The Inheritors* takes a different tack. Here the evolutionary divide between modern humans and Neanderthals remains implicit, a matter of readerly interpretation rather than textual cues. Yet the cognitive work readers have to perform in order to make sense of the focalizing character's experiences is likely to draw their attention to this divide, particularly because the Neanderthals' psychological 'difference' is depicted as a trade-off rather than as a unidirectional subtraction of traits and skills. By confronting readers with the sensory richness and kinesthetic mimicry of proto-humans, *The Inheritors* defamiliarizes readers' folk psychology, creating a doubly unsettling experience: the audience may perceive the 'strangeness' of Lok's perspective as they begin to engage with him early on in the novella; in turn, when the text projects them back into the mind of a modern human at the end of the novel, readers may acknowledge the limitations of their own cognitive apparatus. This defamiliarizing process evokes distinct feelings of puzzlement and disorientation, which may become bound up in interpretation with the evolutionary distance between contemporary humans and proto-humans.

Two further aspects have emerged in my analysis of the case studies. The first is the interaction between narrative techniques and readers' engagement with the protagonists of the novellas. In London, first-person narration and the split between narrative and experiencing I work towards distancing the audience from the protagonist. In Golding, internal focalization and the foregrounding of low-level (sensory and kinesthetic) experience have the opposite effect of *favouring* an empathetic bond between readers and the protagonist. These strategies are likely to 'frame'

readers' interpretations of the texts in different ways, as suggested above. A second aspect worth highlighting here is the multidimensionality of readers' engagement with the representation of mental processes, which involves three aspects: phenomenology, folk psychology and scientific (cognitive) realism. These aspects may work in tandem, but it is important to keep them distinct insofar as their interaction can give rise to different forms of psychological continuity and discontinuity between real and fictional minds. Golding's and London's depiction of proto-human minds is anything but cognitively realistic across the board: these texts should not be read as scientifically plausible accounts of hominid cognition, but as explorations of cognitive difference which rely mainly on folk-psychological knowledge about modern mentality. Despite the occasional references to the embodied and extended nature of mind, London uses narratorial directions rather than the representation of the protagonist's experience to convey the specificity of proto-human cognition. In this sense, then, London's novel is committed to a traditional, 'internalist' view of mental processes, where language has priority over experience and bodily responses to the world.

By contrast, the audience's interaction with the protagonist of Golding's text takes on a distinctly phenomenological dimension, which highlights the deep connection between our cognitive make-up, kinesthetic experience and sensorimotor patterns of interaction with the environment: imagining 'what it is like' to be a Neanderthal involves, for Golding, taking on a Neanderthal body through a process of somatic empathy. By directly implicating the reader in the protagonist's kinesthetic world, the account of the protagonist's mind offered by *The Inheritors* is more likely to prompt reflection on the complexity of human evolution than London's privative, and purely folk-psychological, approach. In this way, Golding's novella demonstrates how bodily involvement and conceptual meaning-making can go hand in hand in readers' engagement with literary narrative.

NOTES

1. On the concept of deep history, see Shryock and Smail (2011).
2. The term 'synthetic' comes from Phelan (1989), where it is used in tandem with 'mimetic' and 'thematic' to refer to three distinct dimensions of readers' engagement with literature, and fictional characters in particular.

3. Throughout this article I shall use the term 'phenomenology' in the broad sense of 'first-person experience', without specific reference to the philosophical tradition that goes by the same name.
4. Philosophers and cognitive scientists have long debated over the core psychological mechanism beyond folk psychology, but it would be impossible to enter that debate here. Suffice it to say that folk-psychological skills and models, as I conceptualize them here, work together with more basic (i.e. embodied) modes of interactions with other people. In particular, folk psychology kicks in when primary, embodied intersubjectivity is insufficient to make sense of others' actions. See Caracciolo 2014a, chap. 6.
5. Ultimately, the diversity of readers' responses to – and interpretations of – literature depends on differences in the predispositions and assumptions that they bring to bear on literature itself. My own reading of London's and Golding's novellas is no exception: it reflects my interest in the 'deep history' of the human mind and will be shared, at least a priori, only by like-minded readers.
6. On madness and narrative unreliability, see the special issue of *Style* edited by Bernaerts, Herman and Vervaeck (2009).
7. This explanation logically implies the inheritance of traits acquired during one's lifetime, a now discredited theory widely associated with French naturalist Jean-Baptiste Lamarck.
8. For this reason, I am not fully convinced by an anonymous reader's suggestion that *Before Adam* is caught up with a dualist conception of the mind – that is to say, one driving a wedge between mental processes and physical phenomena. It is true, as I shall point out below, that Golding's novel appears to anticipate contemporary 'enactivist' accounts of the mind, which question dualist world views. Yet the picture of cognition that emerges from London's novel is not completely disembodied either, because of the importance attached to evolutionary processes and physical artefacts.
9. For more on enactivism and readers' imagination of fictional worlds, see Caraacciolo 2014a.
10. I offer a fuller account of how this progressive 'familiarization' may work in readers' engagement with characters in Caracciolo 2014b.
11. Jahn's treatment of 'recency' and 'primacy effects' in the reading experience builds on Jackendoff's (1987) concept of 'preference rule system'.

BIBLIOGRAPHY

Abbott, H. P. 2003, 'Unnarratable knowledge: The difficulty of understanding evolution by natural selection' in *Narrative Theory and the Cognitive Sciences*, ed. D. Herman, CSLI Publications, Stanford, Calif., pp. 143–162.

Alber, J. 2009, 'Impossible storyworlds — and what to do with them', *Storyworlds*, vol. 1, pp. 79–96.

Berkove, L. I. 2004, 'Jack London and evolution: From Spencer to Huxley', *American Literary Realism*, vol. 36, no. 3, pp. 243–255.

Bernaerts, L., Herman, L. & Vervaeck, B (eds.) 2009, 'Narrative threads of madness: Special issue', *Style*, vol. 43, no. 3.

Caracciolo, M. 2012, 'Fictional consciousnesses: A reader's manual',*Style*, vol. 46, no. 1, pp. 42–64.
—. 2014a, *The Experientiality of Narrative: An Enactivist Approach*, de Gruyter, Berlin.
—. 2014b, 'Two child narrators: Defamiliarization, empathy, and reader-response in Mark Haddon's *The Curious Incident* and Emma Donoghue's *Room*', *Semiotica*, vol. 2014, no. 202, pp. 183–205.
Chalmers, D. J. 1996, *The Conscious Mind: In Search of a Fundamental Theory*, Oxford University Press, New York & Oxford.
Coplan, A. 2004, 'Empathic engagement with narrative fictions', *The Journal of Aesthetics and Art Criticism*, vol. 62, no. 2, pp. 141–152.
Dissanayake, E. 2011, 'Prelinguistic and preliterate substrates of poetic narrative', *Poetics Today*, vol. 32, no. 1, pp. 55–79.
Gallagher, S. & Hutto, D. D. 2008, 'Understanding others through primary interaction and narrative practice' in *The Shared Mind: Perspectives on Intersubjectivity*, ed. J. Zlatev, T. P. Racine, C. Sinha & E. Itkonen, John Benjamins, Philadelphia & Amsterdam, pp. 17–38.
Gibbs, R. W. 2005, *Embodiment and Cognitive Science*, Cambridge University Press, Cambridge.
Golding, W. 1955, *The Inheritors*, Faber & Faber, London.
—. 1982, 'Intimate relations' in *A Moving Target*, Faber & Faber, London, pp. 104–124.
Gregor, I. & Kinkead-Weekes, M. 2002, *William Golding: A Critical Study of the Novels*, Faber & Faber, London.
Hacking, I. 1995, 'The looping effects of human kinds' in *Causal Cognition: A Multidisciplinary Debate*, ed. D. Sperber, D. Premack & A. J. Premack, Oxford University Press, New York, pp. 351–383.
Jackendoff, R. 1987, *Consciousness and the Computational Mind*, MIT Press, Cambridge, Mass.
Jahn, M. 1997, 'Frames, preferences, and the reading of third person narratives', *Poetics Today*, vol. 18, no. 4, pp. 441–468.
Korthals Altes, L. 2014, *Ethos and Narrative Interpretation: The Negotiation of Values in Narrative Fiction*, University of Nebraska Press, Lincoln & London.
London, J. 2000, *Before Adam*, University of Nebraska Press, Lincoln & London.
Mahaffey, V. 2007, *Modernist Literature: Challenging Fictions*, Wiley-Blackwell, Malden, Mass.
Mäkelä, M. 2013, 'Cycles of narrative necessity: Suspect tellers and the textuality of fictional minds' in *Stories and Minds: Cognitive Approaches to Literary Narrative*, ed. L. Bernaerts, D. De Geest, L. Herman & B. Vervaeck, University of Nebraska Press, Lincoln & London, pp. 129–151.
Margolin, U. 2003, 'Cognitive science, the thinking mind, and literary narrative' in *Narrative Theory and the Cognitive Sciences*, ed. D. Herman, CSLI Publications, Stanford, Calif., pp. 271–294.
McGurl, M. 2011, 'The new cultural geology', *Twentieth-Century Literature*, vol. 57, nos. 3–4, pp. 380–390.
—. 2012, 'The posthuman comedy', *Critical Inquiry*, vol. 38, no. 3, pp. 533–553.

McHale, B. 2012, 'Transparent minds revisited', *Narrative*, vol. 20, no. 1, pp. 115–124.

Menary, R. (ed.), 2010, *The Extended Mind*, MIT Press, Cambridge, Mass.

Mithen, S. 1996, *The Prehistory of the Mind: A Search for the Origins of Art, Religion and Science*, Thames & Hudson, London.

Palmer, A. 2004, *Fictional Minds*, University of Nebraska Press, Lincoln & Lincoln.

Phelan, J. 1989, *Reading People, Reading Plots: Character, Progression, and the Interpretation of Narrative*, University of Chicago Press, Chicago.

Ravenscroft, I. 2010, 'Folk psychology as a theory' in *The Stanford Encyclopedia of Philosophy*, ed. E. N. Zalta, available at: <http://plato.stanford.edu/entries/folkpsych-theory/> (accessed 15 August 2014).

Reynolds, D. & Reason, M. (eds.), 2012, *Kinesthetic Empathy in Creative and Cultural Practices*, Intellect, Bristol.

Richardson, B. 2012, 'Response' in *Narrative Theory: Core Concepts and Critical Debates*, ed. D. Herman, J. Phelan, P. Rabinowitz, B. Richardson & R. Warhol, Ohio State University Press, Columbus, pp. 235–249.

Sheets-Johnstone, M. 2011, *The Primacy of Movement*, expanded 2nd edn, John Benjamins Publishing, Philadelphia & Amsterdam.

Shryock, A. & Smail, D. L. (eds.), 2011, *Deep History: The Architecture of Past and Present*, University of California Press, Berkeley & Los Angeles.

Stanzel, F. K. 1984, *A Theory of Narrative*, Cambridge University Press, Cambridge.

Troscianko, E. 2014, *Kafka's Cognitive Realism*, Routledge, New York & London.

Varela, F. J., Thompson, E. & Rosch, E. 1991, *The Embodied Mind: Cognitive Science and Human Experience*, MIT Press, Cambridge, Mass.

Wynn, T. & Coolidge, F. L. 2012, *How To Think like a Neandertal*, Oxford University Press, New York.

Marco Caracciolo (m.caracciolo@rug.nl) is a post-doctoral researcher at the University of Groningen in the Netherlands. He is mainly interested in phenomenological approaches to literature and cognitive narrative theory. His work has been published in journals such as *Poetics Today*, *Narrative*, *Modern Fiction Studies*, and *Phenomenology and the Cognitive Sciences*. He is the author of *The Experientiality of Narrative: An Enactivist Approach* (De Gruyter, 2014), and the co-author – with Marco Bernini – of an introduction to cognitive literary studies in Italian (*Letteratura e scienze cognitive*; Carocci, 2013). He is currently working on a book project on defamiliarization and empathy in readers' engagement with the first-person narrators of contemporary fiction.