

## Beyond the Cultural Stereotyping of Science: Michael Ondaatje's *Anil's Ghost* and the Postcolonial Science Novel

**ABSTRACT** This essay explores the contribution which postcolonial fiction may make to critiquing, shaping, and revising cultural narratives about science and related knowledge practices in diverse geopolitical settings. Singling out cultural narratives of a 'spread' of 'Western science' which have traditionally been a prominent component of twentieth-century modernization narratives, the contribution shows how postcolonial fiction can take the narrative representation of science and related knowledge practices beyond the cultural stereotyping whose formative influence has by no means been completely superseded in popular perceptions and even critical accounts of the cultural place of science. Set against the background of a spectrum of Anglo-American and South Asian 'science novels,' and drawing on conceptions developed by Ong and others ('science as global assemblage,' 'Euro-American cosmopolitan science'), the essay offers a detailed reading of science and related knowledge practices in Michael Ondaatje's *Anil's Ghost*. The essay specifically highlights three related textual strategies that inform the dynamics of plot, character constellations, and narration: a first and fundamental strategy, the gradual pluralization of instantiations of science and related knowledge practices, is complemented secondly by the critical distancing against any bids to promote a cultural stereotyping of science. Both provide the basis for a third strategy, which makes *Anil's Ghost* stand out among postcolonial science novels: the detail and intensity with which the novel works to establish and profile an alternative, culturally and geopolitically sensitive perspective on science.

**KEYWORDS** Euro-American cosmopolitan science, internationalism in science, postcolonial science, Science in fiction, science narrative

*“The National Atlas of Sri Lanka has seventy-three versions of the island,”* begins one of the enigmatic italicized passages that interrupt the narrative of Michael Ondaatje’s *Anil’s Ghost* at certain points. *“The geological map reveals peat in the Muthurajawela swamp south of Negombo, coral along the coast from Ambalangoda to Dondra Head, pearl banks offshore in the Gulf of Mannar. Under the skin of the earth are even older settlements of mica, zircon, thorianite, pegmatite [...]. Plumbago graphite—veins and flakes of it—graphite of the greatest purity (ninety-seven percent carbon), which would be mined in Sri Lanka for one hundred and sixty years, especially during the World Wars, six thousand mines around the country [...]. Another page reveals just bird life. [...] There are pages of isobars and altitudes. [...] There are no city names. [...] There are no river names. No depiction of human life”* (Ondaatje 2000, 35–36).<sup>1</sup>

The novel immediately follows this passage with a different list, one whose close connection to the narrative is much more readily visible and which also extends over two pages: the record of names and dates of disappearance and places last seen of people understood to have been taken by the secret forces of one or another of the three sides in Sri Lanka’s civil war:

*Kumara Wijetunga, 17. 6th November 1989. At about 11:30 p.m. from his house.*

*Prabath Kumara, 16. 17th November 1989. At 3:20 a.m. from the home of a friend.*

[...]. (Ondaatje 2000, 37)

As the plot unfolds, the knowledge of the island’s layers of soils, vegetation, and mining sites will contribute vital evidence towards the successful completion of the novel’s forensic science plot: the search for the identity and origin of an unidentified victim of political violence. Through many small steps, a multi-disciplinary forensic examination of a skeleton reveals the victim to have been a miner who had worked in a plumbago-graphite mine (201). The human dimension is ostensibly disavowed by the scientific representations of Sri Lanka in the first passage, in spite of the manifest presence of a history of colonial extractivism in the account of the geological makeup of the island. It is made visible throughout the novel not only through the spotlights on the lives of victims but, above all, through the collaboration of an unlikely group of investigating scientists, who use their aggregate range of scientific and local expertise in order to establish the links between the earth and the inhabitants: “A good archaeologist can read a bucket of soil as if it were a complex historical

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novel,” the protagonist muses at one point, as she admires the skills of her fellow scientific investigator. “If a bone had been grazed by any kind of stone, Sarath, she knew, could follow such grains of evidence to their likely origin” (147).

Anil Tissera and Sarath Diyasena form the central duo of scientist protagonists, but they are by no means the only scientists in the novel. Their evolving partnership in the unfolding inquiry not only brings them up against the interplay of the warring factions in Sri Lanka’s civil war of the 1980s and 1990s (in which, across different regions of the country, the government is engaged with Sinhala guerrillas on the one hand and Tamil guerrillas on the other); their investigation will also involve a journey across a spectrum of additional knowledge practices, mostly made accessible through Sarath, some of which defy the received binary categories of ‘science’ on the one hand and ‘indigenous knowledge’ on the other. The novel presents to its readers a range of knowledges that makes visible the intersections and interrelations between the more conventional, ‘Western-style’ conceptions of ‘science’ and the forms of expertise and cultural practice which come with the knowledge of the places, the locales in which the practices of science take place.

What becomes visible are gradations in which science is articulated and inflected within a specifically constituted field of knowledge practices—science in a global, political, and cultural spectrum, taking a particular shape and producing particular versions of scientist subjecthood in conjunction with these specific cultural and geopolitical settings. What emerges, accruing as the novel’s plot unfolds, is a particular assemblage of knowledges representing ‘science’ in its particular cultural settings, creating an insight into the ways in which ‘science’ is specifically situated (not despite but along with its constitutive claim to universalism) and is invariably inflected by its adjacent knowledges, by its social contexts, and by the ways in which these are run through with different forms of power, different forms of violence.

In the substantial amount of criticism and scholarship dedicated to the novel since its publication more than two decades ago, the significance of science in *Anil’s Ghost* has by no means gone unrecognized, and neither has the novel’s engagement with Sri Lankan cultural traditions (cf. e.g. Marx 2012; Mackenthun 2014). Critics have identified and discussed many of the individual elements of the novel connected to ‘science’ as well as the ways in which characters are tied to particular understandings of ‘science’ (cf. Higgins and Leps 2009). They have examined Anil’s scientific outlook (cf. Barry 2015) and the development of her perspective in the course of the novel (cf. Babcock 2014; Ganguly 2014). In this context, the roles of Anil,

Sarath, and of other characters tied to forms of scientific and cultural knowledge have also been addressed with a more or less specific or selective focus (cf. Valkeakari 2013; Ganguly 2014; Shetty 2016). At the same time, the novel's representation of cultural knowledges and practices has also called forth critical attention and fuelled critical debate, which has at times been quite intense and divergent in seeking to identify the critical perspectives suggested by the novel's narrative structure, especially in relation to the representation of Buddhism and Sinhala identities (cf. e.g. Kanaganayakam 2006; Goldman 2004; Knowles 2010; Ratti 2013).

Critical attention has not yet focused on how pervasively science is present in the novel. Choosing this focus will reveal the many ways in which 'science' is tied up with the plot structure, with the spectrum of knowledges and knowledge practices, and with the concomitant spectrum of characters in which Anil and Sarath, though central, are just two particular representatives of specific cultural inflections of 'science.' Along with other postcolonial science novels published since the turn of the twenty-first century, *Anil's Ghost* can be seen as a contribution to changing the narratives that have hitherto operated on the basis of *the cultural stereotyping of science*. Ondaatje invokes one of the long-dominant received patterns of the narrative of Western science but refuses to sustain its claim, pluralizing and contesting it instead and thereby enabling the perception of a wider range of knowledge practices, of what could be called geocultural inflections of science. Rather than a comprehensive picture, the novel presents a set of spotlights. These appear exemplary in the sense that they represent positions in a spectrum, but they also foster an understanding that the spectrum of knowledge practices itself contains many other possible inflections, among which the long-received Western conception of science is only one of many. In this sense, *Anil's Ghost* could be seen as an introduction to these cultural and geopolitical inflections of 'science': an introduction to the local assemblages which make up particular instantiations of 'science' along with, rather than despite, its more prominent universalist dimensions.

## **Beyond the Cultural Stereotyping of 'Science': Science as 'Global Assemblage'**

As the introduction to this volume outlines in greater detail, the predominant view of 'science' was unquestionably Eurocentric until well into the late twentieth century. Science was understood as a specifically, and perhaps exclusively, 'Western' phenomenon; it was considered to have emerged in early modern Europe; its history and progress were understood

to be linked to the processes of modernization and secularization. These, in turn, were invoked as the basis of European claims to geopolitical dominance which lasted into the second half of the twentieth century. The modernization theory of the 1950s and the idea of a “spread” of Western science across the globe (Basalla 1967) continued to play their role in the second half of the twentieth century, when the competition for geopolitical dominance became a matter of the opposing ‘blocs’ of the ‘East’ and the ‘West.’ The idea of a transcultural and universal validity of the concepts, procedures, and results of science was thus connected to claims of cultural hegemony linked to particular geopolitical parameters.

These unilateral and Eurocentric conceptions of ‘science’ appear to have endured into the ‘science wars’ of the 1990s but have more recently been supplanted, not least through the work of scholars aligning themselves with postcolonial perspectives, both in the history of science and in science and technology studies. Rather than upholding the binaries of ‘indigenous knowledges’ vs ‘Western science,’ the focus has increasingly been on the historical co-production of scientific knowledge in colonial or transcultural encounters, the ongoing local and global entanglements in the production of scientific knowledge, and the critique of persisting disparities. As indicated in greater detail in the introduction to this volume (cf. above), recent work in science and technology studies has provided the tools that can help us move beyond the reductionism of traditional cultural stereotypes on science.

At a very general level, it appears that two major alternatives have established themselves, if not instead of then, at least, alongside the concept of ‘Western science.’ They would distance themselves from embracing an ‘anti-science attitude’ on the grounds that to decry the colonial and imperial complicities of science and to reject science in favour of the alternative of indigenous knowledges were, in fact, to reinscribe the identification of ‘science’ with ‘Western.’ Instead, what they share is the conviction not that “Science [must] fall” but that “the myth that science belongs to white people must [fall],” as one blog writer succinctly phrased it (Shortridge 2016). Firstly, in the context especially of more recent interventions in redrawing geopolitical constellations, the mounting of counterclaims has emerged as one way to contest conventional forms of the cultural stereotyping of science. To present a claim of precedence for ‘Eastern’ science, as for instance the Hindu nationalist positions analysed by Banu Subramaniam in *Holy Science* (2019) do, still maintains the continuity of the dynamics driving the quest for cultural prestige and geopolitical capital that is apparently to be derived from the idea of precedence, superiority, or exclusiveness in the practice of ‘science.’ Pursuing what may be described as a strategy of

geopolitical reversal, then, does not fundamentally alter the perception of 'science,' which still figures here as an activity and a body of knowledge with universal validity but which is, at the same time, entangled with cultural privilege. Both from a historical and a strategic perspective, however, a second and more radical alternative emerges. In this perspective, the recognition of the colonial and imperial complicities in the history of science may best be matched with the recognition of the numerous forms and instances of co-production of scientific knowledge which the cultural stereotype of 'Western science' has continued to disavow and erase, as well as with the recognition of the many forms in which past imbalances and disparities in the practice, the institutions, and the distribution of credit in science continue to be maintained and reproduced in contemporary settings, or have been supplanted by other, newer imbalances and disparities.

An effective conceptual alternative to the cultural stereotyping of science will, therefore, best be grounded in a conception of 'science' that differentiates between the 'universal' and the 'culturally inflected' in the conglomerate of concepts, practices, and institutions which are generally designated as 'science.' I have so far tended to place 'science' in quotes in order to indicate what is, of course, a well-established insight in science studies: that the term cannot just be taken for granted. 'Science' frequently serves as a shorthand for a whole set of concepts, practices, and institutional settings that make up the range of disciplines that tend to fall under the designation of 'the sciences.' Both the multiplicity and sometimes heterogeneity of practices, concepts, and settings and their shared points of reference and allegiance are best captured in the suggestion put forward by Stephen Collier and Aihwa Ong to conceptualize science as *global assemblage*, to which the editors of this volume also make reference in their introduction (cf. above). Defined as "ensembles of heterogeneous elements" (Collier and Ong 2005, 5), the concept of 'assemblage' counters and places the concept of "a universal science that floats beyond local mediations" (Ong 2016, xiii), while the term 'global assemblage' "suggests inherent tensions: global implies broadly encompassing, seamless, and mobile; assemblage implies heterogeneous, contingent, unstable, partial, and situated" (Collier and Ong 2005, 12).

In a subsequent study, Ong introduces the term "Euro-American cosmopolitan science" in order to foreground these tensions in the place of "simplistic [...] North-South contrasts" (Ong 2016, xiii), and it will be useful to adopt this phrase precisely for the tensions which it evokes between the 'cosmopolitan' and the 'Euro-American.' Following Bruno Latour, we may describe a constitutive asymmetry in scientific practice, raising the question of the location of what Latour termed the scientific 'centres of

calculation' (Latour 1987, 220). The term 'cosmopolitan' implies that these 'centres of calculation' may in principle be situated anywhere, while 'Euro-American' acknowledges that they frequently are, in fact, situated in the metropolitan settings of learning and research which are historically linked to the colonial powers. The phrase 'Euro-American cosmopolitan science' then draws attention to the ongoing specific disparities and imbalances in the distribution of institutional resources for scientific practice which go hand in hand with the existence of science as 'global assemblage,' as 'emergent,' as 'encompassing' and 'mobile,' but also 'heterogeneous,' 'contingent,' 'unstable,' 'partial,' and 'situated.' To speak of 'Euro-American cosmopolitan science' is to recognize this tension: "In order to be universalizable, cosmopolitan science depends on [a] constant effort to be particular, to remediate situated elements," "so that it can attend to an array of 'global' scientific problems" (Ong 2016, xiii).

This perspective will provide a conceptual space that accommodates also what Ong describes as the rearticulation of science in other "research milieus" (Ong 2016, xi)—the range of assemblages that exist in different places in which this "constant effort to remediate situated elements" plays out in different places, and in ways that are both similar and different. If we think of science as real assemblage in a permanently emerging, evolving state, we may also have a conceptual tool for taking into account its specific "milieus"—its particular varieties of cultural situatedness, giving rise to what I have referred to above as 'cultural inflections of science'—while avoiding the inadequate reductionism of the binaries of universality vs. cultural relativity.

## **'Euro-American Cosmopolitan Science' in Contemporary Fiction**

The internal plurality and heterogeneity, the 'emergent' quality of 'science' and even its character of assemblage—these ideas are not necessarily news among scientists, who tend to be aware of the processual character of their activities, of the complex spectrums of fields and locations in which they work, as well as of their multiple divisions into specialisms. However, this perspective has tended to be decidedly under-accentuated in widespread public usage of 'science.' Discussions and invocations of 'science' in the publicly mediated discourses have had a tendency to reinscribe clichéd images and reproduce clichéd narratives; and the reductive binaries circulated in the context of the so-called 'science wars' (cf. *Lingua Franca* 2000) have not been conducive to a better understanding. By contrast, literary

narratives since the late twentieth century have increasingly begun to produce more nuanced representations of ‘science’: differentiated, partial, situated accounts of scientific practice and scientific practitioners, often around hypothetical scenarios, but always clearly conscious of the quality for which Collier and Ong have proposed the term of ‘assemblage.’ Science novels, and specifically postcolonial science novels, have thus for a good while taken the road of representing science in these more complex and differentiated perspectives. Reading a novel such as *Anil’s Ghost* as a postcolonial science novel reveals the ways in which the specific means of literary narrative are used in order to open up perspectives, which will be helpful in discussing the complex and contradictory roles of ‘science’ in contemporary global constellations.

The term ‘science novel’ has begun to gain traction to describe a growing tendency in recent literary fiction to make ‘science’ a core concern, as well as a core component of the fabric of a novel (cf. Gaines et al. 2013; cf. also Gaines et al. 2021; Roxburgh and Clayton 2021). In distinction to the older genre term of ‘science fiction,’ ‘science novels’ give prominence to science as an element in fiction which otherwise employs the mix of realist and postmodern aesthetic and narrative devices characteristic of ‘literary fiction’ as well as the predominantly character-driven plot constructions which characterize that section of the market for fiction on which the attention of literary scholars, literary reviewers, and literary prizes tends to focus. The term ‘science novel’ has emerged along other, earlier coinages, such as ‘science-in-fiction’ (Djierassi, quoted after Gaines et al. 2013, 7) and ‘lab lit’ (Rohn 2010). It appears more suitable than these for designating fiction in which some or all structural elements—plot construction, narrative perspectives, and strategies as well as characters and character constellations—may severally or comprehensively integrate aspects, issues, practices, and concepts associated with ‘science.’

The representation of science in Euro-American science novels has tended to be quite sensitive to the character of ‘science’ as an assemblage. Rather than as a unified and monolithic site of authoritative knowledge production, the novels make visible the societal, economic, and political pressures and expectations which are brought to bear on ‘science’ as well as the struggles for funding and recognition, the power relations and power differentials within scientific institutions, and the conflicts and competition among scientists and scientific institutions.

In terms of their representation of the international dimensions of science and of their mere geographical and geopolitical scope, these novels tend to adopt and reproduce the perspectives linked to ‘Euro-American cosmopolitan science,’ even if in some cases they seem to invite a critical



reflection. The problems that science is called on to address may in many cases be global in scope and relevance, but the locations for the scientific work done to address these problems are linked to North American or European scientific institutions, and the scientist protagonists are European or North American.

Allegra Goodman's *Intuition* (2006) is one case in point. The novel is set in a cancer research lab in the US and recounts a phase in the history of this lab, including the two directors and their families as well as the lab technicians. It focuses on the professional and personal relationships among postdocs who are working in parallel, as teams built simultaneously on cooperation and competition. The team of postdocs is international in its composition. Cliff, one of the protagonists, shares a flat with Prithwish, a fellow postdoc from Sri Lanka, and shares the work on his specific project with a young scientist of Chinese origin, Feng, who turns out to be a good deal more conscientious than he. The exoticizing, orientaling angle in the media coverage of their project, focusing on Feng and his Chinese origins, is put on critical display within the novel but does not prompt the inclusion of an alternative representation. Both Prithwish and Feng remain supporting characters whose conflicts are mentioned but not focused on. The novel's core issues continue to revolve around US characters as well as the conditions of scientific practice and its societal contexts in the US (cf. also Kirchhofer and Roxburgh 2016).

A similar focus operates in Margaret Atwood's *Oryx and Crake* (2003). The novel's dystopian near-future setting is centred entirely in North America, both before the wave of human extinction which will leave only a small number of survivors fending for their existence, and after. There is mediated evidence of global exploitation, and the character of 'Oryx' provides an emblem of this. Her life story, framed within the structures of human trafficking and the exoticizing demands of the porn industry, leads her into contact with the novel's scientist protagonist, Glenn ('Crake'), as well as his literary sidekick, Jimmy ('Snowman'), through whose not-always-reliable perception the entire story is presented. Scientific practice is ethically compromised and entirely pressed into the service of unfettered capitalist exploitation by the corporations now running all social and scientific institutions. Crake has been recruited, on account of his unequalled excellence in genetic engineering, to a position of immense research freedom and means in exchange for a steady output of new and marketable scientific results. Places outside North America, within the framework of the novel, play no roles as locales of knowledge or scientific practice; though they are present through side-glances, as sites of exploitation and extraction, where people participate in or cope with or rebel against these structures.

They are included, too, in Crake's grand scheme of human extinction, conceived out of his disgust at the morally bankrupt world of near-future North America and designed to inaugurate in its stead a more just, peaceful, and sustainable posthuman future, again located in North America.

Ian McEwan's *Solar* (2010) perhaps goes furthest towards an explicit illustration of the imbalances in the geopolitical distribution of the settings for science as well as the asymmetries that govern established perspectives on science and established patterns of participation in science. The novel revolves around projects for addressing the issues of climate change, the global demand for energy, and the need for clean and renewable energy supplies, thus dealing with problems which are global in character. The scientist protagonists repeatedly discuss the societal obligation of science to 'save the planet' (cf. e.g. McEwan 2010, 25, 34). But in terms of the representation of the settings for science, the internationalism of science is limited to classically privileged settings in Europe and North America. The fictional projects and discoveries are all the work of British and American scientists; all locations are either British or American sites and research institutions. All other relevant venues mentioned are located elsewhere in Europe: the Nobel Prize Committee at Stockholm, the prestigious Solvay Conference in Belgium, or the "80 Degree North Seminar," which takes place in Norway. The problems are global in this narrative, but the key scientific players remain Anglophone, European, and American.

*Solar* displays a clear sense of this asymmetry, but it does not offer any substantially diverging perspectives in its makeup of character constellations and plotlines. The disparities inherent in the propagated image of science as an international and progress-oriented project are targeted mainly in the novel's satirical dimensions. In presenting its problematic protagonist Michael Beard, the novel not only highlights the connections of the Nobel-Prize-winning physicist to an international scientific network but also foregrounds the ways in which the version of Euro-American cosmopolitan science which he represents is riven through with "special pleading," "gossip," and "the politics of science" (McEwan 2010, 14). The protagonist is conscious, too, of "a terrifying nationalism" (14) in science, as the dominant nations in the world rival each other for global leadership in research, competing for the prestige and scrambling over the symbolic capital associated with excellence in science. One reason why Beard was awarded the Nobel Prize in the first place may have been that "it was felt to be the turn of British physics anyway" (51).

Postcolonial science novels, by contrast, tend to take on the imbalanced internationalism of science not only by putting it starkly on display but also by providing alternative perspectives that work to disengage science

from its definitional associations with Western cultural hegemony. Amitav Ghosh's *The Calcutta Chromosome* (1995) is masterful in its imaginative and subversive rewriting of one of the heroic episodes in the 'official' history of science: Ronald Ross's discovery of the modes of transmission of malaria in 1898. Instead of forming a mere backdrop for breakthrough science achieved by the British colonial scientist, the colonial India in which the novel is set comes to be revealed as the site of a cult of counter-science whose insights and goals are far in advance of those achieved by colonial medicine, and whose exponents, masking themselves as subalterns, envelop and secretly manipulate all the scientific work recorded in the 'official' history of science, including that claimed by Ross for himself. At the same time, however, the novel to some extent still parallels the confrontational constellation characteristic of the 'science wars' of the 1990s. Ghosh's slightly later novel *The Hungry Tide* (2004) moves beyond the duality of the binary opposition between Western science on the one hand and local or indigenous alternatives on the other. Instead, it juxtaposes, complements, and partly amalgamates the perspectives, goals, and procedures of institutional science (represented by the 'returned migrant scientist' heroine Piya) with the local and indigenous perspectives of the political activists and the indispensable practical knowledge of the local partner Fokir, whose share in their research on river dolphins she recognizes and commemorates rather than seeking to appropriate, reformulate, and erase it (see also Chapter 7 in this volume).

Jaspreet Singh's *Helium* (2013) revolves around a traumatized scientist protagonist and narrator, revisiting the settings where he became a helpless witness to the anti-Sikh pogroms following the assassination of Indira Gandhi, and particularly the mob torturing and killing of his academic mentor. As the narrator tries to face up to his long repressed memories and follows the trail to where the victim's widow has preserved documents which contradict the official denial of any state involvement in orchestrating the murderous mobs, the novel also provides a complex and multi-layered range of instantiations of science, e.g. by invoking the colonial dimension of scientific discovery as it represents the research history of helium, or by reading the Bhopal disaster as an effect of striking disparities in the societal relevance of science, of a striking disjuncture between science and society in India (cf. Kirchhofer 2022; Kirchhofer and Roxburgh 2016).

Manu Joseph's *Serious Men* (2010) is set in a fictitious research institute riven by conflicts between factions with diverging political affiliations, and also addresses the operation of factors such as gender and caste within the institution (see Chapter 8 in this volume). Through the satirical mode that runs through the text as much as it does through McEwan's *Solar*,

*Serious Men* is also perhaps the novel which mounts the most placative and blatant challenges to Western cultural bias in the received accounts of science, in the shape of the scientific outlook of the character of Aravind Acharya—physicist, cosmologist, and director of the Institute. But his approach represents a headlong attack on what he perceives as the cultural bias in the received theory of cosmology, and it is one of the threads that run through the novel: Acharya, we find out, was “convinced that the wide acceptance of the Big Bang theory was influenced by a Christian compulsion to believe in a beginning and an end [...] It was a Belgian Catholic priest named Georges Lemaître who in 1927 had come up with the idea that the universe began from the explosion of an atom” (Joseph 2010, 301): “The Vatican wanted a beginning and the Big Bang provided one” (41). Acharya pursues an alternative hypothesis according to which the universe is permanent, and full of life at a microbiological level. This accounts, according to his hypothesis, for the existence of ‘Junk DNA’: “Life travels through the universe as microscopic spores riding on asteroids and they fall on different worlds. Depending on the conditions in those worlds, different segments of the genome become useful. On Earth, only a fraction is needed” (220). Acharya’s theories will be sadly discredited through the machinations of his institutional rivals, though these in turn will be unmasked as falsely discrediting him as a fraudster. The fraud is exposed and he is rehabilitated, but the novel does not show him finding proof for his hypothesis. What this character does, however, is present a powerful invocation of the possibility of scientific alternatives to the assemblages of “Euro-American cosmopolitan science.”

My brief contrastive survey of British, North American, and South Asian science novels may illustrate how the project of highlighting geopolitical disparities and presenting culturally inflected perspectives on science distinguishes postcolonial science novels from many of their Euro-American counterparts. Michael Ondaatje’s *Anil’s Ghost* (2000), as I aim to demonstrate in the remainder of this contribution, not only shares this project but puts into operation a particularly wide-ranging and differentiated set of textual strategies in order to pluralize conceptions of science within a wider spectrum of related and culturally inflected knowledge practices, to challenge any claims connecting science to ideas of cultural hegemony, and ultimately to establish an alternative, culturally and geopolitically sensitive perspective on science.

## Pluralizing Science in *Anil's Ghost*

To read *Anil's Ghost* with a focus on its representations of 'science' is to bring into view a remarkable breadth and variety of engagement. Unlike many other 'science novels,' *Anil's Ghost* does not focus on any particular scientific issue, concept, or discipline: the novel unfolds a wide spectrum of practices and disciplines, of issues and angles of problematization, connected to different scientific disciplines. Forensic pathology, archaeology, and medicine figure prominently but by no means exclusively. Importantly, the spectrum also includes what we may understand as 'adjacent knowledges,' specific knowledges and cultural practices which would not conventionally range under the designation of science but which, in the novel, become recognizable as related knowledge practices and near functional equivalents. The connections between these various knowledge practices unfold gradually, through a process of detection which forms the central plotline: the goal of establishing the identity of one single victim of political violence whose skeleton was located at an archaeological site, mixed in among the human remains long buried there. At the same time, the novel also highlights and problematizes the different 'narratives' of the role and history of 'science' which are proposed for the perception and self-perception of scientists.

From the outset, the novel foregrounds the geopolitical dimensions of the scientific practices it represents, in ways that effectively resist the long dominant narratives on science in global perspective. This is illustrated emblematically in the opening sections of the novel. Readers first encounter Anil Tissera exhuming and identifying the remains of victims of political violence and civil war situations, in close exchange with the survivors and relatives of those victims. She is clearly introduced as an exponent of Euro-American cosmopolitan science. Born and raised in Sri Lanka to a wealthy family background, she spent a privileged childhood in Colombo but left after the death of her parents to do her medical training in Britain and the US (cf. Ondaatje 2000, 32). A brief marriage to a fellow Sri Lankan, quickly followed by divorce, serves to increase her distance rather than bind her to her place of origin. Having specialized in forensic pathology, Anil goes on to work under the auspices of an international "Center for Human Rights" based in Geneva (12). When we meet her first, in a kind of prologue set in Guatemala, she is engaged in the slow and patient work of justice and incomplete reparation. Her return to her native country is on a limited-term assignment, which allows her a period of seven weeks to shed light on the question of the Sri Lankan government's involvement in the ongoing political killings. By the time she returns to Sri Lanka, after 15 years of absence, she barely speaks Sinhalese any more (32), and right to

the end of her assignment, she asserts her adherence to the international humanitarian framework pitting her against the Sri Lankan government, stating: "I came here as part of a human rights group. [...] I work for an international authority. [...] We make independent reports" (271). Anil's commitment is thus to a particular facet of Euro-American cosmopolitan science, understood in the service of human rights, ethics, and truth—concepts whose implied claim to universalism is represented to be quite as much in need of a geopolitical inflection, as several readings of the novel have pointed out (cf. Ratti 2004; Derrickson 2004; Davis 2009; Babcock 2014).

In spite of this alignment, the novel emphatically does not endorse a construction of the situation as a contrast between political violence as local, and justice and science as international. Instead, it insists on the specifically international dimensions constitutive for the conflict in Sri Lanka. Sri Lanka is indeed the site of the conflict, and the people living there are sometimes agents and often victims of the conflict:

The terrorism of the separatist guerilla groups, who were fighting for a homeland in the north. The insurrection of the insurgents in the south, against the government. The counterterrorism of the special forces against both of them. The disposal of bodies by fire. The disposal of bodies in rivers or the sea. The hiding and then reburial of bodies. (Ondaatje 2000, 38–39)

At the same time, the novel is careful to caution its readers against constructing the situation in terms of a contrast between international humanitarian interest and local crime and violence. Far from being merely 'local' in character, the situation is enabled and sustained by "backers on the sidelines in safe countries"; it is "a war sponsored by gun- and drug-runners" in which "political enemies were secretly joined in financial arms deals" (Ondaatje 2000, 39). The conflicts that ravage Sri Lanka, and to which the presence of Anil and the concern of international human rights groups are a response, are thus clearly marked out as being contingent on international currents and relationships, and run through with the interests of international organized crime.

Nor does the novel allow Anil's scientific expertise to stand as evidence for a narrative of international science coming face to face with traditional indigenous knowledge. Instead, the insights which the novel offers into cultural knowledges, cultural traditions, and cultural practices in Sri Lanka are mediated via encounters with Sri Lankan scientists. Science is thus shown to be an international endeavour, a global assemblage with a spectrum of cultural inflections. While the dynamics of the investigative plot provides the bracket that connects the spectrum of positions, its effect

is to extend the concept of scientific practice beyond the Euro-American perspective adopted by Anil and to anchor it in many places in Sri Lanka, highlighting its connections both to the cultural traditions of the country as well as to its current conflicts.

What Anil encounters in Sri Lanka is different varieties of science and knowledges, crystallized in specific assemblages. It is a range of scientific expertise and of knowledge positions and traditions that Anil does not possess, but that nevertheless proves indispensable to the completion of her assignment. Along with some artisanal and religious traditions which also contribute indispensable components, she comes face to face with different varieties and instances of cosmopolitan science—different in location but by no means locally confined, they are, rather, differently positioned and differently international.

This image will emerge as a result of three interrelated textual strategies that I will seek to highlight in the remainder of this contribution.

## Science in a Spectrum of Knowledge Practices

The *first* and fundamental strategy employed in the text is the *gradual pluralization of instantiations of science and related knowledge practices*. This has the effect of unfolding a broad spectrum of aspects of science in local as well as international connections, among which the conventional received conception of Euro-American cosmopolitan science is only one.

One of the stipulations of Anil's assignment is a local partnership, and it is this which triggers a process of pluralizing instantiations of science and related knowledge practices that will gradually multiply the facets of science and related knowledge practices in Sri Lanka. The first section of the novel ("Sarath," Ondaatje 2000, 5–72) has Anil form a cautious collaboration with Sarath Diyasena, an archaeologist who was trained and works in Sri Lanka. They are given a work base on a "transformed" former "passenger liner" (14) now "berthed permanently" and used by Kynsey Road Hospital to supplement its constrained lab resources; and the detailed description, positioned early in the novel, of their allotted "storage space and work lab, claustrophobic, the odour of Lysol in the air" (15) as they move in, taking precautions against the rats that also inhabit the ship, throws into relief global disparities in funding, equipment, and working conditions for scientists. But in Kynsey Road Hospital, she also occasionally has access to a workspace that she recognizes: a place where she can "now and then [...] use better equipment" (62), a place of the kind that feels like "home" (63) to her: "God, she loved a lab" (62).

At first, the collaboration of a forensic pathologist with an archaeologist may look, as Sarath declares, like “an odd pairing, in my opinion” (13). Given their particular line of investigation, however, this soon turns out to be a very productive combination. Together, Anil and Sarath will examine human remains exhumed at ancient sacred burial sites that are now government-protected archaeological excavation areas, and they will seek to determine whether the bones found are those of ancient monks buried in a sacred site or those of victims of political murders hidden among the sacred remains. When they do find four skeletons that appear to have been recently reburied in the archaeological site, the goal becomes to find clues to their original burial sites and to establish the identity of at least one of the four victims, whom they designate as ‘Soldier,’ ‘Sailor,’ ‘Tinker,’ and ‘Tailor’. Their collaboration will make visible in superimposed layers the deep cultural history and the recent violent conflict in Sri Lanka.

The text records the initial uncertainty on Anil’s part about whether Sarath’s role is to support her investigation or to control and limit it. He, for his part, appears to be made wary, both by the implied arrogance of her perspective as an outsider and by her privileged family background and surviving relatives connected to the government. As the novel unfolds, however, the complex and growing relationship of trust between Sarath and Anil will sustain and drive the course of the narrative until just before the end of the novel.

In order to make progress in their investigation, they require additional expertise which can only be provided by other local partners in science. But they also need to be cautious about whom to trust and whom to involve in their investigation, given its possible political implications. “No one else,” says Sarath when Anil suggests the need for geological expertise. But there nevertheless unfolds a chain of connections to scientists of different disciplines where trust seems possible: entomology, geology, archaeology, anthropology, botany. Sarath resists Anil’s wish to call in a local forensic geologist in order to help identify the soils from the original burial place that may still attach to the bones (48). Anil demurs and decides instead to consult Chitra, a female scientist whose paper on “pupae” (60) has impressed her. Chitra’s analysis will indeed provide a vital clue regarding first location and original burial place of ‘Sailor’s’ body (cf. 147–48), and she also explains how “some insects are attracted to bone, not flesh. [...] So there might be pupae remains from the first location. We could reduce the site possibilities by knowing the type of insect” (69).

The following three sections of the novel—“The Grove of Ascetics” (73–109), “A Brother” (111–53), and “Ananda” (155–201)—are similarly dedicated to the gradual but consistent widening of perspectives on science



and related knowledges in a range of different directions. First Sarath takes Anil to meet Palipana, once an impressive, exacting, and highly respected epigraphist and cultural archaeologist, and also Sarath's former academic teacher and mentor. We learn that Palipana "had made his name translating Pali scripts and recording and translating the rock graffiti of Sigirya" and that he "wrote lucidly, basing his work on exhaustive research, deeply knowledgeable about the context of the ancient cultures" (75). Lately, however, Palipana has lived in reduced and retired circumstances, having become the centre of an academic scandal about infringements of scientific integrity.

Having once been Palipana's student, Sarath approaches him in order to ask for help with reconstructing and modelling one of the victim's faces, based on the shape of his skull. Instead of suggesting a scientific contact, Palipana directs them to Ananda Udugama (cf. Section 4, "Ananda," 155–201), an artisanal craftsman and artist specializing in Buddhist rituals and a former contributor to Palipana's own historical work. Ananda's skill in modelling faces will deliver another vital piece of information, helping them to reconstruct a likely appearance from the victim's skeletal remains and ultimately contributing to the victim's successful identification.

Ananda's mode of work may not be exercised and formalized within the parameters of a scientific discipline or institution, but his skill and expertise produce results of equivalent significance. On the final pages of the novel, after Anil's departure, the scientific excellence of Ananda's practice, always carried out in the face and under the conditions of deadly political violence, is reiterated and emphasized. As Ananda prepares to carry out the ceremony of painting the Buddha's eyes, the narrative reverts to the time of his connections to international archaeological research projects. Under conditions that were safe for Western scientists, Ananda would have been 'subalternized' (Mignolo)—placed "under guidance and authority of foreign specialists" (Ondaatje 2000, 297):

[...] in the end these celebrities never came. There was too much political turmoil and it was unsafe. They were finding bodies daily in the adjoining fields. Victims picked up as far as Kalutara were brought here, out of family range. Ananda [...] gave two of his team members the job of dealing with the bodies—tagging them, contacting civil rights authorities. [...] Later it came to be seen that the work done by Ananda was complex and innovative. (Ondaatje 2000, 297)

The pervasive violence does more than mark the conditions under which scientific work will still be done by those who have no free choice of places

to be. It forces a rearrangement which places Ananda in a position of responsibility, allowing him to create output which gains retrospective recognition.

By the time that the narrative takes Anil and Sarath to encounter Ananda, it has already brought them face to face with the pervasiveness of acts of political violence in a very immediate form. Much of the novel's third section, "A Brother" (111–53), presents close-up contact with the spectrum of the medical expertise and medical science plentifully required by all sides in an armed conflict that has kept producing a steady series of injured victims and injured combatants from all sides ever since the "victims of 'intentional violence' had started appearing in March 1984" (114). Returning from Palipana's refuge, and before they can move on to contact Ananda, Anil and Sarath come across Gunesena, a victim of political violence, by the side of the road. Anil provides emergency medical treatment, and Sarath calls on another trusted scientific practitioner: his brother Gamini, who is a doctor in a hospital in Colombo. Gamini has gone through long years of working in emergency units—"“Gunshot Services,’ they called it” (124). The section offers extensive detail about medical work required from the doctors who attend to the victims, detailing types of wounds and operations, hours of work, physical and mental exhaustion, or the terrible experience of triage after bomb explosions.

In the spectrum opened up by the novel, this section contributes to positioning Anil's project of identifying the remains of the victims of political violence from the recent past, between the archaeological work in which Sarath is routinely engaged (and that kind of cultural archaeology practised by Palipana) on the one hand, and the present reality of political violence on the other. The sequence of close encounters with the range of scientific expertise present in Sri Lanka, which takes up a good two thirds of the novel, is therefore far from episodic. Instead, the various situations are connected not merely through the fact that Anil and Sarath encounter them as partners in the progress of their investigation; these successive encounters also serve to unfold both characters and, moreover, they gradually shift the novel's attention from Anil's web of human connections to Sarath's. The novel will not pit the two characters in opposition to each other. On the contrary, after a brief early phase of caution and mutual suspiciousness, their mutual loyalty takes root and grows, to the degree that they place the success of their investigation above the protection of their own safety and wellbeing. Sarath eventually sacrifices his life for the success of the investigation when he helps Anil rescue the evidence they have found from being destroyed by the government which has employed him. Yet he emerges not as the loyal indigenous side-kick who has aided

the Western scientist with his local knowledge but as a scientist who puts his scientific credo above considerations of political opportuneness and personal safety.

All the facets explored in the novel, diverse as they are, form part of the assemblage of science, and all are clearly shown to be socioculturally embedded. Emphatically, this does not imply that they are subalternized or indigenized in the narrative. In fact, in its representation of science, the novel not only carefully avoids but appears rather to distance itself from any categorizations that would classify knowledge practices by opposing the scientific as international, universal, and global against the indigenous, culturally embedded, and local. *Anil's Ghost* rather appears to insist that any manifestations of science and related knowledge practices will be culturally embedded or at least culturally inflected, and takes pains to invite its readers to recognize this.

## Delinking Science and Cultural Hegemony

The pluralization of instantiations of science and related knowledge practices, which the previous section has retraced, is complemented by the text's *second* strategy, the *critical distancing against any bids to promote a cultural stereotyping of science*. This is brought to bear most prominently on the perspectives represented and adopted by Anil (and the problematization and revision of these perspectives may, by implication, perhaps also entail a problematization and revision of the perspectives familiar to an international, progressive, and educated Euro-American audience, at which the novel's publication by prestigious British and American publishing venues clearly is aimed). But this strategy of critical distancing equally operates against nationalist constructions of science propounded as foundations of alternative cultural monopolies. The pluralization of instantiations of science and related knowledge practices in the novel goes together with the discrediting of any claims to correlate science with bids for cultural hegemony.

In the situations and reflections in which we encounter her in the novel, Anil herself does not actively propagate an opposition between Western science and local or indigenous knowledges. Her articulation of a sweeping contrast between Western humanitarianism vs local conflict and violence remains situationally conditioned. But her position in a geopolitical grid of scientific practice and humanitarian discourse, as indicated at the beginning of the previous section, might be considered as sufficient

grounds for an initial anticipation that these oppositions will frame the plot that is going to unfold.

It might, in fact, appear at the outset as though the novel is setting up a 'returned migrant' narrative with a scientist protagonist. This trope in its characteristic form is reminiscent of European Naturalism, where it tends to be employed as a means of representing the clash between a metropolitan modernity and an outdated traditionalism linked to a provincial locality. There is, in fact, a range of postcolonial science novels in which the figure of the 'returned migrant scientist' is invoked, though rarely in the 'naturalist' mode of a mutual unmasking of modernity and tradition (cf. Kirchhofer 2022, 314–15).

But while this culturally coded literary pattern is invoked, it is neither foregrounded nor validated. We do find out for instance what Anil appreciates about living in 'the West,' but this is more by way of a passing remark, and the topic is soon forgotten in a detailed discussion with the Sri Lankan entomologist helping her narrow down the possible locations of the original burial of 'Sailor.' In fact, most of Anil's 'backstory' is presented in passing, interspersed in a passage which focuses on her experiences as a science student and practitioner in various international settings. Her brief, misguided marriage with a young man from Sri Lanka during the first year of her study in Britain, which led her to seek greater distance from a social setting where she feels unappreciated; her father's medical expertise and her parents' death in a car accident; her brief interlude as a prizewinning swimmer; and, most strikingly, her purchasing her name from her brother are the main pieces of Sri Lankan backstory about her. But none of these is centrally linked to the conflicts and contradictions that currently trouble Sri Lanka, and none produces a meaningful confrontation with her past and the history of her family and connections. Instead, as the plot unfolds, we gradually find out a good deal more about other characters' family histories—Sarath's family history above all, as we (and Anil) learn the story of Sarath's failed marriage, or about Sarath's childhood relationship with his brother Gamini who has always been overlooked ("The Mouse," Ondaatje 2000, 203–27). Ananda's family relations are presented, too: his autodestructive mourning for his murdered wife, from which his artistic work is a way of saving him. These family stories, to which Anil comes in the role of witness (282), make visible the intricate links between the individual lives and the troubled state in which Sri Lanka finds itself.

The novel may open with a perspective closely aligned with Anil's, but it does not by any means maintain an exclusive alignment with her perspective. If Anil remains a central character, it is also because the sequence

of encounters occasioned by her assignment and her collaboration with Sarath provide a sequence of opportunities to call into question the exclusiveness of her perspective. This happens, as has already been outlined, in the indirect way of pluralizing instantiations of science and related knowledge practices, which resolves the cultural exclusiveness implied in the cultural stereotyping of 'science' as Western into a range of culturally inflected instantiations of science from which the Euro-American instantiations differ only in the specificity of their cultural and geopolitical positions. It also happens in a much more direct manner. Her most confidential encounters are shot through with explicit challenges to that perspective. Early on in the narrative, while they are still in the process of testing how far they can trust each other, Sarath points out to Anil the role distribution implied by the structure of her assignment. "You can't just slip in, make a discovery, and leave," Sarath tells Anil, pointing out that her position is predicated on a script with preassigned roles which reproduces a conventional media bias that fails to truly engage with the situations on which an investigation may be focused: "[Y]ou'll be like one of those journalists [...] staying at the Galle Face Hotel. That false empathy and blame" (40).

And just before the end of the novel—in fact, only once Anil has left Sri Lanka with the evidence preserved by Sarath at the cost of his life—she recalls Sarath's brother Gamini pointing out, again, the cultural imbalance in the narrative pattern that frames her presence in Sri Lanka:

'American movies, English books—remember how they all end?' [...] 'The American or the Englishman gets on a plane and leaves. That's it. The camera leaves with him. He looks out of the window at Mombasa or Vietnam or Jakarta [...] The tired hero. [...] He's going home. (Ondaatje 2000, 282–83)

Perhaps, in order to make the point harder for readers to miss, Gamini is also made to spell out the generality of this pattern: "That's enough reality for the West. It's probably the history of the last two hundred years of Western political writing. Go home. Write a book. Hit the circuit" (283).

Anil does not deviate from the role that is pre-assigned to her in the cultural script. But while she completes the plot trajectory associated with her original project, she also recalls these words, spoken in a conversation between the two brothers and her. The novel makes a considerable effort to invite readers to recognize the shortcomings and the structural imbalance on which this established conventional pattern is predicated, and to align their perspectives with the highly critical view articulated by Sarath

or Gamini. The significance which the novel attributes to these statements is not generated by detailing Anil's thoughts and reactions to it at the time; but these statements constitute the last passage which the novel devotes to Anil—a passage, moreover, which is the last that gives Anil the function of focalizer, and in which Anil “a long time later” (282) wonders about her choices and remembers those words.

But when Anil leaves, the novel itself does not follow. Instead, the perspective remains with the continuing violence in Sri Lanka, on which the outcome of the investigation has no direct bearing, and with the characters who continue their lives, and their work in science and related knowledge practices, under those conditions: Gamini and Ananda.

The encounter with Palipana is particularly relevant in this context, for several reasons. Palipana not only figures as an additional facet in the spectrum of science in Sri Lanka; he represents a programmatic counterstance to the cultural stereotyping of science associated with a European or Euro-American perspective on global science: “While the West saw Asian history as a faint horizon where Europe joined the East, Palipana saw his country in fathoms and colour, and Europe simply as a landmass on the end of the peninsula of Asia” (75). Palipana's programmatic reversal of the culturally predominant perspective in scientific outlook is paralleled at the institutional level with an early withdrawal from the Western dominated circuits of international science:

The 1970s had witnessed the beginnings of a series of international conferences. Academics flew into Delhi, Colombo or Hong Kong for six days, told their best anecdotes, took the pulse of the ex-colony, and returned to London and Boston. [...] Palipana [...] went to one such gathering, and never went to another. (Ondaatje 2000, 75)

But Palipana does more than pursue a strategy of ‘provincializing Europe’ by proposing a scientific paradigm that is no longer predicated on the supposition of Euro-American cultural hegemony. Palipana mounts a counterclaim to cultural hegemony: “The main force of a pragmatic Sinhala movement,” he “was for a number of years at the centre of a nationalistic group that eventually wrestled archaeological authority away from the Europeans” (75). But while Palipana's presence in the novel forms a counterpoint to a kind of Euro-American cosmopolitan science in which Western scientists exert discursive supremacy (with which Anil is partly aligned through her training and institutional affiliation), his own position also becomes legible as a bid to link science and cultural hegemony, with which the novel does not align itself. In spite of his reputation for rigorous

and meticulous scholarship, built up over long years of research, Palipana is discredited for his later publications, when certain stunning “discoveries” of his are revealed to be forgeries (cf. 76–78). Palipana’s historical and archaeological research, the results of which had evidently chimed well with the requirements of a cultural outlook closely linked to Sinhala nationalism (and, thus, to a highly partisan position in the conflict over the construction of the relative shares of the Buddhist/Sinhala and the Hindu/Tamil components in Sri Lanka’s history and cultural identity)<sup>2</sup> culminates in an act of forgery, which may not have appeared as a “falsehood in his own mind” but, rather, as “the last stage of a long, truthful dance” (77). But the blurring of the boundaries between scientific research and cultural politics is not endorsed by the text. Instead, the presentation of Palipana also underlines that the novel’s distancing strategy operates in relation to any form of a cultural stereotyping of science, not merely to the predominant one.

Again, it is Sarath with whose position the text seeks to align the reader. The critical account of Palipana, as well as the initial appreciative introduction to his work and position, are presented through the voice of an unindividualized external focalizer, a voice which occasionally also informs the reader about Sarath’s attitudes. Thus, we learn of Sarath’s admiration for a mentor who had “consistently challenged [him] during his academic years for crimes of laxness and inaccuracy” but equally of the sense of “betrayal” (78) that he shares with other admirers when they learn of the forgeries.

The novel’s critical distancing from a Western cultural stereotyping of science, sweeping and placative in the passages relating to Palipana and more individually tailored in the complex relationship between Anil, Sarath, and Gamini, is carefully guarded from becoming an endorsement of alternative cultural stereotypings. Instead, it will be the recognition of individual and situational inflections of scientific practice that emerges from the structural entanglements of plot and character in the novel. And the character whose practice illustrates this is Sarath—Anil’s *ghost*.

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2 For a critique of the proposals of a scientifically validated type of cultural nationalism in Sri Lanka, cf. Rambukwella (2018).

## Towards a Postcolonial Cosmopolitan Science?

The fact that the novel closes with Ananda and the Buddha ceremony has sometimes been read as an embrace of a Sinhalese cultural monopoly on the question of Sri Lanka's postcolonial national identity (on this point, cf. Goldman 2004; Kanaganayakam 2006). But even though it is Palipana who points Sarath and Anil towards Ananda, Ananda's position in relation to science and culture is vastly different from that of Palipana. In Ananda, as has already been shown, we encounter kinds of knowledge and practice that will be recognized as "complex and innovative" (Ondaatje 2000, 297), although paradoxically, as I have indicated above, it takes precisely the conditions of violence and unsafety produced by the civil war to allow Ananda's expertise to appear and be recognized, and prevent it from being delegitimized by being 'subalternized.' At the same time, Ananda's work is a far cry from Palipana's attempt to will a cultural truth into existence, which involves a version of science that seeks alignment with a claim for cultural hegemony. Ananda's goal is not "to celebrate the greatness of a faith" but to maintain his distance from the ubiquitous violence of war, from "demons, spectres of retaliation," for Ananda "knew that if he did not remain an artificer he would become a demon" (300).

Once Anil has left, the novel's focus remains on Sarath, Gamini, and Ananda, the culmination of the third textual strategy, working to *establish and profile an alternative, culturally and geopolitically sensitive perspective on science*. Gamini and Ananda continue their respective work under the conditions of ongoing violence and war. Sarath pays the price for helping Anil get away with the evidence they have found together. His dead body, bearing the marks of elaborate tortures, ends up with many others in the emergency unit where Gamini works, and is tended and mourned by Gamini in "a pietà between brothers" (285). Like Sarath and Gamini, Ananda's life and work has been spent "on this borderland of civil war among governments and terrorists and insurgents" (286). All three have "searched out and found their own dominions. Sarath in sundrenched fields looking for astrological stones, Gamini in his medieval world of Emergency Services" (286), Ananda in his work as an artificer. The significance of Sarath's death is less connected to the preservation of 'Sailor's' skeleton and the self-sacrifice that ensures the successful completion of Anil's assignment. In its closing sections, the novel loses sight of these aspects, never following its effects on their shared discovery, and focusing instead on the persistence of Sarath and his particular scientific faith in the thoughts and practices of those closely associated with him: for Gamini, there is "the beginning of a permanent conversation with Sarath" (285);



for Ananda, the knowledge that “[h]e and the woman Anil would always carry the ghost of Sarath Diyasena” (301).

Sarath’s scientific outlook is presented very clearly and extensively as Anil and Sarath’s investigation draws towards a close, in one of the comparatively rare passages infused with Sarath’s perspective:

There are images carved into or painted on rock [...] that have altered Sarath’s perceptions of his world. Years ago, he and Palipana entered unknown rock darkensses, lit a match and saw hints of colour. [...] These were discoveries made during the worst political times, alongside a thousand dirty little acts of race and politics, gang madness and financial gain. War having come this far like a poison into the bloodstream could not get out.  
[...] Half the world, it felt, was being buried, the truth hidden by fear, while the past revealed itself. (152)

As with Ananda, we encounter here the specific interweaving of the internationally fuelled destructive violence of civil war with the thrill of archaeological discovery, which provides an extreme variation on the general phenomenon of a culturally inflected universal that is the situated manifestation of the emergent global assemblage that is ‘science.’

Anil would not understand this old and accepted balance. Sarath knew that for her the journey was in getting to the truth. But what would the truth bring them into? It was a flame against a sleeping lake of petrol. Sarath had seen the truth broken into suitable pieces and used by the foreign press alongside irrelevant photographs. [...] As an archaeologist, Sarath believed in truth as a principle. That is, he would have given his life for the truth if the truth were of any use. And privately [...], he would, he knew, also give his life for the rock carving from another century. (152–53)

As we know, Sarath ends up giving his life not for a rock carving but for the truth that Anil has been seeking. But his scientific ethos is tied to an instantiation of ‘science’ that forms part of the global assemblage, just as much as any instantiations of science that emerge and are situated in other “milieus” (Ong 2016). The irresolvable tension between the universal and the situated that is constitutive of the specific existence of the global assemblage of science becomes palpable in Sarath’s scientific credo and practice, as much as in the spectrum of other instantiations of science in whose context this is placed. This account of science is validated and endorsed by the textual structures of the novel—not as the only possible one but as the one which this particular scientist embraces and which is


as valid and 'scientific' as any of the other accounts whose more or less far-reaching claims of validity we encounter in the novel.

The perspective on science and related knowledge practices emerging from *Anil's Ghost* is emphatically one in which 'science' is never independent of the cultural and geopolitical conditions under which it is practised. The novel's perspective on science does not seek to ignore or disavow the impacts of these frameworks on the conditions under which scientific practice occurs, whatever individual characters may be seen to say or think; and neither does it declare any of these frameworks to be the only valid and possible ones, claiming a monopoly on science for one of its cultural and geopolitical inflections. Instead, it embraces the work and practice of science under the conditions under which it is possible in a given historical, cultural, and geopolitical setting. The character who stands most for this perspective is not Anil but her Sri Lankan fellow scientist, who navigates her through the multiple versions and instantiations of science that they encounter together in the course of the novel. In the end, it is the local scientist Sarath, Anil's 'ghost,' who arguably emerges as the normative centre of the novel. Instead of a cultural stereotyping of science, the novel exemplifies and endorses a view of the work and practice of science which is sensitive to the conditions under which it is possible at a particular juncture, in a certain historical, cultural, and geopolitical setting.

Within the spectrum of the postcolonial science novel, *Anil's Ghost* is remarkable for the painstaking guidance of the reader towards these insights, and for the prominence and textual detail in which the three narrative strategies that I have identified are elaborated and foregrounded. The strategies themselves—the narrative resistance to the cultural stereotyping of science; the narrative's insistence that a certain cultural inflectedness is part and parcel of scientific practice as well as of other, related knowledge practices; and its focus on the representation of science and knowledge practices in settings other than the more conventional Euro-American contexts—appear to occur, with more or less emphasis, across the spectrum of the postcolonial science novel. Among the examples I have briefly invoked prior to my reading of *Anil's Ghost*, it would appear that Ghosh's novels place a greater emphasis on the co-production of scientific knowledge in the encounters and interfaces between Euro-American 'science' and knowledge practices that appeared to lie beyond it. Novels such as *Serious Men* or *Helium*, as much as they may differ from each other, place a greater focus on the specific modes and conditions of scientific practice in frameworks of a specific postcolonial society. *Anil's Ghost* stands out through the range of scientific fields and of related knowledge practices

that are integrated in the narrative trajectories of the novel. It stands out, too, through the power with which its main narrative trajectory, centred around the relationship between Anil and Sarath and amplified through the intensity of their numerous scientific and personal connections, does not merely offer a sustained critique of the conventional cultural stereotyping of science but also serves to establish and profile an alternative, culturally and geopolitically sensitive perspective on science.

#### ORCID®

Anton Kirchhofer  <https://orcid.org/0000-0003-3375-3642>

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