

Institution: Anglia Ruskin University
Unit of Assessment: UoA 29 English Language and Literature
Title of case study: Dissemination of research into the transmission and cultural significance of evolutionary theory
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>Rebecca Stott's research into evolutionary theory (2001-7) has informed public knowledge of the history and philosophy of science. Both her fiction and her creative non-fiction make comparatively unfamiliar aspects of early evolutionary theory accessible to the general reader, and have thus enhanced understanding of science as well as scientists' understanding of culture. Stott founded a tradition of exploring science-literature intersections within our department which has been carried forward by our creative writers Katy Price and Laura Dietz.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Rebecca Stott worked in the Department of English, Communication, Film and Media at Anglia Ruskin between 1993 and 2007, and became a Professor in 2002. During this period she established a track record of scholarship focused on the development, transmission and cultural significance of evolutionary history. During her time at Anglia Ruskin she produced the works which established her both as an authority on nineteenth-century literature and as a creative practitioner combining scholarly archival work with creative writing for a wider audience: <i>Theatres of Glass: The Woman Who Brought the Sea to the City</i> (2003), <i>Darwin and the Barnacle</i> (2003), <i>Oyster</i> (2004), and <i>Ghostwalk</i> (2007). There is a strong synergy between her scholarly work and her fiction, and the latter can be seen both as further evidence of research and as a vehicle for impact. The relationship between her critical and creative work is evidenced, for example, in her article 'Thomas Carlyle and the Crowd: Revolution, Geology and the Convulsive "Nature" of Time' (1999) which engaged with the same phenomenon later to be explored in her novel <i>The Coral Thief</i> (2009) - the relationship, or perceived relationship, between the discourses of science and politics.</p> <p><i>Darwin and the Barnacle</i> (2003) is an account of an eight-year period in the life of Charles Darwin in which, abandoning his major work on natural selection (eventually to become <i>The Origin of Species</i>), he obsessively struggles to solve the riddle of a single species of barnacle. It explores the way in which his reading during these years shaped his thinking. Stott's focus on the impact of literature, biography and travel writing on his scientific discoveries exemplifies her distinctive interest in the interface between science, culture and creativity. This research monograph was submitted to RAE 2008.</p> <p><i>Ghostwalk</i> (2007) was also submitted to RAE 2008. The novel explores Sir Isaac Newton's study of alchemy. Blending fiction and non-fiction, it includes seventeenth-century accounts of alchemy, optics, glass-making and the plague with twenty-first-century issues such as animal rights campaigns and quantum physics. As well as presenting findings drawn from Stott's academic research into the history and philosophy of science, <i>Ghostwalk</i>, through its innovative literary techniques, is an example of research as creative practice. It experiments with form and genre, and engages with a range of complex issues, including temporality, quantum entanglement and historiography.</p> <p>Research within the department has continued to build on Stott's example. Dietz's novel <i>In the Tenth House</i> (RAE 2008) explores the relationship between science and spiritualism at the end of the nineteenth century and Price's <i>Loving Faster Than Light</i> (2012), which was written while Price was based in our UoA, analyses the intersection of science and literature, and the social and cultural history of physics.</p>
3. References to the research (indicative maximum of six references)

Impact case study (REF3b)

Stott gained a Leverhulme Scholarship 1996-7 and a Leverhulme/British Academy Research Readership in 2004. <http://www.britac.ac.uk/funding/awards/posts/rrsrf2004.cfm> The 2004 grant was awarded to enable her to pursue her research into the relationship between literature and evolution.

Published research outputs include:

1. 'Thomas Carlyle and the Crowd: Revolution, Geology and the Convulsive "Nature" of Time', *Journal of Victorian Culture*, 4.1 (1999) DOI 10.1080/13555509909505977

This was published in a well-regarded peer reviewed journal, and was submitted to RAE 2001 in which Anglia Ruskin University (then Anglia Polytechnic University) was awarded a 5 for English.

2. *Oyster* (London: Reaktion, 2003)

This was part of a well-received series, and was submitted to RAE 2008 by the University of East Anglia. Over 91% of items submitted by this UoA scored 2* or better. It can be supplied by the HEI on request.

3. *Darwin and the Barnacle* (London: Faber and Faber, 2003)

This was published by a high profile publisher and was submitted to RAE 2008 by the University of East Anglia. Over 91% of items submitted by this UoA scored 2* or better. The item can be supplied by the HEI on request.

4. 'Through a Glass darkly: Aquarium Colonies and Nineteenth-century Narratives of Marine Monstrosity', *Gothic Studies*: 2:3 (2000), pp. 305-27

This was published in a peer-reviewed journal and was submitted to RAE 2001 in which Anglia Ruskin University (then Anglia Polytechnic University) was awarded a 5 for English. It can be supplied by the HEI on request.

5. *Theatres of Glass: The Woman who Brought the Sea to the City* (Short Books, 2003)

This item can be supplied by the HEI on request.

6. *Ghostwalk*, (London: Phoenix, 2007).

This was submitted to RAE 2008 by the University of East Anglia. Over 91% of items submitted by this UoA scored 2* or better. This item can be supplied by the HEI on request.

4. Details of the impact (indicative maximum 750 words)

Stott's novels are both instantiations of research and conduits for impact. Thus as well as enhancing the personal development of readers, through expanding and enriching their imagination, they also help develop public understanding of science. *Ghostwalk* was first published in 2007 (paperback 2008), and quickly generated impact. For example in 2008 Stott was interviewed for Radio Wisconsin about the use of physics in the novel, and it was shortlisted for Cambridgeshire's Book of the Decade competition in 2010. It has sold over 24,000 copies, and was reviewed positively in the *Guardian*, *The Times*, *Daily Telegraph* and *Independent*, as well as in many other newspapers, magazines and internet sites. It has been translated into 12 different languages and was shortlisted for the Jelf First Novel prize. It attracted over 100 reviews on Amazon.com. With its detailed representation of seventeenth-century and contemporary scientific cultures, it has brought the history and philosophy of science to new audiences.

The Coral Thief, like *Ghostwalk*, is an example of research as creative practice. It is also a vector through which the earlier research Stott undertook at Anglia Ruskin continues to have impact. As with *Ghostwalk*, this impact manifests itself as the cultural and intellectual enrichment of those who

have read or listened to the novel, or to Stott's discussion of the research and thought which informed its composition. *Ghostwalk* is set in the Cambridge of Sir Isaac Newton while *The Coral Thief* is set in post-revolutionary France and links the political and religious upheavals of that era to the scientific discoveries of Cuvier and Lamarck. Thus, while introducing readers to landmarks in pre-Darwinian scientific thought, the novels encourage both those with a scientific background and general readers to explore the wider implications of scientific research in order to better understand the complex connections between the discursive practices of science, politics and religion. This both contributes to public understanding of a significant issue facing society and creates cultural capital which improves the quality of people's lives. These distinctive qualities of Stott's research reflect our UoA's wider engagement with scientific debates, as instanced in the creative practice of Dietz, the research and creative practice of Price, and in many colleagues' expertise in science fiction, the subject of another case study.

Stott was interviewed about *The Coral Thief* on *Woman's Hour* by Jane Garvey on 24 December 2009. In that year *Woman's Hour* attracted record numbers of listeners, reaching an audience of 3 million for the first time in its history. Subsequently *The Coral Thief* was read by Jane Allard on Radio 4's Book at Bedtime (11-22 January 2010). Book at Bedtime typically attracts 600,000 listeners per night, or 1.5 million over the course of a week. *Ghostwalk* and *The Coral Thief* were both released as audiobooks, in 2007 and 2009 respectively. In addition, nearly 5,000 copies of the novel have been sold.

The Coral Thief was first published in hardback and subsequently reissued in paperback (2010). It has had a worldwide market, and was reviewed in the *Guardian*, *The Times*, *Daily Telegraph* and *Independent*, in addition to numerous other papers, magazines and internet sites including: *London Metro*, *Sugar*, *Big Issue in the North*, *Sunday Business Post*, *Publishers' Weekly*, *Booklist*, *Kirkus Reviews*, *Portsmouth Herald*, *Washington Post*, *The Bookseller UK*, *The Scotsman*, *Choice Magazine*, *Daily Mail*, *Financial Times*, *Waterstone's Books Quarterly*, *Woman Magazine*, *New Scientist*, *Times Literary Supplement*, *Dallas Morning News*, and *Science magazine*.

Stott's books have also been reviewed worldwide in scientific journals such as *Chemical Heritage* and *New Scientist* as well as in mainstream and literary publications. This range suggests the impact she has had on both popular and academic awareness of the relationship between literature and science, contributing to scientists' appreciation of the public and historical understanding of their fields. Her works have contributed significantly to contemporary debates about the place of science in society. Stott's novels conform most clearly to the second example given in the indicative range of impact categories offered in the Panel Criteria and Working Methods. As well received and widely reviewed examples of innovative literary fiction they have created cultural capital, and they also function as interpretations of cultural capital, communicating, and inviting reflection on, research into the history and philosophy of science.

5. Sources to corroborate the impact (indicative maximum of 10 references)

1. Link confirming the broadcast of *The Coral Thief* on Book at Bedtime (2010).
<http://www.bbc.co.uk/programmes/b00pqfb3>
2. Link to *Woman's Hour* Interview in 2009
http://www.bbc.co.uk/radio4/womanshour/02/2009_51_thu.shtml
3. Link to an interview with Rebecca Stott to mark Cambridge's A Book a Day in May event in 2008
http://www.bbc.co.uk/cambridgeshire/content/articles/2008/04/30/book_day_may_book_list_feature.shtml
4. Notification that *Ghostwalk* was on the shortlist for Cambridge's Book of the Decade award.

https://www.facebook.com/permalink.php?story_fbid=180321125311854&id=106156113195

5. Link to Anna Mundow's review of *The Coral Thief* in the *Washington Post* (23/9/2009)

<http://www.washingtonpost.com/wp-dyn/content/article/2009/09/22/AR2009092203648.html>

6. Link to Peter Forbes's review of *The Coral Thief* in the *Independent* (8/1/2010)

<http://www.independent.co.uk/arts-entertainment/books/reviews/the-coral-thief-by-rebecca-stott-1860895.html>

7. Link to Clare Clark's review of *The Coral Thief* in the *Guardian* (6/2/2010)

<http://www.theguardian.com/books/2010/feb/06/coral-thief-rebecca-stott>

8. Link to Andrew Robinson's review of *The Coral Thief* in *New Scientist* (25/1/2010)

<http://www.newscientist.com/blogs/culturelab/2010/01/rival-theories-transmuted-into-a-parisian-intrigue.html>