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'THAT'S A SCIENTIFIC FACT': CHRISTINE BROOKE-ROSE'S EXPERIMENTAL TURN

For Christine Brooke-Rose's obituarists, her signature as a novelist was clear: she was a writer of 'defiant experimentalism', 'one of [Britain's] most radical exponents of experimental fiction', an 'English experimental writer known for wielding words with the ardor of a philologist, the fingers of a prestidigitator and the appetite of a lexivore, resulting in novels that exhilarated many critics and enervated others'.[1] Such surveys of Brooke-Rose's career were equally consistent in their descriptions of the origin of the writer's experimentalism. As the first obituary quoted here indicates, Brooke-Rose 'began her career as an author conventionally enough in the 1950s by writing four accomplished but orthodox novels'—namely, *The Languages of Love* (1957), *The Sycamore Tree* (1958), *The Dear Deceit* (1960), and *The Middlemen* (1961)—but 'in 1964, following a serious illness, she published *Out*, an experimental novel of the sort unlikely to feature in any WH Smith summer promotion'.[2]

Often called to give an account of this experimental turn, Brooke-Rose downplayed its apparent suddenness, stating that with the reversed chronology of *The Dear Deceit*, she was 'already beginning to "experiment" with reader's expectations'.[3] *Out*, therefore, represented not so much her 'trying to do anything different', but rather the coincidental combination of a general 'dissatisfaction' with her earlier style and the effects of her illness: 'I started writing a sentence and fell back on the pillow exhausted. I didn't really know where I was going, and it took me a long time to write it. I was groping. So I don't think it was a conscious decision.'[4] Nevertheless, *Out* was still the work in which, as Brooke-Rose put it, she 'started experimenting'—a tendency that was never reneged upon in a novelistic career that lasted until her final work of fiction, *Life, End of* (2006).[5] Brooke-Rose's critical reception has borne out the impact of this experimental turn, treating the novels preceding *Out* as peripheral to the œuvre as a whole.

[1] 'Christine Brooke-Rose', *Daily Telegraph*, 25 April 2012 <http://www.telegraph.co.uk/news/obituaries/culture-obituaries/books-obituaries/9227040/Christine-Brooke-Rose.html>; Stuart Jeffries, 'Christine Brooke-Rose Obituary', *Guardian*, 23 March 2012 <http://www.theguardian.com/books/2012/mar/23/christine-brooke-rose1>; Margalit Fox, 'Christine Brooke-Rose, Inventive Writer, Dies at 89', *New York Times*, 10 April 2012 <http://www.nytimes.com/2012/04/10/books/christine-brooke-rose-experimental-writer-dies-at-89.html> [all accessed 29 October 2015].

[2] 'Christine Brooke-Rose', *Daily Telegraph*, 25 April 2012.

[3] Christine Brooke-Rose, 'Christine Brooke-Rose Interviewed by David Seed', *Textual Practice*, 7 (1993), 247–57 (p. 250).

[4] Ellen J. Friedman and Miriam Fuchs, 'A Conversation with Christine Brooke-Rose', in *Utterly Other Discourse: The Texts of Christine Brooke-Rose*, ed. by Ellen J. Friedman and Richard Martin (Normal, IL: Dalkey Archive Press, 1995), pp. 29–37 (pp. 30–31).

[5] Brooke-Rose, *Invisible Author: Last Essays* (Columbus: Ohio State University Press, 2002), p. 54.

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However, a further shift in Brooke-Rose's output is afforded secondary prominence in accounts of the development of her writing. In 1968 she moved to Paris—at the invitation of Hélène Cixous—to take up a post in the English Faculty at the newly formed experimental university in Vincennes. Previously, she had been active in London's literary scene, producing work in a variety of forms: alongside the novels mentioned above, she also regularly reviewed books for the *Times Literary Supplement* and *Observer*, as well as publishing poetry (*Gold* (1954)), academic work (*A Grammar of Metaphor* (1958)), and translations, both literary and non-literary (Juan Goytisolo's *Children of Chaos* (1958) and Alain Robbe-Grillet's *In the Labyrinth* (1967); Alfred Sauvy's *Fertility and Survival* (1961)). Following her move to Paris, however, Brooke-Rose's non-fiction output was mostly focused upon academic writing, as represented in the collections *A Rhetoric of the Unreal: Studies in Narrative and Structure, Especially of the Fantastic* (1981) and *Stories, Theories and Things* (1991). Her fiction also began to reflect this shift. Brooke-Rose's academic context fundamentally informed the novels she wrote after 1968—from *Thru* (1975), which Brooke-Rose called 'a novel about the theory of the novel', 'written almost tongue-in-cheek for a few narratologist friends', and drawing deeply on French structuralism and poststructuralism, to the allegorical academic conference at the heart of *Textermination* (1991), where literary characters from a range of cultures and works pray for existence to an 'Implied Reader', through to an extended disquisition on narratology in *Life, End of*.[6]

However, despite the gap of four years—and two novels (*Out*, and *Such* (1966))—between Brooke-Rose's experimental turn and her academic turn, critics have often subsumed the former into the latter. Sarah Birch, for example, considers that all of Brooke-Rose's experimental novels 'question the systematicity of theoretical discursive constructs', and so force them 'to interact in such a way as to undermine their claims to convey absolute truths'.[7] Similarly, albeit more specifically, Michela Canepari-Labib portrays Brooke-Rose's experimental works as fulfilling the Barthesian designations for a 'scriptible' (writerly) text, since they 'overtly posit themselves as a construct of words' and 'continually resist naturalisation'.[8] Both of these appreciations bear the hallmarks of a certain tradition of poststructuralist literary criticism, wherein a given text is shown to uncover the aporetic nature of discourses that pertain to some kind of transcendent orientation in 'truth' or 'nature'. In her final critical work, *Invisible Author* (2002), even Brooke-Rose herself seeks *ex*

[6] Friedman and Fuchs, 'A Conversation with Christine Brooke-Rose', p. 36.

[7] Sarah Birch, *Christine Brooke-Rose and Contemporary Fiction* (Oxford: Clarendon Press, 1994), p. 4.

[8] Michela Canepari-Labib, *Word-Worlds: Language, Identity and Reality in the Works of Christine Brooke-Rose* (Oxford: Peter Lang, 2002), p. 145.

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post facto to locate her later interests in poststructuralism in her earlier novels, stating that, subsequent to her first readings of Jacques Derrida and Julia Kristeva, '[i]t was extraordinarily comforting in the early seventies to read as theory all that I already had been groping for in *Out*'.[9] Brooke-Rose casts equally her 1968 novel, *Between*, as unintentionally echoing Derrida, with its ordering constraint of a narrative written without the verb 'to be' rendering a central character who 'cannot really *be*; she is a construct, as identity is a construct, or, in Derridean terms, she is "always already" there, and always deferred'.[10]

This article seeks to provide a counter to such revisionism regarding Brooke-Rose's experimental turn, however critically productive and heuristically useful poststructuralist approaches have been for readers of her challenging texts. Underlying this article, therefore, is a mildly polemical impulse to decouple Brooke-Rose's earlier experimental work from poststructuralism. By paying closer attention to Brooke-Rose's writing from the time of her experimental turn, I aim to show the particular intellectual contexts that provided the conditions for this fundamental shift in her fictional output. In particular, Brooke-Rose's interests in Heisenberg's quantum physics and contemporary French fiction—as well as her attempts to draw links between the two—suggest a significant transformation in her thought around the time of her first experimental fictions. The details of this transformation recast Brooke-Rose's experimental turn as deriving from more than a merely stylistic decision, so lessening the critical demand that it be retroactively described according to the later trajectory of its author's career.

'That is how it all began': Brooke-Rose's Early Narrative Experiments

Style, nevertheless, is the primary exhibitor of the shift that has taken place in Brooke-Rose's first experimental novel. In synopsis, *Out* reads like dystopian science fiction, portraying a radically altered future to reflect upon contemporary anxieties about the military–industrial complex and the persistence of racial prejudice and segregation in spite of the perceivable end of empire. Set in a subtropical location after some kind of environmentally and politically transformative event, *Out* takes place in a future society with an inverted colour bar, and charts the progress of an old, 'colourless' protagonist as he moves from his shack, to the Labour Exchange, to Mrs Mgulu in the Big House, all the while falling victim to his own sickness, and the inequalities inherent in the social and bureaucratic structures that surround him.[11]

From the start of the novel, however, Brooke-Rose's experiment with nar-

[9] *Invisible Author*, p. 58.
[10] Ibid.
[11] Brooke-Rose, *Out* (London: Joseph, 1964). All subsequent quotations from *Out* will come

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rative is foregrounded. *Out* opens with an image of two flies on the knee of the protagonist, apparently copulating. This image quickly starts to unpick itself, as first its temporal particularity is posited in the fact that '[s]ooner or later, the knee will have to make a move', and then its very capacity for observation is undermined:

> A microscope might perhaps reveal animal ecstasy in its innumerable eyes, but only to the human mind behind the microscope, and besides, the fetching and rigging up of the microscope, if one were available, would interrupt the flies. (p. 11)

Such a narratorial tic is frequently reverted to throughout *Out*, generating a proliferation of different recording instruments, often in short succession, and so demonstrating the novel's dominant rhythm—what David Hayman and Keith Cohen have called Brooke-Rose's preference for a 'sort of multiple-choice structure':[12]

> The white veins in the pink marble tremble and nod, they sway and stretch out to catch the excited atoms. An oscillograph might perhaps reveal whether the hammering which now drives its high-pitched ring of metal on metal into the neural cells also drives into the memory of the conversation, memory being a function not a place. An electroencelograph might perhaps separate the components of the conversation into the elements of silence, reality and unreality. A recording engineer might then dub the unreality with the hammering, if of course the hammering is not already part of the mixture. (p. 102)

For Karen R. Lawrence too, this technique is part of *Out*'s preference for an 'almost compulsive enumeration of possibilities' in a constant process of being 'entertained and discarded'.[13] Lawrence sees such recording instruments representing 'possible modern technologies for returning the narrative to old certainties', but trapped in a situation where these technologies only ever remain possible, and are never committed to being used.[14]

By the end of the novel, Brooke-Rose is more explicit in her attempts to draw attention to the fact that her experimental turn is enacted on the plane of narrative, and achieved in part by openly questioning the very descriptive possibility of any narrative technique. Instead of speaking of endings, the final pages of the novel suggest that such concerns are premature, as the issue of beginnings has yet to be settled. Amid a hazily narrated scene of the novel's

from the most readily available edition of the novel in *The Christine Brooke-Rose Omnibus. Four Novels: Out, Such, Between, Thru* (Manchester: Carcanet, 1986), pp. 7–198, with page numbers given parenthetically.

[12] David Hayman, Keith Cohen, and Christine Brooke-Rose, 'An Interview with Christine Brooke-Rose', *Contemporary Literature*, 17 (1976), 1–23 (p. 2).

[13] Karen R. Lawrence, *Techniques for Living: Fiction and Theory in the Work of Christine Brooke-Rose* (Columbus: Ohio State University Press, 2010), p. 29.

[14] Ibid., p. 30.

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protagonist at work in a garden, two isolated paragraphs see the novel arrive, finally, at beginnings:

> It is impossible ever to see the beginning of anything because at the beginning the thing is not recognisable as anything distinct and by the time it has become something distinct the beginning is lost. (p. 196)

> That is how it all began. There is a secret but it is not a story. It is not possible to witness the beginning, the first ticking of the metronome, because all you are entitled to assume is that it would have been as now described if it had been seen by minds with the kind of perception man evolved only quite recently. Those that cannot grow with it must die. (p. 198)

Bringing to a close a novel littered with recording instruments, Brooke-Rose posits in conclusion a final example—that of narrative discourse itself. Here, though the cadence remains of the examples given above—as does the general rhythm of descriptions caught in circuits of their own impossibility—in offering up squarely narrative terms, Brooke-Rose suggests that narrative discourse might encompass all of her other recording instruments.

Here, the radical break in Brooke-Rose's approach is revealed not simply as the enunciation of a range of frustrated possibilities for representation—microscopes and oscillographs and so on—but as a fundamental inscription of doubt as to prose fiction's capacity for representation. Such a revelation certainly lends itself to a post-Saussurian reading, where language's referentiality is brought into question, and the persistent fiction of this referentiality is open to charges of ideological double-dealing. Michela Canepari-Labib, for example, sees Brooke-Rose as aiming to prove history, and the modes of representation it relies on, as merely 'another fiction [. . .], a further relative concept which depends on the means of observation available'.[15] However, another fiction Brooke-Rose wrote at the time of her experimental turn further nuances the particular literary and epistemological concerns involved in the shift in her approach to narrative.

Written contemporaneously with *Out*, Brooke-Rose's short story 'The Foot' is narrated by the phantom limb of a woman—now an amputee—recovering after a car crash.[16] The story's most striking feature is to have its phantom limb speak, and speak as narrator:

> She thinks about me, thus creating my shape, together with its pain, thus giving me existence as a foot, the prettiest foot I have ever been and perhaps was before the leg was lacerated wrenched and crushed in all that twisted car metal because it's hard to tell whether I once was her real foot or not, so completely do I now achieve identification

[15] Canepari-Labib, p. 180.

[16] For a discussion of the composition of 'The Foot' see Lawrence, p. 199. The story was first published in *The Unlikely Ghosts*, ed. by James Turner (London: Cassell, 1967), pp. 91–106, and reprinted in Brooke-Rose's *Go When You See the Green Man Walking* (London: Joseph, 1970), pp. 43–64, from which all subsequent references will come.

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as her phantom foot slim long and gracefully arched and well sprung above a most shapely big toe. That's where I manage to hurt most.[17]

By having the foot speculate on its own status as something that stands uneasily at the boundary of the subjective and the objective—something subjunctive, both there and not there—'The Foot' offers a solution to the problems encountered in *Out*. In *Out*, Brooke-Rose stages a narrative with a proclivity towards multiplicity and alternative description as a means of displaying its own ultimate horizon in a written discourse that must necessarily fail in what it seeks to describe. The wager of 'The Foot', however, is that by having its first-person narrative spoken by a figure whose very ontological status lies in the realm of a paradoxical unfixedness, *Out*'s narrative problems are partially circumvented: 'The Foot' speaks directly from a situation that *Out* can only demonstrate in the unfolding of a complex third-person technique. As a cipher for the kind of infinite possibility and pure potentiality expressed at length and with great strain in *Out*, Brooke-Rose finds in the phantom foot a way for such an abstract state to speak itself.

Thus, between *Out* and 'The Foot', the central element of Brooke-Rose's experimental turn is addressed in different ways. However, as *Out*'s method is achieved at much greater length, the novel is able—in a manner foreclosed in 'The Foot'—to speculate on its achievements metadiscursively. As in the examples shown above, the novel develops a particular texture, characterized by the development of terms on which its own processes might be described. Here, the use of a *mise en abyme* technique (that is, a literary recursion—an instance of a literary work presenting an image of itself within its own bounds) becomes a central aspect of Brooke-Rose's narrative. *Out*'s central *mise en abyme* is introduced towards the end of the second section of the novel when the protagonist has to undergo the process of 'psychoscopy'—Brooke-Rose's imagined, scientized, and technologized version of psychiatric therapies. During the protagonist's first session, his doctor narrates the experience to him:

> Your profile is coming up very clearly indeed on the oscillograph, and the profile provokes its own continuation, did you know that, the profile moulds you as it oscillates? Diagnosis provokes its own cause did you know that? To put it more succinctly, diagnosis prognosticates aetiology. (pp. 138–39)

As the protagonist looks up to see what the doctor is talking about he is reprimanded, in the process demonstrating precisely how diagnosis might prognosticate its own aetiology: 'no, don't look up at the monitor, you see, it only makes the eyes of the jellyfish look heavenwards, but we know that jellyfish is only looking at itself, don't we? And the jellyfish cannot meet its own eyes' (p. 139). In one respect, here, Brooke-Rose creates another figure to

[17] Brooke-Rose, 'The Foot', p. 47.

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accompany the flies from the novel's opening, reflecting the circuits of referential impossibility into which she inserts her narrative discourse. But in its greater simplicity, the process of 'psychoscopy' more fully encompasses *Out*, becoming the novel's principal *mise en abyme* by staging in the experience of its protagonist the paradox of a narrative so preoccupied with seeing—and its failure to do so—that it constantly strains, failingly, to see itself seeing.

The phrase 'diagnosis prognosticates aetiology' subsequently becomes a refrain in *Out*, appearing, for example, in the novel's final scene (considered above), as the protagonist discusses the question of beginnings with his manager, Mr Swaminathan:

> Imagination is a function, not an organ, it is an energy but can get sick and cold and radiate no warmth to stronger bodies. Mr. Swaminathan, you don't have to explain. Sometimes it is kinder to explain at the beginning. But when and how did it begin, your nod just now meant nothing. That's a very good question. Diagnosis always prognosticates aetiology, as you well know. (p. 197)

If, in this refrain, Brooke-Rose develops a central set of terms on which to understand her transformative experiments with narrative, then Sarah Birch provides a vital qualification. Birch sees the phrase 'diagnosis prognosticates aetiology' as 'a rephrasing' of a key element of quantum physics—Werner Heisenberg's Uncertainty Principle—in 'scientific jargon'.[18] As such, the Uncertainty Principle provides in many respects a conceptual ground for Brooke-Rose's experimental turn.

The Uncertainty Principle

Heisenberg's Uncertainty Principle forms a major part of what is often called the 'Copenhagen Interpretation' of quantum mechanics. In one of Heisenberg's early formulations, the Uncertainty Principle summarizes a relation of indeterminateness that necessarily underscores quantum theory:

> The uncertainty principle refers to the degree of indeterminateness in the possible present knowledge of the simultaneous values of various quantities with which the quantum theory deals; it does not restrict, for example, the exactness of a position measurement alone or a velocity measurement alone. Thus suppose that the velocity of a free electron is precisely known, while the position is completely unknown. Then the principle states that every subsequent observation of the position will alter the momentum by an unknown and undeterminable amount such that after carrying out the experiment our knowledge of the electronic motion is restricted by the uncertainty relation. This may be expressed in concise and general terms by saying that every experiment destroys some of the knowledge of the system which was obtained by previous experiments.[19]

[18] Birch, p. 56.

[19] Werner Heisenberg, *The Physical Principles of the Quantum Theory*, trans. by Carl Eckart and F. C. Hoyt (Chicago: University of Chicago Press, 1930), p. 20.

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This extract from Heisenberg's 1930 work *Die physikalischen Prinzipien der Quantentheorie* (*The Physical Principles of the Quantum Theory*) introduces two particular elements of the Uncertainty Principle that came to stand for the concept as a whole: first, the incompatibility of an electron's speed and its position (to measure one is to give up the capacity to measure the other), and second, the scene of such incompatibility—an experiment where an act of measurement takes place. Indeed, often in Heisenberg's work these two elements are explained with the example of a microscope, as in his 1958 work *Physics and Philosophy*, which gives perhaps the most famous account of the Uncertainty Principle:

> The position of the electron will be known with an accuracy given by the wave length of the γ-ray. The electron may have been practically at rest before the observation. But in the act of observation at least one light quantum of the γ-ray must have passed the microscope and must first have been deflected by the electron. Therefore, the electron has been pushed by the light quantum, it has changed its momentum and its velocity, and one can show that the uncertainty of this change is just big enough to guarantee the validity of the uncertainty relations.[20]

Such examples do not encompass the full range of insights and emphases incorporated into the Copenhagen Interpretation. In *Physics and Philosophy* Heisenberg gives due space to the importance of a notion of 'complementarity' in his narration of the development of the Copenhagen Interpretation:

> [Erwin] Schrödinger had described the atom as a system not of a nucleus and electrons but of a nucleus and matter waves. This picture of the matter waves certainly also contained an element of truth. [Niels] Bohr considered the two pictures—particle picture and wave picture—as two complementary descriptions of the same reality.[21]

Bohr was particularly important in the development of the Copenhagen Interpretation, and its shifts in emphasis over time. For N. Katherine Hayles, for example, we can detect Bohr's influence in Heisenberg's turn (in *Physics and Philosophy*) towards the philosophical tradition as a frame of reference (especially with regard to the Aristotelian notion of *potentia*), as well as in Heisenberg's consideration of language as a necessary horizon for the indeterminateness of quantum mechanics.[22] Overall, however, the element of the Copenhagen Interpretation that registers most pervasively in Brooke-Rose's work is the idea of unavoidable distortion necessitated by acts of observation, along with the profound epistemological implications that ensue.

The Uncertainty Principle enters Brooke-Rose's writing in 1957. As a regular writer for the *Times Literary Supplement*, Brooke-Rose reviewed Owen

[20] Werner Heisenberg, *Physics and Philosophy: The Revolution in Modern Science* (New York: Harper, 1958; repr. London: Allen & Unwin, 1959), pp. 48–49.

[21] Heisenberg, *Physics and Philosophy*, p. 44.

[22] See N. Katherine Hayles, *The Cosmic Web: Scientific Field Models and Literary Strategies in the Twentieth Century* (Ithaca, NY: Cornell University Press, 1984), pp. 51–52.

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Barfield's quasi-philosophical *Saving the Appearances*, seeming largely sympathetic to Barfield's work. Particularly attentive to Barfield's insights on representation, in the middle of the review, Brooke-Rose twice evokes the Uncertainty Principle:

> The development of phenomena, modern physics shows, is correlative to the development of consciousness, yet in spite of this the behaviour of the 'unrepresented' is invariably assumed (*e.g.* in calculations of the age of the earth based on radio-activity) to have remained unchanged. All we are entitled to assume is that phenomena would have been as now described if they had been seen by people with the same kind of perception as Western man has developed in the past few centuries.
> [. . .]
> The 'unrepresented,' like the 'potential' phenomena which would have occurred if present-day percipients had been there to see them, are in a sense our collective unconscious, which must become conscious before we can 'save the appearances.'[23]

It is only towards the end of *Saving the Appearances* that Barfield considers explicitly the Copenhagen Interpretation. Barfield does so by quoting from a broadcast by Bertrand Russell given on the occasion of Albert Einstein's death in 1955:

> The more accurately you determine the place of a particle, the less accurate will be its velocity; and the more accurately you determine the velocity, the less accurate will be its position. And the particle itself has become something quite vague, not a nice little billiard ball as it used to be. When you think you have caught it, it produces a convincing alibi as a wave and not a particle. In fact, you know only certain equations of which the interpretation is obscure.[24]

In many ways, an earlier comment from *Saving the Appearances* about 'the recent tendency of physics to implicate the observer again in the phenomena' seems to have resonated more with Brooke-Rose—as shown by the paraphrases in her review.[25] However, the quotation from Russell is more generally emblematic of the status of the Uncertainty Principle by the late 1950s, and of the extent and manner of its circulation. Crucially, Brooke-Rose's review suggests that she encountered the Uncertainty Principle, at least initially, at a remove from its source: Heisenberg's core ideas come not directly to Brooke-Rose but third-hand, with a quotation from one philosopher (Russell) used in the book of another (Barfield), and with a quotation that speaks of the Uncertainty Principle in relation to a physicist (Einstein) who might not be the first, second, or third name associated with the concept.

Such a situation is not unique to Brooke-Rose. In her biography of Heisenberg, Cathryn Carson shows how, even by the 1930s, Heisenberg 'hardly ever

[23] Brooke-Rose, 'Mental Participation', *Times Literary Supplement*, 6 September 1957, p. 537.
[24] Quoted in Owen Barfield, *Saving the Appearances: A Study in Idolatry* (London: Faber, 1957), pp. 152–53.
[25] Ibid., p. 43.

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made' the Uncertainty Principle the 'center of his public address, scarcely displaying the equation in a single popular lecture'.[26] For Carson, the continued prominence of the ideas emanating from the Uncertainty Principle relates to the fact that these ideas 'circulated far and wide' and beyond Heisenberg's control, more specifically within a Habermasian public sphere with a 'dynamic of its own'.[27] Elsewhere, Carson attributes Heisenberg's 'remarkable success with post-1960s audiences' as in part deriving from the fortuitous circumstances of his translation into English. Heisenberg, Carson shows, 'assigned the English editions of three of his works' to

> a publishing series called *World Perspectives*, whose manifesto (published in each of his books) reads like the counterculture *avant la lettre*. The intended audience of this series, which offered large, low-priced editions for student sales, no doubt valued his subtle intimations of a revolution in thought already in progress.[28]

By documenting the circulation of Heisenberg's ideas not only beyond his own work, but also beyond a specialist scientific domain, Carson highlights an important context for the adoption of such ideas by non-specialists. In the historical moment considered in this article, more specifically, the dissemination of *Physics and Philosophy* in a widely available, affordable edition is demonstrative of the status in the late 1950s of Heisenberg and his ideas. The entry of Heisenberg's ideas into a broader public sphere of the sort that Carson portrays also provides the background to Brooke-Rose's particular adoption of these ideas.

The 'nouveau roman'

The literary influence, meanwhile, that most evidently informs Brooke-Rose's experimental turn is that of the *nouveau roman*. By the end of the 1950s the term *nouveau roman* had come to denote a loosely grouped collection of French writers whose novels challenged the *donnés* of nineteenth-century realism. Mostly published by Jérôme Lindon's Éditions de Minuit, the *nouveau roman* was represented most enthusiastically by Alain Robbe-Grillet, with Michel Butor, Nathalie Sarraute, and Claude Simon also evoked in the same context, and a wide range of other writers—such as Marguerite Duras, Claude Mauriac, Claude Ollier, and Robert Pinget—incorporated more sporadically. By the end of 1961, Brooke-Rose had read both the fiction and the theoretical writing of Robbe-Grillet and Sarraute.[29] Meanwhile—though Brooke-Rose

[26] Cathryn Carson, *Heisenberg in the Atomic Age: Science and the Public Sphere* (New York: Cambridge University Press, 2010), p. 47.
[27] Ibid., pp. 47–48.
[28] Cathryn Carson, 'Who Wants a Postmodern Physics?', *Science in Context*, 8 (1995), 635–55 (pp. 649–50). The World Perspectives texts by Heisenberg that were published in London editions are *Physics and Philosophy* (1959) and *Physics and Beyond* (1971). See also the New York edition of *Across the Frontiers* (1974).
[29] See Brooke-Rose, 'Christine Brooke-Rose Interviewed by David Seed', p. 251.

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most probably read the *nouveau roman* in French—a number of English translations of Butor, Robbe-Grillet, Sarraute, and Simon were in circulation in Britain, in the main owing to the activities of the *nouveau roman*'s most vocal British advocate, the publisher John Calder.[30]

Brooke-Rose published two pieces on the *nouveau roman* in 1961, strongly endorsing the claim to novelty suggested in its name.[31] However, the manner in which the *nouveau roman* factors a few years later in her critical writing—coinciding with her experimental turn as a writer of prose fiction—best encapsulates the *nouveau roman*'s particular bearing on her thought. In her essay 'The Baroque Imagination of Robbe-Grillet'—published in 1964 in French, and in English the following year—Brooke-Rose's reading of Robbe-Grillet's *Dans le labyrinthe* (1959) could equally apply to *Out*.[32] Describing the ambiguous structures of repetition or near-repetition, the indecipherable non-chronologies, and the seemingly fatigued narrative point of view of Robbe-Grillet's novel, Brooke-Rose could be describing her own experiments:

> It is presented instantaneously, yet out of time, experienced and re-experienced through the dying soldier's delirium, when all the data of the preceding days have acquired a dream-like intensity that nevertheless confuses time, accuracy, and even subjective identity, so that the soldier could be seeing himself from outside himself, as well as reliving incidents and collocations of data with omissions, shifts, or added detail, as if through the expanding and contracting lens of memory and imagination; but instantaneously, merging with direct experience.[33]

At the level of technique, many of the significant elements that Brooke-Rose sees in Robbe-Grillet's novel also find their way into *Out*, as with her description of how, in *Dans le labyrinthe*, '[t]hings are not only perhaps something else but can even be something quite other than what they have just been described as'.[34] Taking one of Brooke-Rose's chosen examples in this respect (here reproduced in Brooke-Rose's own later translation of Robbe-Grillet's novel), the line of progeniture is easily detectable in *Out*:

> Then they heard the sound, very far away, of the motorbike.
>
> No. It was something else. It is dark. It is another attack: the sharp, staccato sound of automatic rifles.[35]

[30] See Adam Guy, 'The *nouveau roman* in Britain, 1957–73' (unpublished doctoral thesis, Lincoln College, University of Oxford, 2014).

[31] See Brooke-Rose, 'The Vanishing Author', *Observer*, 12 February 1961, p. 26; and Brooke-Rose, [review of Robbe-Grillet, *Jealousy* etc.], *London Magazine*, February 1961, pp. 74–76.

[32] For the original French version of the article see Brooke-Rose, 'L'Imagination baroque de Robbe-Grillet', *La Revue des Lettres Modernes*, 94–99 (1964), 129–52.

[33] Brooke-Rose, 'The Baroque Imagination of Robbe-Grillet', *Modern Fiction Studies*, 11 (1965–66), 405–23 (p. 418).

[34] Ibid., p. 422.

[35] Alain Robbe-Grillet, *In the Labyrinth*, trans. by Christine Brooke-Rose (London: Calder & Boyars, 1967), p. 137. Quoted in the original in Brooke-Rose, 'The Baroque Imagination', p. 422:

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The concrete huts move slowly by, grey in the shimmering heat. No. The sun beats down into the nervous system that has no foliage to protect the nerve-ends.[36]

Another way in which *Out* clearly draws on Robbe-Grillet's work is in its use of the present tense. In 'The Baroque Imagination' Brooke-Rose sees Robbe-Grillet's present tense as achieving effects similar to those she sees in the self-refuting 'No' quoted above:

We are made to see, creator-like, the same objects in different time-scales, yet as instantaneously as language, which takes time, can make it. This is a very Baroque situation, in which the same object can be several things at once, or seen in two or three different perspectives simultaneously. Here it is achieved by analogy, and by apposition within the present tense (together with time and place auxiliaries like *maintenant* [now], *dehors* [outside]), rather than by metaphor, explicit paradox or other specifically Baroque methods.[37]

In 'The Baroque Imagination', Brooke-Rose formulates the very theoretical precepts that underlie her narrative in *Out*, finding precedent in the contemporary literary field. Her notion of the Baroque draws in writers such as John Donne and Laurence Sterne, seeing Robbe-Grillet as sharing with them an epistemology founded in contradiction and doubleness, an epistemology that offers 'one in the eye for the theory of art as imitation', reflecting instead on the 'paradox of antirhetoric as in itself rhetoric, anti-style as in itself style'.[38] Set against the background of a literary culture still dominated by the assumptions of nineteenth-century realism, Brooke-Rose casts Robbe-Grillet's *baroquerie*—and by extension her own—as the essence of his claim to radical innovation within the novel as a form.

Another critical piece by Brooke-Rose from 1964 finds similar tendencies in Claude Mauriac's 1959 novel *Le Dîner en ville*:

M. Mauriac makes full use of both the omniscient author convention and that of the 'non-existent' author, or as Bertrand himself ruminates about his own book, of a technique that is both subjective and objective at the same time. And, like Nathalie Sarraute [. . .] he records and magnifies the 'subconversation' as an electron-microscope records and magnifies neural impulses: they have to be magnified to be captured at all.[39]

As with her analysis of Robbe-Grillet's *Dans le labyrinthe*, Brooke-Rose emphasizes the ways in which Mauriac combines and mutates narrative conventions (point of view, interiority, description), opting not to overturn them, but

'Alors ils ont entendu le bruit, très lointain, de la motocyclette. || Non. C'était autre chose. Il fait noir. De nouveau c'est l'attaque, le bruit sec et saccadé des armes automatiques' (Robbe-Grillet, *Dans le labyrinthe* (Paris: Minuit, 1959), p. 160).

[36] *Out*, p. 158.

[37] 'The Baroque Imagination', p. 420.

[38] Ibid., pp. 405, 406.

[39] Brooke-Rose, 'Dinner with M. Carnejoux', *Observer*, 8 March 1964, p. 27.

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to reproduce them in forms that render them paradoxical and double instead. Consequently, in her evocation of Nathalie Sarraute, Brooke-Rose's writing implicitly joins up Mauriac, Robbe-Grillet, and Sarraute into something of a synthesis regarding the innovations of the *nouveau roman*. But more importantly, here, the conceptual framework used is not that of the Baroque, but of a more scientific kind.

If, in her piece on Mauriac, Brooke-Rose implicitly evokes the distortion effects necessitated by the Uncertainty Principle in her portrayal of the 'electron-microscope' of Mauriac's technique, then in her 1965 essay 'Dynamic Gradients' this frame of reference is made explicit. In 'Dynamic Gradients' it is through the comparison between Sarraute and Robbe-Grillet that Brooke-Rose names the Uncertainty Principle. As in her earlier piece on Mauriac, Sarraute is referred to as creating 'the necessary outside stimuli, however trivial, and then record[ing] and amplif[ying]' the results, with the 'half-conscious movements and murderous impulses' of Sarraute's bourgeois Parisian subjects 'viewed like organisms caught and enlarged in an electron microscope'.[40] Given the cosmic metaphoric of Sarraute's novel *Le Planétarium* (1959), however, Brooke-Rose points out that the analogy of an electron-microscope does not quite suit Sarraute's technique. Robbe-Grillet, however, might be a better fit, as he

> does the opposite, with similar effect, because in this kind of treatment, the distinction between subjective and objective vanishes, as it does in one sense in science, where it has become a truism that, in submicroscopic terms, the object observed is affected by the instrument observing it—part of the famous principle of uncertainty which has indirectly affected all of our philosophy and our attitudes.[41]

For Brooke-Rose, the major index of this effect in Robbe-Grillet comes through a narration that, though characterized by an 'objectification and geometrification of empirical data', is nevertheless also 'intensely subjective in that it accurately follows the swerves, blockages and sudden enlargements of the observer's psychological make-up'.[42] Here, Brooke-Rose's former argument from 'The Baroque Imagination' is reiterated, but firmly within the purview of the Uncertainty Principle.

Getting with the Modern World of Science

Brooke-Rose's interest in the Uncertainty Principle manifests itself a number of times in her fiction of the 1960s. Discussing alchemists, the narrator of her short story 'Queenie Fat and Thin' (1970) states that 'they do not let the

[40] Brooke-Rose, 'Dynamic Gradients', *London Magazine*, March 1965, pp. 89–96 (pp. 92–93).
[41] Ibid., p. 93.
[42] Ibid., pp. 92–93.

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transmutation of elements also transmute the experimenter as the observer affects the object observed why, that's a scientific fact'.[43] With its astrophysicist protagonist, Brooke-Rose's second experimental novel *Such* (1966) takes physics in its many forms as a central point of reference.[44] On the two occasions that the Uncertainty Principle is stated most explicitly in *Such*, it is presented as an extreme, and as an index of the absolute existential doubt that encroaches upon its characters. The Uncertainty Principle is given at one point in a (potentially imagined) dialogue about the problem of particularity, where it is stated that a

> principle of indeterminacy applies, compared, I mean, with the determinacy in regard to large numbers of atoms. The moment you try to find out its condition the very process of investigation must disturb it. So with ideas and people, compared to mass ideas, mass people. And causes.[45]

This theme is pursued in greater depth in a dialogue at the end of the novel, where the protagonist, Larry, talks to another character, Elizabeth, and Brooke-Rose finds space to gesture towards her initial encounter with Heisenberg in Barfield's *Saving the Appearances*:

> — Larry, everyone deserves the attention of definiteness.
> — Even if they prefer the uncertainty principle?
> — They only pretend to prefer it. While they have to. You used to say that. Someone would come along and find a unified theory that would do away with indeterminate interpretations, you'd say, and revert to causality. I thought perhaps you might.
> — I thought so too. In psychic terms at least. But I didn't. In the meantime we do the best we can, some of us preferring to pretend causality exists, and others, others preferring to prefer its absence. But you can never know with absolute certainty that what looks like the same particle, with the same identity—
> — Yes but for the practical purposes you have to, Larry, in the chemistry of people. Otherwise how can you live?
> — You can't. Not really. You pretend you do. To save the appearances.
> — Larry, you can't honestly believe that.[46]

Overall, these examples show that, with the exception of *Out*, Brooke-Rose's fiction from around the time of her experimental turn tends to address the Uncertainty Principle at the level of content, rather than at the level of form.

[43] Brooke-Rose, 'Queenie Fat and Thin', in *Go When You See the Green Man Walking*, pp. 166–79 (p. 173).

[44] Brooke-Rose, *Such* (London: Joseph, 1966). All subsequent references will be to *The Christine Brooke-Rose Omnibus*, pp. 199–390. Brooke-Rose sent an early typescript of *Such* to the director of the Jodrell Bank Centre for Astrophysics, who, she reports, 'gently passed me on to his assistant director, who was very charming, took me round, and said I was at the second level in astrophysics'. Ultimately, she felt she was offered 'no help at all', save the 'general introduction as it were' given to 'all friends and visitors' (quoted in Lawrence, p. 200).

[45] *Such*, p. 363.

[46] Ibid., p. 387.

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Such examples are testament to the degree to which the Uncertainty Principle fastened itself on Brooke-Rose's imagination in the 1960s. However, it is Brooke-Rose's integration of the Uncertainty Principle into the metafictional architecture of *Out*, and her attachment of the Uncertainty Principle to the *nouveau roman* in her contemporary critical work, that best demonstrate the manner in which Heisenberg's ideas underwrite her turn towards literary experiment.

Called to give account of her practice as an experimental writer in two radio interviews from late 1965, Brooke-Rose again draws out extended parallels to the Uncertainty Principle. Also again linking it with the *nouveau roman*, in one interview she talks of how she is 'very interested, in general, in the French novelists' attempt to try and get with the modern world of science'—more specifically in the sense that:

> The modern scientific concept [is] that any object is affected by the instrument observing it. You can't actually see an electron jumping from one orbit to another, if indeed it jumps, and…the photon that you've got to use is going to affect its behaviour. And I think this is very important in the observation of reality; the moment you start observing it, it shifts. And I think this is a problem modern novelists have to face, that you can't just make a photograph of the reality immediately around you because it has already shifted by the very process of photographing it, and looking at it.[47]

Here, Brooke-Rose's argument is much the same as in 'Dynamic Gradients', if drawing more closely and in more detail from Heisenberg's original formulation. In her other radio interview from the same time, however, Brooke-Rose's emphasis has shifted slightly:

> I think that it's very important to remember when discussing what has or has not gone wrong with the modern novel to remember that the novel is a way of looking at reality and that any author of any period will look at the reality immediately around him through certain kinds of spectacles and that it's no use writing, say, in the twentieth century, any more than it's any use writing in the '60s through the spectacles of the '30s, because reality shifts all the time and it's up to the novelist to reflect the reality as he sees it and not the reality as other people have depicted it…But it does change all the time, the more one looks at it. It's rather like the uncertainty principle in science…the more you look at an object, say in microscopic terms, the more the object is affected by the instrument observing it…[48]

Brooke-Rose's focus here seems to be the broader sweep of literary history rather than the particular technique of individual novels. In her formulation, the Uncertainty Principle provides an analogy for received notions of novelistic realism, with individual novels operating in either good or bad faith

[47] Quoted in Heather Reyes, 'The British and their "Fixions," the French and their Factions', in *Utterly Other Discourse*, ed. by Friedman and Martin, pp. 52–63 (p. 57). Square brackets and ellipses are from Reyes.

[48] Ibid. Ellipses are from Reyes.

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against such a background: the realist novel that accords with the Uncertainty Principle-like development of the form as a whole uses the necessarily distorting formal 'spectacles' of its own time rather than those of a previous time.

This apparent shift, however, merely deepens Brooke-Rose's vision for the contemporary novel and the centrality she accords within it to the *nouveau roman*, as well as adding further conceptual grounding to her own experimental turn. In 'The Baroque Imagination' she sources her notion of the progression of literary history in Nathalie Sarraute's work:

> I mean rather more than what Nathalie Sarraute seems to mean when she says that the so-called formalists, who try hard to look anew, and to evolve new forms for the expression of what they see, are the true realists; whereas the so-called realists are the formalists because they are essentially reporters, however acute, who look fairly hard but see what any other intelligent person looking at the same area of experience would also see, and who are obliged for ready intelligibility and urgency of communication to pour what they have seen into the by then familiar forms evolved by the previous generation's formal experimenters (indeed, one might add that their very seeing is conditioned by those forms).[49]

Though in this article Brooke-Rose pushes her analysis further by using her concept of the Baroque, the idea she describes here as emanating from Sarraute is very much the same as the one she glosses with the Uncertainty Principle in her later radio interview. The fact that Brooke-Rose attaches this notion to Sarraute is important, too, as the same notion is also articulated in the theoretical writings of two other major *nouveaux romanciers*, Michel Butor and Alain Robbe-Grillet—for all three it is a means of attacking the ossified conventions of nineteenth-century realism that prevail in the contemporary novel. Whether in Sarraute's formulation, in Butor's insistence that 'formal inventiveness in the novel, far from being opposed to realism as too often assumed by short-sighted criticism, is the *sine qua non* of a more extended realism',[50] or in Robbe-Grillet's claim that 'even if the novel were only reproducing reality, it would hardly be normal if the bases of its realism had not evolved in parallel to these transformations',[51] the idea picked up by Brooke-Rose represents something of a theoretical tenet for the *nouveau roman*.

Consequently, Brooke-Rose's analysis doubles its link between the Uncertainty Principle and the *nouveau roman*. While Heisenberg's ideas provide

[49] 'The Baroque Imagination', p. 411.

[50] Michel Butor, *Répertoire: études et conférences 1948–1959* (Paris: Minuit, 1960), p. 9 (my translation of the original: 'L'invention formelle dans le roman, bien loin de s'opposer au réalisme comme l'imagine trop souvent une critique à courte vue, est la condition *sine qua non* d'un réalisme plus poussé').

[51] Alain Robbe-Grillet, *Pour un nouveau roman* (Paris: Minuit, 1963), p. 137 (my translation of the original: 'même si le roman ne faisait que reproduire la réalité, il ne serait guère normal que les bases de son réalisme n'aient pas évolué parallèlement à ces transformations').

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her with an analogy for the *nouveau roman*'s view of literary development, within this framework, the pre-given reality that any individual novel of her present day must describe is, for Brooke-Rose, one already characterized by Heisenberg's insights, and one already best described by the *nouveau roman*. Though her experimental turn appears as a radical break within her own body of work, ultimately, as Brooke-Rose praises 'the French novelists' attempt to try and get with the modern world of science', so is hers a thoroughgoing attempt to 'get with' the *nouveau roman*.

Out also registers Brooke-Rose's double link between the Uncertainty Principle and the *nouveau roman*. If the 'spectacles' of a traditionally conceived realism perceive a world of solid objects existing untroublingly in space, and events happening in a relatively short-term and linear conception of time, then *Out* constantly demonstrates the inadequacy of such a perception:

> Somewhere in the archives there will be evidence that this occurred, if it is kept, and for those who wish to look it up. Other episodes, however, cannot be proved in this way. Sitting alone, for example, on a kitchen chair, making love. A rectangle of light ripples on the wrinkled wood. If all the molecules that compose the solid table were gradually to move faster and faster, as fast as the molecules of liquid, the fastest would have sufficient velocity to move out of the substance. The table would then evaporate. A little pool of liquid might be left on the red stone floor, but otherwise it would be impossible to prove that the table had been there. A radio-isotope carbon 14, with a half-life of 5600 years, might perhaps trace and measure its prehistoric existence, but only for the human mind behind the carbon 14, the development of phenomena being correlative to that of consciousness. (p. 79)

In this passage, the rhythm of the constant enumeration of possibilities considered above, rounded off with another paraphrase of the Uncertainty Principle, is harnessed to stage the inadequacies of a traditionally conceived realism. In exposing the partiality and isolation of an archival account of any occurrence, or the sheer contingency of any object's solid state when considered in the *longue durée* of its molecular constitution, the Uncertainty Principle frames Brooke-Rose's entire descriptive economy. Moreover, by using the pointedly evocative paraphernalia of realism—everyday objects like a table, acts like making love, poetic images such as light rippling on wood—Brooke-Rose draws attention not only to the formal 'spectacles' she uses, but also to what they perceive: a pairing that, in the interrelation of its parts, is shown to be marked by the insights of Heisenberg's quantum physics. Such instances evoke their intellectual foundation in Brooke-Rose's joint reading of the Uncertainty Principle and the *nouveau roman*, and ground her own newly experimental technique.

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Coda: Experiment and the Two Cultures

Given that some implications of the Uncertainty Principle—the privileging of subject positions, the foreclosure of access to absolutes in meaning or measurement—overlap with those of poststructuralism, in keeping with the critical context considered at the start, it is unsurprising that Brooke-Rose's engagement with the former might be conceived of in terms of the latter. Further, the close involvement with the *nouveau roman* in the 1950s and 1960s of definably structuralist or poststructuralist critics and philosophers such as Roland Barthes, Maurice Blanchot, Michel Foucault, Gérard Genette, and Tzvetan Todorov could also provide a ready-made context for Brooke-Rose's dialogue with writers such as Robbe-Grillet and Sarraute.

In keeping with the aims of this article, then, a more local paradigmatic frame might be required to aid a reading sensitive to the particular dynamics of Brooke-Rose's experimental turn at the point of its historical emergence. One such frame might be the famous 'Two Cultures' debate initiated by C. P. Snow—in Guy Ortolano's words, a 'transformative moment in the historical tradition discussing the arts and the sciences'.[52] Superficially, at least, Brooke-Rose could be said to enact successfully the rapprochement between literary and scientific cultures that Snow proposed in his contributions to the debate. However, Brooke-Rose's own take on the 'Two Cultures' debate—from the end of 'Dynamic Gradients'—troubles this point of comparison, and merits quoting at length:

> I do not think that the cliché of the Two Cultures applies in practice. Artists, or at least certain kinds of artist, have always borrowed from and been conditioned by the science of their time. Obviously the writer is not doing the same job as the scientist, any more than the chemist is a physicist or the doctor a mathematician. His method is not basically a scientific one, he is not out to prove or to predict. But in his own way he also tests and tests his hunches about the reality behind the appearances, and he tests them in the matter which is language, the signs through which we express our observation of phenomena. And the experimental writer is trying to do this as much as the consolidating writer who reports in more recognizably familiar terms on what he sees, indeed, these two elements can occur in one and the same writer at different times. There is room for both. It is legitimate to criticize these experimental writers in relation to what they are trying, implicitly or explicitly, to do. But let us at least grasp what it is they are doing.[53]

Here, though initially Brooke-Rose rejects the false dichotomy set up within the designation of 'Two Cultures', as her argument develops, she shifts to more familiar territory, tacitly reinserting the Uncertainty Principle into her view of the conditions of literary production, while again making the distinction

[52] Guy Ortolano, *The Two Cultures Controversy: Science, Literature and Cultural Politics in Postwar Britain* (Cambridge: Cambridge University Press, 2009), p. 27.

[53] 'Dynamic Gradients', p. 96.

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between writing of good and bad faith with regard to how these conditions are acknowledged. But more specifically, by explicitly broaching the question of 'experimental writing', Brooke-Rose exposes the investment of the 'Two Cultures' debate in a certain traditionalism in both literary and scientific terms.

In the 1950s and 1960s Snow was considered to be at the forefront of what Andrzej Gąsiorek calls a 'vigorous campaign against modernism' waged to 'defend an apparently discredited realism [. . .] against the aesthetic doctrines that had superseded it'.[54] Accordingly, Snow was a high-profile antagonist to, among other things, the *nouveau roman* as one among many 'active' manifestations of the ongoing tendency towards 'the romantic conception of the artist, the alienation of the intellectual, the aesthetic of the anti-novel, the abdication of the generalizing intellect, the hatred of the scientific-industrial revolution, the prizing of verbal innovation, the desire to contract out of society'.[55] Against such tendencies, Snow advocated for the shoring up of a traditionally conceived realism. For William Cooper—a disciple of Snow—Snow was able to achieve such a traditionally conceived realism through an ostensibly scientific technique. For Cooper, a novel by Snow sets out questions to be investigated

> experimentally, with techniques like those of a scientist, making hypotheses about the natures of his characters and testing them against the way those characters behave, suggesting theories about how in general their actions arise, yet concerning himself always with individual acts and their causes.[56]

Formally, as has been shown, Brooke-Rose's technique chimes with the one Cooper sees in Snow in the sense that it is an approach to narrative founded on a theory of knowledge developed in the sciences. However, this example becomes a fixed point against which the substance of Brooke-Rose's experimental turn can be measured.

Today, the very notion of an 'experimental turn' is a minor—if under-theorized—critical commonplace. Brooke-Rose's writing from the time of her own experimental turn theorizes this notion in a manner that might be more broadly critically productive. Brooke-Rose's experimentalism is double. It is first conducted in relation to the innovations of the *nouveau roman*, and in opposition to the insurgent nineteenth-century-type realism of writers such as Snow—hence Brooke-Rose's defiant designation of writers such as Robbe-Grillet and Sarraute as 'experimental'. But second, if, with Cooper, the work of a writer such as Snow is definably 'experimental', then Brooke-Rose's

[54] Andrzej Gąsiorek, *Post-War British Fiction: Realism and After* (London: Arnold, 1995), p. 179.
[55] C. P. Snow, 'Challenge to the Intellect', *Times Literary Supplement*, 15 August 1958, p. iii.
[56] William Cooper, *C. P. Snow* (1959; repr. London: Longman, 1971), p. 37.

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writing of the early 1960s exposes the fact that the very notion of experimentalism, after quantum theory, had altered fundamentally. Brooke-Rose's experimental turn is conducted precisely in a manner that diverges from the notion of experiment as conceived within classical science; it instead sees any experiment as underscored by the distortion and indeterminacy theorized by Heisenberg.

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