**‘Her dreams receding’: gender, astronauts and alternate Space Ages in Ian Sales’ *Apollo Quartet***

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In this chapter, I will consider a sequence of alternate history science fictions by the contemporary British sf author Ian Sales. These novellas, titled the ‘Apollo Quartet’, re-imagine the NASA space program of the 1950s, 1960s and 1970s to critique the ideological and gender codings of what Dale Carter called the ‘American Rocket State’ of the decades following World War 2. Carter, in his book *The Final Frontier*, suggested that not only did the NASA space program and its male astronauts articulate a peculiarly ‘American pioneering tradition’ and masculine heroism, they ‘embodied a nation, a social system, a whole way of life. Their mission would make manifest America’s destiny; their achievements would universalize the American Century’ (159). In the second decade of the 21st century, Sales returns to this historical moment to interrogate its particular mode of spectacular geopolitical strategy, where the Space Race was part of the Cold War, a technical and ideological supplement to the Arms Race: ‘“To insure Peace and freedom,” Kennedy told the voters a month before the [1960] election, “we must be first”’, Carter notes (154). Sales’ fictions reveal the belligerent, violent practicalities of space ‘exploration’, inextricably bound up with the Cold War, and also the systemic exclusions and blinkered thinking of NASA’s technocratic project. For us, in the 21st century, the heroic images of the Saturn V rocket launch or of Aldrin (and reflected in his visor, Armstrong) standing on the Moon tend to mask the rather less heroic realities: I will begin with NASA’s implication in both utopian dreaming and nostalgia. Sales is sophisticated enough, however, to allow those tensions, between a longing for the heroic spectacularism of Apollo and a critique of its foundational principles and operation, to form the very fabric of his fictions. They come neither to praise nor bury Apollo, but to make us think about what its meanings might be. For me, this has a very personal dimension.

Being born in 1969, prior to the Apollo 11 landing (I was 3 months old at the time, so cannot with any seriousness claim that I remember it), the Space Age has always had a firm grip on my imagination. I don't remember any of the Moon landings, but do remember Skylab, the successor program which used some of the cancelled Apollo crews and Saturn V rockets to put a small space station into low Earth orbit. Skylab was eventually abandoned and it returned to Earth in 1979, parts of the space station debris falling across Western Australia in a pointedly symbolic moment. Thereafter, NASA, its budgets constrained, concentrated on the Shuttle, which flew for the last time in 2011. NASA’s missions are now unmanned. Plans for a crewed mission to Mars are often mooted, but its danger and logistical difficulty means that plans tend to recede back beyond the budgetary horizon, and instead an automated Rover traverses the Mars landscape, sending back images and data for Earth-bound scientists to study. The last of the manned NASA missions to the Moon, Apollo 17, left the surface on 14 December 1972. The Commander of that mission, Eugene Cernan, was the last human being to walk on another world, as he followed Harrison ‘Jack’ Schmitt back into the Lunar Module. ‘Gene’ Cernan died a week ago to the day as I write, on 16 January 2017. Six of the Apollo moonwalkers remain: Buzz Aldrin (Apollo 11), Al Bean (Apollo 12), David Scott (Apollo 15), John Young and Charlie Duke (Apollo 16), and Jack Schmitt. Duke is the youngest, at age 81. Soon, time and age will take the other moonwalkers, and a particular chapter in human history, the Space Age, will come to a definitive close. The Heroic age of space exploration, of Saturn V rockets and Lunar landers and Neil Armstrong, is long gone.

In his book on Apollo, *Moondust*: *In Search of the Men Who Fell to Earth* (2005), Andrew Smith characterises the program in terms of spectacle and theatre:

Apollo was a performance, pure and simple. JFK wanted something to capture the global imagination, and to excite his own people, and he found it. But he didn't create the idea, the fantasy was already there, independent of the Cold War, and there’s no question that Kennedy knew he was tapping into something far deeper and more primal than an urge to humiliate the Soviet Union. All those space novels and sci-fi movies and articles in *Colliers* and *Space Cadet* magazines sat at the top of a pyramid of human dreaming that stretched back thousands of years. Apollo may have been driven by the Cold War, but it was an emanation of American popular culture at that moment in time. It occurred to me that, in the end, it was *theatre* – the most mind-blowing theatre ever created. (297).

As an emanation of ‘cultural dreaming’, there is something utopian about Apollo, something to do enacting an idea of the future which in indissoluble from science fiction itself. Constance Penley, in *NASA/TREK* (1997), wrote that ‘NASA remain[ed] a repository for utopian dreaming’ at the time of writing (15). That there has been a relative paucity of science fiction texts that deal directly with Apollo indicates that it offers little symbolic capital upon which the sf writer can draw, because Apollo was science fiction already, of a particular kind: a heroic, spectacular adventure narrative which both echoed the themes and ideas of early 20th-century pulp sf and anticipated the cinematic imagination of post-*Star Wars* spectacle sf. As Penley wrote in *NASA/TREK*, ‘NASA has already put itself in the terrain of fiction, folklore, myth and popular culture; NASA *is* fiction, folklore, myth, and popular fiction’ (88). Writers who have dealt with the space program directly include J.G. Ballard, in particular in short stories such as ‘The Dead Astronaut’ or ‘Memories of the Space Age’, where he directly revisits the symbolic or psychological meanings of Apollo; or Barry Malzberg’s *Beyond Apollo* (1972), where the survivor of a crewed mission to Venus returns profoundly mentally affected by his experience, and ‘writes’ the novel which enacts his inability to express what he has suffered. In my book *Masculinities in Fiction and Film: Representing Men in Popular Genres 1945-2000* (2006), I wrote about ‘NASA fictions’ such as Brian De Palma’s *Mission to Mars* (2000) which overtly use the imagery of Apollo and Shuttle missions to articulate and negotiate a revised ‘frontier masculinity’; subsequent films such as Alfonso Cuarón’s *Gravity* (2013) or Ridley Scott’s *The Martian* (2015) have also built sf scenarios on ‘realistic’ post-Apollo narratives of survival in space. Such ‘realism’ also frames Ron Howard’s *Apollo 13* (1995), but in which is also embedded a form of nostalgia for a ‘can-do’ masculine heroism in which NASA engineers find a way to bring the stricken craft and its crew back safely to Earth, poignant but also deeply compensatory in the historical lee of the Challenger space shuttle disaster of 1986, in which its seven crew were killed. It is difficult, one might think, to approach Apollo without falling prey to nostalgia, and this has been true for some time. Constance Penley, writing about the then-25th anniversary of the Apollo 11 landing, noted that ‘there were innumerable books, journalistic retrospectives, videos, and television specials that endlessly replayed NASA’s most glorious triumph. But clearly this celebration was shot through with nostalgia for what may never be again’ (12).

‘Nostalgia for the future’ was identified by Simon Reynolds and the late Mark Fisher with a group of musical projects and sound artists, who attempted to recapture a certain structure of feeling associated with the 1960s. Reynolds, author of *Retromania* (2011) and Fisher, author of the *K-Punk* blog and later *Capitalist Realism* (2009) took Derrida’s concept of ‘hauntology’ to attempt to characterise the uncanny nature of much of this music. In a *K-Punk* post from 2006, Fisher suggests:

the period since 1979 in Britain has seen the gradual but remorseless destruction of the very concept of the public. Public space has been consumed and replaced b[y] something like the ['third place'](http://en.wikipedia.org/wiki/Third_Place) exemplified by franchise coffee bars. Here, you are transported into the queasily inviting quasi-domesticated interior of one of SF Capital's space-ships: deterritorialization (you could be anywhere) and reterritorialization (you are in surroundings whose every nuance is shinily familar). These spaces are uncanny only in their power to replicate sameness (their voracious dominance of the high street is as visually striking a sign as you could wish for of the lie that capitalism engenders competition and diversity), and the monotony of the Starbucks environment is both reassuring and oddly disorientating; inside the pod, it's possible to literally forget what city you are in. What I have called nomadalgia is the sense of unease that these anonymous environments […] provoke; the travel sickness produced by moving through spaces that could be anywhere.

I should confess that, albeit born too late to remember the moon landings, I too fall prey to ‘nostalgia for the future’ in thinking about the Space Age and the Apollo program. In a sense, they are an antidote to what Fisher identifies as the commodified spaces of contemporary life, the world as the ‘interior of one of SF Capital's space-ships’. The future proposed by Apollo is one of possibility, of change, of optimism, of a different understanding of human beings and their place in the cosmos. Little wonder, I think, that several of the Apollo astronauts (like Al Bean or Ed Mitchell) developed a transformative or even mystical response to their experience of travelling to and walking on the moon; their experiences made them think differently about both human beings and the Earth itself. Even hard-headed test pilots and technocratic astronauts fell under the spell of Apollo, what Penley called a ‘repository for utopian dreaming’ (15).

 Ian Sales’ ‘Apollo Quartet’ of novellas (plus a coda) constitute a very different set of responses to NASA and the Moon missions. Published from 2012 to 2016, the novellas are: *Adrift on the Sea of Rains* (2012), *The Eye With Which the Universe Beholds Itself* (2013), *Then Will The Great Ocean Wash Deep Above* (2013) and *All That Outer Space Allows* (2015), and then a *Coda: A Visit to the Air and Space Museum* (2016). Taken as a sequence, they constitute an alternative history of the Apollo program; or rather, a sequence of different alternate histories, which re-imagine the Space Age, then science fiction, and then finally the Quartet itself, to bring to the surface its ideological underpinnings and in particular its gender codings. The texts become increasingly experimental in form, and while they begin with an overt critique of technocratic, belligerent Cold War masculinity in *Adrift on the Sea of Rains,* move to a re-imagination of the space program and then science fiction itself which places women at the centre of the narrative.

*Adrift on the Sea of Rains* won the BSFA short story award in 2012 and was a finalist in that year’s Sidewise Award for alternate history fictions. It imagines a NASA program (eventually part-funded by the Pentagon) that extended to 25 missions, encompasses the building of a lunar base, and is ongoing in 1979, when the novella is set (the year that Skylab fell from orbit). A timeline of missions is given in extensive detail at the back of the novella, lending authenticity to its extrapolation of the Apollo programme. A glossary follows, additional documentation that attests to the novella's hard-sf credentials. The milieu is resolutely homosocial, and the novella deftly articulates the personal dynamics between members of this masculine group, mainly from the point of view of its 'leader', Colonel Vance Peterson. Peterson is an ex-USAF pilot (like many of the early astronauts, drawn from the ranks of test pilots in the Air Force and Navy) who seems to be conceptually limited to the horizons of his own institutional embedding and of continuing Cold War antipathies, a set of prejudices which ultimately leads to destruction.

In investigating this gendered geopolitics, the text combines formal with narrative and thematic elements to trace the origins of the historical timeline which leads to nuclear war on Earth, and the terminal stranding of the American astronauts on the Moon. The Moon base (named Falcon, a reference perhaps to Captain Robert Falcon Scott, who famously died in Imperial ‘exploration’ of the Antarctic) is the repository for the novella's main novum, the 'Bell', a remnant of Nazi ‘*wunderwaffe*’ (wonder weapons). The Moonbase is a research station for investigation of these wonder weapons, and the ‘Bell’ is a means by which alternate realities can be reached. This is vital, as a nuclear war has stranded the men on the moon, and they activate the ‘Bell’ to search for an Earth in which Armageddon has not taken place. The men work the 'Bell' until a blue, unharmed Earth is seen in the Moon's sky. Essentially, the men search for a ‘jonbar point’, what the *Science Fiction Encyclopaedia* defines as ‘a forking place in Time’, and what the text calls a ‘decision node’ (*Adrift* 13) which will allow the astronauts to shift into an alternative historical continuum in order for them to be rescued. Interleaved with this narrative are italicised sections which narrate Petersen’s former career as a USAF pilot, which are presented in reverse chronology. The first begins with the nuclear annihilation of human life on Earth, and then move back through his arrival on the Moon, the launch of the vehicle that takes him there, a moment in his career as a test pilot, and finally to the moment – the ‘decision node’ or ‘jonbar point’ – when Petersen decides to shoot down a Soviet supersonic bomber which intrudes onto Canadian airspace. The narration of the italicised sections much more closely approximates Petersen’s macho fighter-pilot discourse (although the entire novella is focalised by his point of view):

*He saw the impact, the sudden blossoming of flame on the T-4s flank, the enemy bomber shedding shattered panels which spun mirror-bright in the sun as they fell, the curving smoke trails of debris as the aircraft broke apart; and his wizzo said, Jesus Christ, you sure as shit shouldn’t’ve done that. He was right, of course, and back at the base the colonel chewed him a new one though they both knew it was a righteous kill, but relations were hair-trigger and neither side wanted to give the other provocation*. (*Adrift* 51)

The word ‘righteous’ is key to decoding Petersen’s macho discourse: he entirely believes in the rightness of his own ideological position, the rightness of the use of military force by the USA against the Soviet Union, and the rightness of his own decision. This world-view leads to disaster. After the Bell delivers them to a time-line close to our own 1979, in which the Soviet space station Mir is in low-Earth orbit (and in which, as I have noted, Skylab has fallen to Earth), the astronauts engineer a Lunar Module to enable Petersen to take off from the Moon’s surface, cross space and hope to contact or dock with the orbiting space station. As he approaches Mir, thinking the presence of the Soviet space station must mean they have ‘won’ the Cold War, Petersen is consumed by ‘sour hate-filled rage’: this ‘is not the world he knows, nor any he wants to know’ (*Adrift* 54). He targets Mir with the module and bails out in a space suit, consigning himself, his fellow astronauts on the Moon, and the cosmonauts on Mir to death; but his last realisation is that the Russian word Mir means ‘Peace’. The irony is all too apparent: the Cold Warrior, achieving a self-righteous ‘peace’ of mind following his ‘revenge’, only perpetuates conflict. Petersen will burn up in the atmosphere unlamented. His ‘heroic’ masculine ethos is the very cause of his, and his world’s, destruction.

 In a connected short story, ‘*Wunderwaffe*’ (2012),Sales imagines a pre-history for the Bell, in which the Nazi scientist Rotwang (a name taken from Fritz Lang’s *Metropolis* (1929)) constructs a cyborgised ‘Maria’ to travel through the portal that the Bell opens in space-time, he presumes to another part of the planet but in fact to another, parallel world. ‘*Wunderwaffe*’s narrative is followed by a Bibliography; this is also the case for all the Quartet, and *Adrift on the Sea of Rains* and *The Eye With Which the Universe Beholds Itself* also contain appendices. The appendices and bibliography work as part of the apparatus of the text itself, part of a world of documentation, a *textual* world: the astronaut’s library of scientific reports, NASA manuals, technical files. Much of the historical backstory and framing contexts for the novellas are given in ‘Glossary’ sections, which ostensibly concentrate on the technical details of the story (Apollo missions, names for craft and suits) but act as a kind of *parallel text*, a means of providing information without disrupting the economy of the novellas’ narratives. The appendices are organised alphabetically, a kind of glossary or mini-encyclopaedia, re-articulating chronology in a textual form that opens up the novellas in interesting ways. The appendices are at once a supplement (the narratives can be enjoyed without them) but are also central to Sales’ extrapolative method. The encyclopaedic form is a kind of extrapolation/ legitimation, working to deepen or expand the narrative world but also to make it more concrete as a *historical* extrapolation; at the same time, of course, as with all formal play with this kind of apparatus, the effect is also self-reflexive, to foreground the text *as* a text. More artfully, the *parallel texts* within each of the novellas formally present the motif of the alternate historical continuum that is central to the mode of the alternate history.

 In *Adrift…*, the extended Moon program is a direct extension of the historical Apollo; in *The Eye With Which The Universe Beholds Itself*, the second novella in the sequence, the ‘decision node’ is the moment in the descent of Apollo 11’s LM when Neil Armstrong, in ‘our’ world and history, piloted the module manually to a safe landing. *The Eye With Which...* predicates NASA’s Mars program (named Ares) on Armstrong’s decision to abort the landing, which then gives the opportunity for the Soviet Zond program to land Cosmonaut Alexei Leonov on the Moon first. (In our history, the catastrophic failure of the 3 July 1969 test of the N1 rocket delayed the Soviet program for 2 years, and no Cosmonaut ever walked upon the Moon.) This failure drives the US to land a human being on Mars, which is the Ares program; this first man is the protagonist of *The Eye With Which...*, Major (later Brigadier General) Bradley Emerson Elliott. *The Eye With Which...* is a narrative with a double time-frame; in 1979, Major Elliott lands upon Mars, and makes a discovery that will alter the possibilities of human exploration of the galaxy; in 1999, Brigadier General Elliott (long since absent from NASA) is invited to travel to a distant star aboard a craft powered by the technology that is a result of his Mars landing. Sales connects the second mission with Elliott’s growing estrangement from his wife, a consequence of his career as an astronaut (and the kind of desires and gratifications that career entails). This strongly connects *The Eye With Which*… with the fourth book in the Quartet, which is narrated from the point of view of an ‘astronaut’s wife’, as I will explore shortly. In the second novella, however, the shift into personal and emotional territory deepens Sales’ portrayal of the male astronaut. Rather than Petersen’s somewhat limited Cold Warrior, Elliott is presented as a man whose long journeys (to Mars and to an exo-planet somewhere far from Earth) are spatial analogues of his own emotional dislocation. His voyage out, unlike that of Petersen, is not followed by the consoling thought that ‘he is coming home, and he will never leave’ (*Adrift* 54); although Elliott just about makes it back to the craft on Mars after an accident during an EVA, his journey to the exo-planet is a one-way trip: the novella ends ‘This time, he is not going home’ (*The Eye With Which* 56). For Elliott, this is a wished-for outcome: ‘I knew what I was doing. […] I knew I’d be stuck down here’ he tells the crew on the orbital craft who are unable to rescue him (*The Eye With Which* 55), and connects with the book’s opening sentence: ‘This time, when he returns home, he knows she will have left him for good’ (*The Eye With Which* 11). The interleaved dual narrative is then circular: Elliott’s self-willed marooning is both an escape and a completion of the emotional trajectory of the astronaut. As Andrew Smith notes in *Moondust*, ‘the huge divorce rate in the Astronaut Corps [meant that by] the end of the 1970s […] the highest rates in the nation settl[ed] on the Cape Kennedy area of Florida’ (58). The cost of the Space Program in *The Eye With Which…* is not strictly geopolitical or financial: it is personal and emotional.

 Where the first and second books of the Quartet interrogate masculinity, the third and fourth books, through their projected alternate histories, focus on the experience of women. *Then Will The Great Ocean Wash Deep Above* (2013) has another dual narrative, split between the ‘Up’ experiences of Geraldine ‘Jerrie’ Cobb, one of the ‘Mercury 13’ female astronauts that, in our history, undertook the same physiological testing as the male NASA astronauts in a privately funded program but never flew, but in the novella goes into space as all the male USAF and Navy pilots are bound up in an ongoing Korean War; and the ‘Down’ narrative of Lt. Commander John MacIntyre, a submariner who pilots a submersible to recover a spy-satellite film ‘bucket’ from the bottom of the ocean, a canister which contains photographs of Sino-Soviet military build-up on the North Korean border. At the end of the novella, Sales gives us the *real* histories of the ‘Mercury 13’ women who were excluded from NASA; the 13 women passed ‘Phase I’ of the testing, and the only one to pass ‘Phase III’, Jerrie Cobb, becomes a kind of ‘everywoman’ astronaut in *Then Will The Great Ocean*.

Rather than the military man or career pilot (the two masculine avenues into the astronaut program), both implicated in an institutional and philosophical narrowness of mind, Cobb is religious as well as ambitious, full of wonder for the universe as well as inhabiting a burning will to succeed. For Cobb, though, spaceflight is an encounter with God’s creation. On an EVA, Cobb is so intoxicated by the freedom of spacewalking and her sense that she is completing God’s purpose (as well as NASA’s mission) that she barely finds the will to re-enter the capsule:

Someone is talking to her. Cobb blinks and tries to focus.

It is Hixson: Jerrie, they want you to come back in now.

Back in?

Back in.

A minute longer, Cobb replies, please.

Mission Control say you have to come in now, Jerrie.

[…] Now I can enter, Says Cobb. This is the saddest moment of my life. (*Then Will The Great Ocean* 31-2)

This directly repeats the moment when Ed White became the first American astronaut to spacewalk on the Gemini 4 mission in 1965 (and who was to die, with his ‘Capcom’ colleague Gus Grissom, in the Apollo 1 launchpad fire in 1967), as recounted by Andrew Smith:

Grissom: Gemini 4 – get back in!

(White pretends he hasn’t heard. He’s looking at the Earth.)

White: What are we over now, Jim?

McDivitt [Command Pilot]: I don't know, we’re coming over the west now, and they want you to come back in.

White: Aw, Cape, let me find a few pictures.

McDivitt: No, *back in*. Come on.

(pause)

White: Coming in. Listen, you could almost not drag me in, but I’m coming…

(a few more minutes stalling by the reluctant spacewalker, who finally relents)

White: This is the saddest moment of my life. (203)

Sales politicises this sense of freedom by referring to Rosie the Riveter as Cobb struggles to get back into the craft, and this admixture of a sublime sensibility *and* feminist politics lends Cobb a particular interest. McIntyre, the commander of the bathyscaphe, is, by contrast, a rather shrunken figure, who is immensely relieved to return to the surface. Even though he imagines himself as Orpheus, descending into the underworld (mis-remembering the myth), it is Cobb, through her perception of the sublimity of even low Earth orbit, that ascends to an ‘epic’ grandeur of vision.

In *Then Will The Great Ocean*, the relation between narrative and ‘appendix’ (non-fictional) material that ‘explains’ the extrapolative method is different: more directly historical and *not* bracketed off as a supplementary ‘appendix’, but rather following directly from the narrative. The section on the female ‘astronauts’ is clearly polemical; at the very end, Sales notes that it was not until 1983 that NASA sent a woman crew-member into space (Dr Sally Ride), and not until 1999 that a NASA mission had a female commander (Eileen Collins). The exclusion of women from the NASA program is revealed to be purely ideological, if a woman such as Jerrie Cobb is as physiologically, psychologically and technically capable of enduring the rigours of spaceflight as their male counterparts. Here, the alternate history is not an extrapolation from our own history, but a critique of it. Sales’ next move is to critique the gender bias of the history of science fiction itself.

 The main character in the final book of the Quartet, *All That Outer Space Allows* (2015) is Ginny Eckhardt, the wife of Walden Eckhardt who is, as the novel opens, a test pilot at Edwards AFB in the mid-1960s. Ginny is not only a pilot’s, and then when Eckhardt is accepted into NASA, an astronaut’s wife, but is also a science fiction author, writing under the name V.G. Parker (Virginia Parker, her birth name). The conceit of *All That Outer Space Allows* is that sf is a genre written and read by women: its most famous authors are women (Ginny is pen-pals with ‘Ursula, Judith and Doris’), the editors of *Galaxy* and *Astounding* are women, its readers and correspondents are mainly women. The gender politics of this alternate scenario mean that sf had still less cultural capital in the 1950s and 1960s than it had in our world: disregarded as a ‘women’s genre’ (like romance fiction, or the melodrama that the novel’s title overtly refers to) sf is something of a social secret for Ginny. Frowned upon by her ‘flyboy’ husband, who inhabits a typically retrograde patriarchal machismo, her writing is kept hidden, like the copies of sf magazines she stashes in her cupboard. Throughout the narrative, it is suggested that Ginny writes sf in part because the patriarchal structures of the post-war USA means that she *cannot* and *will not* be allowed to go into space herself; it is a kind of displacement activity that stands in for all the exclusions suffered by women in a patriarchal social and cultural circumstance.

This allows Sales to present the idea of performance and role-playing; we first see Ginny in ‘slacks and her favourite plaid shirt’ (*All That Outer Space Allows* 11), which is both her writing attire and a symbol of the ‘real’ Ginny masked by the enacting of the role of ‘wife’ that she must do to support Walden’s career. Later in the novel, Sales suggests that Ginny no longer needs that hidden persona symbolised by the clothes, that Ginny is able to bring public and private personas together, but the details of her career – after some success in the late 60s and early 70s, she drifts away from sf – indicate otherwise. The importance of clothes is connected to a crucial theme in the novel, to do with gender and women’s lives under patriarchy: that of seeing and being seen.

At the beginning of the novel, Ginny watches a plume of smoke hanging over Edwards AFB, and fears that it is her husband who has crashed, perhaps fatally. This isn’t so; an officer comes to seek out Ginny’s neighbour with the news that the pilot has been injured, but is in the hospital. She invites him in for an iced tea while he waits, and after an awkward interlude, wonders whether she has overstepped the bounds of social propriety, but he soon leaves, wanting to wait outside in the car for the neighbour ‘so I don’t miss her’ (*All That Outer Space Allows* 14). In an unassuming way, this introduces a recurrent motif in the narrative: men *not seeing* women, both physically and literally. When Walden takes Ginny on a tour around the Houston MSC, he runs off to check on a missed appointment. Abandoned to her own devices (another recurrent motif) Ginny is taken into the suiting room by Dee, a female technician. Searching for her, Walden pokes his head around the door, scans the room, scowls, and departs, only later coming back to locate her. He has physically *not seen* his wife (*All That Outer Space Allows* 140). Other details compound this motif: when she has lost an item in the house, he ‘happily’ joins in the search, but ‘never’ finds it, and Ginny often comes across the object in a place he has already looked.

This idea is literalised through a short story Ginny publishes, given in full in the novel, called ‘The Spaceships Men Don’t See’ (*All That Outer Space Allows* 64-73). Like the title of the novel itself, this is a playful intertextual allusion, this time to James Tiptree Jr/ Alice B. Sheldon’s famous story ‘The Women Men Don’t See’; in a mocked up *Encyclopaedia of Science Fiction* entry for V.G. Parker (*All That Outer Space Allows* 143), it is suggested that Ginny’s story gains more visibility retrospectively, after readers make the intertextual connection to the Tiptree story. There is a curious and playful tampering with chronology here, where Ginny’s story anticipates the more famous (and ‘real’) Tiptree’s, which then refers back to and legitimates it in some way. This playfulness has the effect of stitching Ginny’s story into the history of actual science fiction written by women throughout the twentieth century, and in that sense, we can see *All That Outer Space Allows* as a parallel project to Sales’ *SF Mistressworks* project, which explicitly challenges the gendered language of Gollancz’s SF Masterworks series, a kind of critical recuperation. In both, Sales attempts to make visible the *unseen* history of sf by women.

*All That Outer Space Allows* does not only re-write, through an alternate history scenario, the gendered history of science fiction; it also re-writes the gendered history of the Apollo Quartet itself. It becomes ever clearer, in each successive book, how an underlying tension between Sales’ admiration for and investment in the Apollo programme and a critique of the patriarchal masculinity and codes of ‘heroic’ endeavour are being worked out. *All That Outer Space Allows* explicitly re-writes this in gender terms, as when Ginny begins writing the novella ‘Hard Vacuum’, her last significant sf publication, the opening paragraphs are given in the text itself: ‘Some days, when it feels like the end of the world yet again, Vanessa Peterson goes out onto the surface and gazes up at what they have lost’ (*All That Outer Space Allows* 140). This is the opening of *Adrift on the Sea of Rains*, with ‘Vanessa’ substituted for ‘Vance’. Several other moments in *All That Outer Space Allows* suggest that Ginny is the ‘author’ of narratives that approximate *The Eye With Which The Universe Beholds Itself* and *Then Will The Great Ocean Wash Deep Above*.

All of the novellas in the Quartet offer a formal extension to the political and thematic revisions offered in each text. In *All That Outer Space Allows* Sales goes further still, and begins to deconstruct the narrative *from within*. The first such moment takes place in chapter 1. Ginny muses that it was ‘so strange that his parents should name [Walden Eckhardt] after a book subtitle “Life in the Woods” … ’. And then we have this:

They didn’t, of course; I did. I named him Walden for Henry David Thoreau’s 1854 polemic. There is a scene in Douglas Sirk’s 1955 movie *All That Heaven Allows* – the title of this novel is not a coincidence: the movie is a favourite, and in broad stroke, both *All That Heaven Allows* and *All That Outer Space Allows* tell similar stories: an unconventional woman who attempts to break free of conventional life … (*All That Outer Space Allows* 17).

After a paragraph and a half, we segue back into Ginny’s point of view. This technique recurs throughout the novel, wrenching the reader out of the immersive experience of reading Ginny’s story into something else entirely. The syntax and flow become halting, as though unsure of itself, jumping from Thoreau to Douglas Sirk, interrupted by dashes, by colons (twice), by ellipsis marks. As well as Sales demonstrating that *this is a fiction*, it is a kind of crisis in the parameters of Sales’ own project, a point at which narrative can no longer be written, where the cultural work of revision and re-scripting comes to a halt *because it is narrative.* As Sales points out, partly through these ‘authorial’ disruptions, Apollo was always embedded in a range of different narratives, from official documents, jargon and acronyms (some of which are directly reproduced in *All That Outer Space Allows*) to the *Life* magazine news-management of NASA’s image to the memoirs of astronauts and their wives, many of which appear in the novel’s bibliography. To re-write Apollo, particularly in the way Sales does so (through exhaustive research and citation) is, in part, to be complicit in Apollo and its narratives.

 The *Coda* to the Quartet, published in late 2016, folds Sales’ personal investment in Apollo back into the sequence explicitly. Titled *A Visit to the National Air and Space Museum*, the first-person narrative presents Sales making a trip to the museum in Washington, D.C., some time in the mid-1990s. This appears to be in ‘our’ historical continuum until, after looking at a Mercury capsule and then an Apollo Command Module, he encounters a photograph with a board bearing the words: ‘The Last American Spacecraft’. The narrative then tells the story of the fatal flight of Skylab 4, in which the crew began to hear strange communications while in orbit, and then perish when a pressure valve opens on their descent back to Earth, asphyxiating the crew. ‘There is something in the American psyche which reacts badly to public tragedy, particularly when fatal,’ Sales writes (*A Visit* 17); the consequence of the disaster was that crewed NASA spaceflights were abandoned, but American writers and film-makers began to create a fantasy space program that compensated for this trauma:

In literature and the cinema, the USA launched an all-out offensive to take back high orbit and the planets of the solar system. In popular fiction, the US maintained a vigorous space programme, with space stations in low earth orbit, bases on the Moon, and even an outpost on the surface of Mars. Hollywood studios produced big budget space movies: murder mysteries set in lunar bases, disasters in orbit, asteroids due to impact the earth but only the US can save the planet... (*A Visit* 17)

Of course, there was no Skylab 4 disaster in ‘our’ history. The crew returned to Earth safely. The ‘Glossary’ to the text implicitly reveals the source of this alternate, imaginary history of the end of the space program: the deaths of the three cosmonauts aboard the Soyuz 11 craft in 1971, in which the crew were asphyxiated when a pressure valve opened on the their descent. (The later Soyuz 21 crew experienced strange psychological effects in 1976 when toxic fumes affected the life-support systems on the Salyut 5 space station, forcing an early return to Earth.) In a kind of auto-critique which echoes the terms of my own approach in this chapter, Sales then notes that

there is also that aspect of the American character in which the imaginary is occasionally privileged over the reality—the Space Race may have continued to exist only in the minds of Americans, but it did allow them to live with their abrupt retreat from space, despite having put twelve men on the surface of the Moon between 1969 and 1972. The country created a mythology of progress based on what might have been, a future they used to have. Perhaps when US troops finally pull out of Vietnam, the same will happen. (*A Visit* 17)

In another divergence, which repeats that in *Then Will The Great Ocean Wash Deep Above*, the Vietnam War had not ended by the mid-1990s. This switching and interleaving finally affects the Quartet itself, when Sales declares that he had had enough of this imaginary space race, and on reading a narrative about US ocean exploration, wrote his own ‘Poseidon Quartet’: ‘*Adrift in the Gulf Stream*, *The Eye With Which The Universe Beholds Itself*, *Then Will the Great Ocean Wash Deep Above*, and *All That The Ocean Depths Allow*, which I eventually published through my own small press, Benthic Books’ (*A Visit* 20).

 There is one more reversal. Before the Glossary which, like the other four texts, provides an supplement and revision to the main narrative, the text of *A Visit to the Air and Space Museum* takes the form of a screenplay. It describes shots of the Saturn V rocket lifting off on 16 July 1969 for the Apollo 11 mission, over which runs a voiceover:

Given my interest in space exploration, especially the US space programme of the mid-twentieth-century, my desire to visit the Smithsonian Institute’s National Air and Space Museum came as no surprise to the friends I was visiting in Maryland. I had, after all, written a quartet of books—three novellas and a novel—based on alternate visions of NASA’s Apollo programme… (*A Visit* 24)

This repeats, word for word, the beginning of *A Visit to the Air and Space Museum* itself. The text becomes a film, implicated in the ‘theatre’ of Apollo, its dominant spectacularity, and its heroic masculine adventurism as the enormous rocket lifts from the Earth and into the sky. The circularity I have noted as a formal motif throughout the Quartet tightens to a recapitulation, the ending repeating the beginning but in an alternate medium – or perhaps, the textual simulacrum of an alternate medium. At the very end of the Quartet, in its (paradoxical) fifth text, the *Visit* points to the limitations of fiction itself: not just science fiction, not just NASA, not just the Apollo missions, but the capacities of literary narrative to present the meanings of Apollo, of the astronauts and their stories, and its role in post-World War 2 popular culture and fiction.

 In Sales’ Apollo Quartet, then, alternate history is turned to specific purposes. Not simply a means by which to investigate socio-cultural or political developments in our own history through counterfactuals, the mode’s particular form of estrangement, Sales uses the alternate history form to critique the ways in which gender was constructed and encoded in key institutions in the post-World War 2 United States, from NASA to science fiction itself. Ultimately, though, there is no exterior, ‘neutral’ space of critique, in the Quartet; in its multiple enfoldings and extrapolations, the texts’ (and their author’s) own implication in the allure of Apollo and the Space Race is placed before us. If Apollo is still a source for the Quartet’s ‘cultural dreaming’, it is one that disrupts the fabric of the texts themselves, deliberately and necessarily.

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