Woomera's Women: Roles and Rolls of Film

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Abstract
In the aftermath of WW2, with the onset of the Cold War, Australia became one of a few global centres for the testing of rockets and other long-range weapons. By the mid 1950s a town named Woomera had been created in the Australian Desert with a population of 7,000 at its peak. Women's roles at Woomera were initially expected to be traditional – supportive wives and mothers. This paper focuses on women who undertook new roles operating the sophisticated Kine-theodolites that filmed and tracked the rocket firings and other women who assisted in the production and post-production processes. When the range was established at Woomera, the British and Australian governments were both fearful of the future. My research has found that the women working on the range did not share the fear of the perceived "communist menace" and a possible third World War. For them, many of whom were still in their teens, life was all about "having fun." I have been fortunate to have tracked down and met some of the women who worked at Woomera in the 1950s-1970s and have also found film footage of them working on the Kine-cameras. My research is part of an Australian Research Council (ARC) discovery project auditing Australian produced "utilitarian" film from 1946-1980. The key investigators are Professor Ross Gibson (University of Canberra), Associate Professor Deane Williams (Monash University), and Professor Joe Masco at the University of Chicago and Associate Professor Mick Broderick at Murdoch.

Keywords: Woomera, women, Cold War, kinetheodolite, cameras, social history, oral history

Woomera and the Fearful Future

Woomera is a town created in the South Australian desert from 1946. It's formal rocket range came into being on 1 April 1947. Woomera was initially created out of a fear for the future. In the final stages of WW2, Germany launched its new weapons, the Vengeance rockets (V1s and V2s) from The Hague to travel in a few minutes the 300 kms to London. The V-weapons - the V1 flying bomb and V2 rocket - were Nazi Germany's last ditched attempt to stave off defeat through advanced technology. Germany deployed its 'revenge weapons' (*Vergeltungswaffen)* hence V bombs, to terrorise British civilians and undermine morale. Nazi propaganda dubbed these weapons 'wonder weapons' (*Wunderwaffe*) and hoped they would turn the tide of the war. After the war the allies captured these weapons, and the science behind them. At the start of the Cold War, there was an awareness that weapons similar to the V bombs would be required to stem the tide of the perceived Russian communist menace. It was this background that led to the establishment of the Anglo/Australian Joint Venture at Woomera.

Even though the V- weapons killed fewer people than during the "Blitz," they were weapons unparalleled in warfare to this time and they were the direct ancestors of today's intercontinental ballistic missile (Morton, 5.) 3,000 V weapons fell on London. The last V2 strike occurred on 27 March 1945. The V-weapons led to over 30,000 British civilian casualties and left hundreds of thousands homeless. Similar numbers of people died as slave labourers in the manufacture of the V bombers. While the destruction was indeed massive, it was the fact that these weapons were unmatched by the allies that was most fearful.

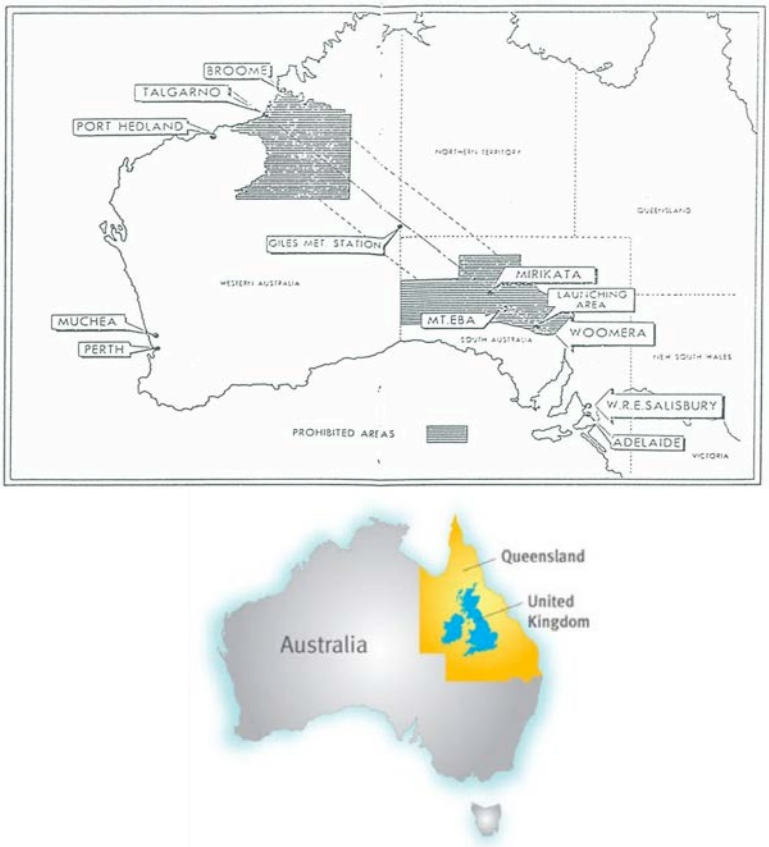
Despite "winning" the war, Britain was almost bankrupt by the end of 1945 and most of the hardware and scientific knowledge that had led to the creation of the V2s was not available to her. Due to the United States' Manhattan Agreement, Britain found herself no longer a party to the support of her supposed ally, the United States, in creating the powerful weapons that may have been required in the event of a third world war. Hence, the need to develop her own super weapons. Once Britain had decided it was essential to develop long-range weapons she looked to a suitable location in which to test them. Initially Canada was considered and was the first choice of the British cabinet. However, Canada's variable climate was considered problematic. Australia, while acknowledged as being almost too remote, was ultimately chosen. Australia's government was open to a joint venture with its Mother Country and hence a formal agreement was drawn up and Woomera came to be.

Woomera, c 1952. (Morton, 209.)

In its heyday Woomera had a population of 7,000, the highest birth rate in Australia (double the national average) and the longest bar, a sometimes-disputed "fact," of which the heavier drinking locals were enormously proud. Today, its population hovers around 240.

Trials, testing, cameras

The testing range extended some 1850km from the centre line at Woomera to Talgarno on the West Australian coast. Britain's aim was to develop weapons that could reach targets in the Soviet Union and the distance from Woomera to Talgarno was close to that between the UK and the Soviet Union. The trials of these weapons needed to be captured on film, and a workforce was required to ensure this occurred. Each test generated 1,000s of images. 50,000 pictures could be created per trial. 30 trials in a busy month could add result in 1.5 million pictures. The images were captured on a variety of cameras, including kinetheodolites – optical tracking instruments that combine a modified theodolite (telescopic instrument used by surveyors) and a recording cine-camera – and a number of specifically developed high-speed cameras. From the images, mathematical data and formulae were developed that assisted the scientists responsible for the burgeoning weapons program. The data film recorded various aspects of rockets and missiles in flight. The data was reduced to scientific and mathematical statistics, initially by female "computers" and later the enormous computing machines that were the forerunners of the computers we know today. Women played a significant role in operating the cameras that filmed the tests and in the computing of the data derived from this film.



Maps of the range showing the distance from Woomera to Talgarno and the relative size of the United Kingdom to Australia.

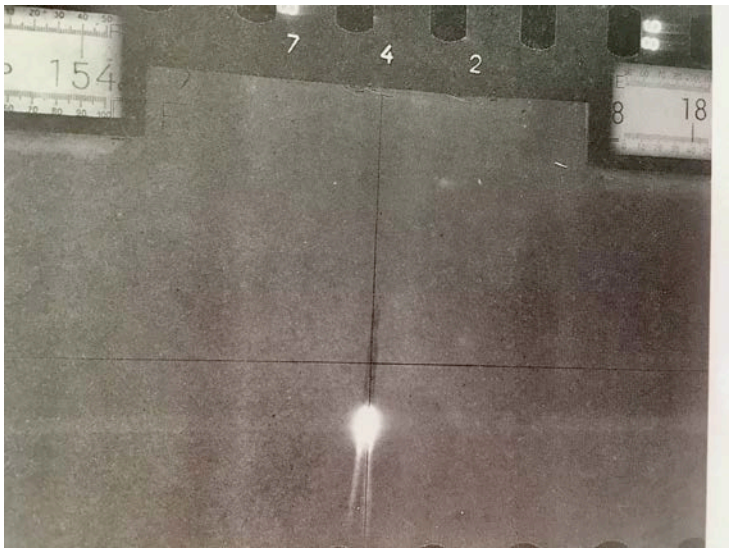
Bloodhound ground-to-air missile, c 1959, Woomera. (Morton, 316.)

Salisbury

While the range at Woomera was the outdoor "laboratory" for the testing of the weapons and rockets, a converted munitions factory at Salisbury, North of Adelaide was converted to become the scientific laboratory in which the films were developed and data derived from them assessed.

The analytical centre located at Salisbury, near Adelaide. Interior of Instruments and Photographic Laboratory. (NAA image)

My research is concerned with the role of women who worked both at Woomera and Salisbury in tasks related to the weapons testing and upper atmospheric research projects. I have been exploring the degree to which this was "a new flight path" for women and also researching women's employment opportunities and experiences at Woomera compared with those typical of women elsewhere in Australia in this era.



A single frame of an Askania kinetheodolite showing the azimuth (A) and elevation (E) scales and the frame number: 742. The subject of this piece of film: the satellite-launching rocket, Europa. (Morton, 207.)

Laurine Hall

Early in my research I read a reference to camera operator, Laurine Hall, knick-named "Floss" (Southall, 129-30), who was renowned for riding her motorbike out to the range:

> Suddenly a motorcycle crackles alongside one of the buses. Students glance up from their books…the motorcycle races ahead into the west. The rider is a handsome girl with long flaxen hair streaming in the wind. Everyone else travels by bus or staff car. Floss - Miss Laurine Hall – famous through the British rocket world, rides her own horse

Southall continued, referring to Hall's camera post: K2, (kinetheodolite post number 2)

> The post itself is known as K2. Flowers grow round the door, chintz curtains dress the windows, and pictures of puppies hang on the walls. Prettiness and femininity creates a strange feeling. Clearly the operator who handles this vital instrument is no hardheaded, iron-nerved war veteran. K2 is the working home of Miss Laurine Hall, the girl on the motor cycle, the girl better known to the world of rocketry as "Floss." It has been said that if the day comes for Floss to let the range down, the range will shut up in disgust and go out of business. This unusual young woman, scarcely out of her teens, has remained unspoilt by the fame her exploits have brought her. Barefooted she can kick a football further than most men, yet she makes her own clothes and spends her leisure hours, on and off watch, sewing or knitting or embroidering […] Floss has this unusual aptitude from the start, and if such a creature exists she is a born missile tracker. She has become a constant, a known factor, an agency of measurement against which scientists know they can judge. They can scarcely be blamed for treasuring her.[1]

It became my mission to find this woman, with the hope that she was still alive and willing to talk about her work. After some ten months, by means of genealogical and archival research, networking and pure good luck, I found her, now Mrs Laurie East, alive and well and living in Tasmania (an Island state off mainland Australia.) She celebrated her 80th birthday in July 2018.

"Floss" was also written up in the professional journal, *Flight International,* a year after Southall's book was published:

> *"…Floss, alias Miss Laurine Hall, 24… one of Woomera's more colourful notables. She operates an Askania kinetheodolite in a chintz-curtained downrange station, has worked her way through four motorcycles during her nine-year stay at Woomera…"*[2]

[1] Southall, I, (1962). *Woomera*. London. Angus and Robertson. pp. 129-130.
[2] *Flight International*, 21 November 1963.

Laurine Hall, Woomera, c 1958. (By courtesy Mrs Laurine East.)

Laurine Hall gained almost celebrity status at Woomera, more for her appearance and unusual choice of transport to work at the range than for her work as a camera operator, although she insists her skills were inferior to those of many of her colleagues (OHI June 2017). In 1963, ITV's Peter Fairley interviewed her. A screen shot of a clip from this interview is shown here.

Laurine Hall being interviewed by Peter Fairley while at her camera post.

Fairley tells us, as had Southall, Miss Hall, "is a born missile tracker," but offers little in support of this. During the interview, Hall conveys the excitement of tracking a weapon. Fairley does not take the technical discussion further and proceeds to ask Hall about her marriage plans.

The picture that emerges from this research is of a substantial number of young women who endured extreme weather conditions to capture a broad range of data that

among other things, helped Britain develop its rockets and later led to Australia launching its first satellite, WRESAT. Often the women's work was exciting, but along with this they endured long days of waiting for the next trial to go ahead. It was during the down times that "women on the cameras" had the most fun; playing practical jokes on each other and on the "lads" working nearby, styling each other's hair, working on a wide variety of crafts and also broadening their general knowledge. Loma Silsbury has spoken about some of the men in charge on the various camera posts and the guidance they offered the women, many of whom began work at the range straight from school, some aged only 14:

> Jim Hogan was inclined to dish out books for us to read and then discuss the subject matter. Twofold result, we were quiet while reading and then engaged in the discussions after….Brian McNamara was a brilliant teacher however, for those who were more interested in primping and preening, he also instructed on how to make our own shampoo, cosmetics and facial masks….He also 'invented' his own version of Trivial Pursuit to keep us amused. Even made a game board to go with it. In the vehicle or when travel was required, he churned out masses of doggerel incorporating the Camera Operators and their ilk. Jim Degatardi was into bush walking, orienteering and outdoorsy things. His instruction was on survival both in the harsh Post War reality and in the bush if needed. Much the same could be said of Jack Warrel. Les Dayman appealed to all things theatrical and so on it went. Denis Kadar was a wheeler-dealer and gave tremendous insight into the world of commerce and the art of the entrepreneur. Len Gallagher was a historian and thus, even with his slightly Old-womanish tendency to being both a pedantic list maker and general fusspot, we learned much from his recounting of historical events. All in all, we had the chance of a very broad education…."[3]

To date, as part of this research, 11 of Silsbury and Hall's co-workers, male and female, have spoken about their work on the range. None had any memories of being concerned about the possibility of a third world war or of the communist menace that both British and Australian governments considered a serious threat. On the contrary, they have fond memories of the sporting and social activities they enjoyed on the range, in the down-time between tests, and in the village itself and of the benefits of meeting people from countries outside of Australia.

In terms of the test filming, males almost exclusively held the senior role of photographer, a term used synonymously with that of "filmmaker" and females tended to be employed as the "assistant photographers". None of the women with whom I have spoken actively sought promotion to the senior role. Yet there were clearly females in this role. Patrick Bradley, one of the interviewees for this study, regarded Joan Campbell as one of the few in a senior role.

[3] Correspondence with Loma Silsbury, 18 February 2018.

Patrick Bradley, top right, Joan Campbell seated at front. Woomera Cine Section, 1958. (image by courtesy, Patrick Bradley.)

Cecily Quinn

Yet a select few females, including Cecily Quinn, were offered roles on the faster and more sophisticated Vinten cameras because of their proficiency on the Contraves and Askania kinetheodolites. Quinn began work on the range, aged 16 in 1954, initially on the Contraves on which she worked with a number of different women. Camera operators were paired up with different women as dictated by their generally male supervisor. A single person operated Askania kinetheodolites. Quinn received a telegram from the Queen for operating the only camera to record the impact of a particular rocket during a night trial on the Vinten, V34. She has reflected:

> Living and working in the desert had an impact on all our lives. I believe it opened up a wider view of our world, meeting so many from the other countries while being on the ground floor as the rocket launchers opened up (OHI 9 Feb 2018)

Many of the trials were conducted at night and this required great skills of the camera operators during complete darkness. Yet Quinn and others particularly enjoyed the night trials:

> When I worked on night trials, it was beautiful with the V34 lens, to look at the moon; it was just like a grape! I loved working nights, and this is what you miss when you go to the cities, you don't see the stars….also, you had to load things in the dark, so you had to be very competent. Get your machine turned on…reload the film if you ran out…everything in the dark. (OHI 9 Feb 2018)

Cecily Quinn at work on the Vinten (V34) camera, c 1960.
(Image by courtesy Cecily Quinn.)

The moon, taken 23:00 hours, September 1960 by Cecily Quinn, Range E on V.34, the only one of its kind in Australia at the time.
(Image by courtesy Cecily Quinn.)

Stephanie Travers

Research has revealed that despite being largely absent in the official history of Woomera, there were in fact women in other senior roles on the range. One of these was Stephanie Travers, who, while in her early 20s, held the role of second in charge of range instrumentation. One of her male contemporaries, senior camera operator, Patrick Bradley has said of her:

> "….Stephanie Travers was a very important person on the range, she was a Sub-controller. She worked for the range crew…she was the most senior woman on the range. She was deputy to the Range Controller, and the Range Controller was responsible for running the trial. We all, all sections, all units, had these trials instructions. The Range Controller's job was the run the trial

> according to the trial's instruction. It's a massive responsibility, because there was a bunch of instrumentation, optical and electronic, spread over hundreds of square miles, and there were the launch teams, all the support people, and so on. And so what this person is responsible for is managing the setup of the trial, and being responsible for the fact that the launch team, and the contractors are preparing the weapon properly, that the Air Force are prepared, the target aircraft for example is oriented and ready to go, that all the optical instruments are in place and operating correctly, and all the electronic instrumentation, and so on. That the recovery people are ready to go, that the whole system is ready. And that's too much work for one person. And so there was a Sub-Controller, and that was Stephanie Travers. Stephanie's job, Sub1, she was called… she was the contact for all of the optical systems.…she would have been in her mid 20s and she was very competent."[4]

The Australian Women's Weekly ran a feature on Woomera on 3 December 1958. Of Travers the article's writer, Ronald McKie, declared:

> "Miss Stephanie Travers, one of the key firing personalities on the range…staggers under the title of Sub Controller Instrumentation."[5]

Clearly from Bradley's testimony and that of others who worked alongside her, Travers was competent and qualified and most certainly did not "stagger" under her title or the weight of her role.

Another of Travers's contemporaries was Barbara Hewish, known on the range as "UNCLE." She was junior to Travers, yet still held a very senior role. The Central Timing Unit on the range was shortened to CTU and again to U, U had the call sign "Uncle." Hence Barbara Hewish was known as Uncle and remembered in many testimonies as Uncle. Again she does not appear in the official Woomera history.

Both Travers and Hewish had control over trials that involved £1,000s of equipment and could end a trial with a push of a button should they deem it required.

Mary Whitehead

At Salisbury, where the trials data was processed, other women played vital roles. One of these was Mary Whitehead, a qualified mathematician, who worked for Weapons Research Establishment (WRE) from 1949 until her retirement in 1982. Her main task initially was to assist in devising the formulae to calculate the precise position of a missile or aircraft at the time of its trajectory. In time she worked on the first digital electronic computer in Australia (WREDAC), one of only four in use in Australia at that time. At the end of the missiles trials Whitehead was transferred to the library to do searches on the United State databases which were the forerunner of the present day internet. Whitehead was among a small number of women who played significant roles in work that saw Australia becoming a world leader in the

[4] Oral history interview with Patrick Bradley, 7 June 2018.
[5] *Australian Women's Weekly*, 3 December 1958, page 17.

development of data processing, mathematical modelling and computer simulation of weapons systems.[6]

The computing team at Salisbury was established in 1947 along the lines of the computing staff at RAE Farnborough, the Orfordness Research Station and other British facilities. During WWII women increasingly took on the roles of data analysis, as men were required for more "essential" war work. According to Australian Space Historian, Kerrie Dougherty, women "were bought in to fill the gap." In 1949 the first team of six computers began worked at LRWE's Salisbury facility with the Bomb Ballistics group. Mary Whitehead led the team. Dougherty, who interviewed Whitehead in 1991, believes that she was the first female professional employed by the LRWE.[7] The first "computers" for the Test Vehicles Group were employed around October 1949. By the end of 1950 both teams (Bomb Ballistics and Test Vehicles) were combined into the Maths Services Group. Mechanical computers (as opposed to the human "computers") were being developed in the early 1950s, specifically to assist in the extraction of data from film records. The original human "computers" were mainly women. Originally it took 50 hours work to read 10,000 telemetry points (a small number for an average trial) from a film, followed by 50 hours to calculate the results using only desk top calculators. Another 20 or more hours would be needed to prepare to data into a useable format (Morton, p. 379.) Between 1956-57, the first WREDAC computer reduced the cost of data analysis from $4.00 a trajectory point to 50 cents. This was further reduced to ten cents per point with the introduction of the first IBM 7090 computer in 1963. (Morton, 391.)

Whitehead was highly regarded and travelled, at her own expense to learn more from her contemporaries in the United Kingdom and the United States. She was offered an exchange study program, which was cancelled at the last minute by the Australian Government, who took exception to money being spent on female travel.[8]

Other women who worked with Whitehead have been located recently and are willing to share their stories, which will become a part of future research.

Publicity Films

The Anglo/Australian joint venture was a major undertaking by both nations and many publicity films were released to promote the project and educate the public on its progress. Films were made by WRE itself and by a number of film studios associated with test partners. One of these was the Conquest Film Unit, which was a division of Hawker Siddeley Dynamics, created to promote its role in the testing

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[6] Dougherty, K., "The Role of the Australian Defence Scientific Service in Space-Related research and Innovation, " Paper delivered at the *67th International Astronautical Congress (IAC)*, Guadalajara, Mexico, 26-30 September 2016.

[7] Dougherty, Kerrie. Calculating Women: A Brief History of the LRWE/WRE Computing Team [online]. In: National Space Engineering Symposium (9th: 1994: University of New South Wales). Satellite Communications: Ninth National Space Engineering Symposium 1994; Proceedings. Barton, ACT: Institution of Engineers, Australia, 1994: 225-230. National conference publication (Institution of Engineers, Australia); no. 94/7, page 226. Availability:<https://search.informit.com.au/documentSummary;dn=691953427857680;res=IELENG> ISBN: 0858256053. [Accessed 06 Aug 18]

[8] Notes of an interview with Mary Whitehead, May 1991, (interviewer, Kerrie Dougherty).

program. During WW2 Hawker Siddeley was considered the United Kingdom's most important aviation concern. During WW2 Hawker Siddeley built the Blue Streak Rocket, designed to carry a nuclear warhead, which was launched at Woomera in June 1964.

By 1961 Hawker Siddeley employed some 90,000 people and had annual sales of £324 million.[9] It is unsurprising, given the extent and success of the company, that it would operate its own film unit to record its many successful aeronautical and space research endeavours. Conquest made films on the technical aspects of rockets and missiles, but it also made publicity films. One of these, The Blue Streak Rocket Launcher, features a Mrs Lawrence, "a housewife of Woomera". However, as the narrator explains over the footage of Mrs Lawrence dutifully washing the breakfast dishes while her husband reads the paper:

> "…Mrs Lawrence is more than a housewife. She has a part-time job on the range and for her, and several hundred others involved in Blue Streak's test, the weeks of preparation are almost over. Every working day, she joins other desert commuters on the trek to work, but for her, it's more than a bus-ride away…..Mrs Lawrence's post is far up north and there can't be many women in the world who fly 300 miles to work, and back, every day….She takes sandwiches for lunch and the plane will be back for her around 4 in the afternoon….But, today is special – the day of Blue Streak's launch, and Mrs Lawrence's camera will be one of many that will follow the flight."[10]

Here we are shown a close up of Mrs Lawrence at her camera post, a kinetheodolite, at which women like Laurine Hall, Cecily Quinn and Loma Silsbury worked.

The film is interesting for its depiction of a housewife in an unusual occupation, but also in that Mrs Lawrence is a fictional character. The script to this film is held by the National Museum of Scotland, which is the repository of the Conquest Film collection.

It is curious that although so many women already worked on the cameras at the range, an actress was used by Conquest and not one of the actual camera operators named above. Of further interest is that women like Mary Whitehead and her team who worked at Salisbury under an Australian Government Public Service award, had to leave the job on marriage. Yet at Woomera married women were able to remain at work once married and in fact many married women found work on the range to alleviate the boredom of living in an isolated village.

Concluding Comments

Woomera was unique in many respects. Aside from being a purpose built centre for weapons and rocket testing, it provided an arena for women to explore new careers outside the home and to continue to do so after marriage. There were also women

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[9] https://www.gracesguide.co.uk/Hawker_Siddeley accessed 16 October 2017. (Notes for this section of the Graces Guide reference the 1961 Guide to Key British Enterprises.)

[10] Script available at National Museum of Scotland and www.nationalarchives.gov.uk/films/1951to1964/popup/transcript/trans_rocket.htm (Accessed October 2016.)

who continued to work on the range having had children. Despite the strict security and behavioural code applied at Woomera, many of the prevailing social norms were overlooked. Woomera was a place of pragmatism, it existed to test missiles and weapons and these tests required numerous camera operators to record the date the tests generated. So from women as young as 14, straight from school, and to more mature women in their 30s with young children, female employment on the range was both accepted, encouraged and "normal."

Oral history can at times produce suspect evidence given the tendency to mythologise ones own history. Yet for without the use of oral history in this study of Woomera's women, the work and lives of a unique cohort of women would not be available. Dougherty's work with Mary Whitehead and my own with Laurine Hall, Cecily Quinn, Loma Salisbury, Patrick Bradley and many others has filled in many gaps in the extant research on the role of women at Woomera.

A future goal is to bring the women who operated the cameras during the Cold War back to the range for a reunion where they can retell their stories and share memories of this unique time and place in Australian history.

Acknowledgements

Many thanks to Australian Space Historian, Kerrie Dougherty, who shared her research on Mary Whitehead, to my supervisor, Dr Mick Broderick and to the men and women of Woomera's rocket range who have generously shared their stories, particularly, Mrs Laurine East, Miss Cecily Quinn and Mrs Loma Silsbury.

References

Books, journal articles, newspapers:

Australian Women's Weekly, 3 December 1958.

Donovan, P. *Anticipating Tomorrow's Defence Needs: A Century of Australian Defence Science*, 2007, Commonwealth of Australia, Canberra.

Dougherty, K., "The Role of the Australian Defence Scientific Service in Space-Related research and Innovation, " Paper delivered at the *67th International Astronautical Congress (IAC)*, Guadalajara, Mexico, 26-30 September 2016.

Dougherty, Kerrie. Calculating Women: A Brief History of the LRWE/WRE Computing Team [online]. In: National Space Engineering Symposium (9th: 1994: University of New South Wales). Satellite Communications: Ninth National Space Engineering Symposium 1994; Proceedings. Barton, ACT: Institution of Engineers, Australia, 1994: 225-230. National conference publication (Institution of Engineers, Australia); no. 94/7, page 226. Availability:<https://search.informit.com.au/documentSummary;dn=691953427857680;res=IELENG> ISBN: 0858256053. [Accessed 06 Aug 18]

Flight International, 21 November 1963.

Gibber Gabber, (Woomera Newsletter) various issues, esp 12 July and 26 July 1957.

Miller, Tina (2012) *Ethics in qualitative research* (Second edition). *Doing Rapport and the Ethics of Faking Friendship*. Sage. Los Angeles, Calif. London.

Morton, Peter & Australia, Department of Defence (1989). *Fire Across the Desert: Woomera and the Anglo-Australian Joint Project 1946-1980*. AGPS Press, Canberra.

Southall, I, (1962). *Woomera*. London: Angus and Robertson.

Thompson, C. P. (1996). *Autobiographical memory: Remembering what and remembering when*. Mahwah, N.J: Lawrence Erlbaum Associates.

Williams, A. L. (2004). *Home on the Range: Living a civilian life in Woomera's Cold War military landscape.* (Bachelor of Archaelogy (Hons)), Flinders University South Australia. Retrieved from https://www.flinders.edu.au/ehl/fms/archaeology_files/dig_library/theses/AndreaWilliams.pdf

Yow, Valerie Raleigh (2005), *Recording Oral History: A Guide for the humanities and social sciences*. AltaMira Press. CA.

Oral History Interviews (with the author):

- Margaret Trench (Woomera, April 2017)
- Kate McGoran (Woomera, April 2017)
- Laurine East (nee Hall) (Tasmania, June 2017 and January 2018) KEY SUBJECT
- Merrilyn Bell (by phone, June 2017)
- Joan Adams (Zajeck) (Adelaide, July 2017)
- Nigel Whitburn (father Chief photographer) (by email July-December 2017)
- Pat and Geoff Hall (Fremantle, October 2017)
- Bruce Aitken (Adelaide, February 2018)
- Loma Silsbury (Port Pirie, February 2018)
- Cecily Quinn (Whyalla, February and June 2018)
- Ron Matthews (Toowoomba, April 2018)
- Patrick Bradley (Kangaroo Island, June 2018)
- Dennis Kader (Koroit, June 2018)

Archival Films:

Blast Off 64 (1964)
Blue Streak in Aussie (1963*)*
Space Research Facilities at Salisbury and Woomera (1965)
The Australian Guided Weapons Range (1954)
The Blue Streak Rocket Launcher (1964)
Woomera Australia (1955)
Woomera range (1956)

Websites:

BAE systems, Heritage
http://www.baesystems.com/en/our-company/heritage/heritage-resources?siteAjax=Global&searchSort=sort-relevance&searchLayout=list&searchPageNo=3&searchQuery=hawker%20siddeley

British Film Institute
http://www.bfi.org.uk/education-research/education/education-partnerships

Graces Guide to British Industrial History
https://www.gracesguide.co.uk/British_Aerospace_(BAe)

http://www.iwm.org.uk/

National Archives of Australia
http://www.naa.gov.au/

National Archives UK
http://nationalarchives.gov.uk/

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