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Abstract: While the presence of women in the academic profession at levels above tutor, demonstrator, research assistant or the first rungs of lectureships was uncommon before the 1980s, individual women of talent nevertheless forged research careers of outstanding excellence. Among these scholars were the women who became the first female fellows elected to one of the four Australian learned academies founded between 1954 and 1976. The period witnessed the election of fourteen women to these academies, the first being Dorothy Hill, elected in 1956 to the Australian Academy of Science that was established two years previously. After Hill two further women were elected to that academy over the next twenty years, five women to the Australian Academy of the Humanities and four to the Academy of the Social Sciences in Australia, founded in 1969 and 1971 respectively. Two women were among the sixty-four foundation fellows of the Australian Academy of Technical Sciences in 1976. Diverse in the paths that led to their recognition by their male peers as leaders in their research fields, the women were alike in their determination and persistence in pushing the boundaries of knowledge in their chosen disciplines, and the generosity with which they engaged with postgraduate students, fellow academics and the wider public. As the women’s movement inspired more women to pursue advanced research, and the academies to develop a more nuanced evaluation of women’s contributions, many of these first academicians lived to observe the increased rate of entry of women researchers to the academies though gender proportions remained unbalanced.

Keywords: gender, research, science, humanities, social science, women’s employment, academic profession, learned academies

Formed in 1954, the Australian Academy of Science elected its first female fellow, the 49-year-old University of Queensland geologist Dr Dorothy Hill, two years later in 1956. She was the first of some fourteen women who won similar recognition by 1976 as research leaders through their inclusion as fellows in the Australian learned academies that came into existence by 1976. Following Hill, the mathematician Hanna Neumann and the physiologist Mollie Holman were elected to the Australian Academy of Science in 1969 and 1970 respectively. Historians Kathleen Fitzpatrick and Marnie Bassett, art historian Ursula Hoff and the poet Judith Wright McKinney became fellows of the Australian Academy of the Humanities on its formation in 1969.
followed by the literary critic Leonie Kramer in 1974. The demographer Norma McArthur and the sociologist Jean Martin were foundation fellows of the Academy of the Social Sciences in Australia when it began operations in 1971, though McArthur resigned soon afterwards. Enid Campbell, the expert in constitutional law, was elected in 1972 and the psychologist Jacqueline Goodnow in 1976. The year 1976 saw the marine biologist June Olley and animal geneticist Helen Newton Turner become foundation fellows in the newly formed Academy of Technological Sciences. This chapter considers the careers of these female fellows up to the time of their entry to the learned academies, when senior men in their fields identified these particular women, alongside several hundreds of men as distinguished research leaders. This chapter opens up to scrutiny the avenues through which some women achieved previously rare levels of scholarly eminence.¹

The first learned academies in Australia emerged from committees of leading academics who found themselves involved during World War II and the immediate postwar years in planning for postwar reconstruction.² The Australian Academy of Science (AAS) was founded in 1954 by Australian Fellows of the Royal Society of London, with Sir Mark Oliphant as its founding president.³ Prominent academics in the humanities and social sciences had set up separate councils, the Humanities Research Council and the Social Sciences Research Council that became converted into the two learned academies, the Australian Academy of the Humanities (AAH) established in 1969 and the Academy of the Social Sciences in Australia (ASSA) that formed in 1971. The fourth learned academy was the Australian Academy of Technological Sciences (ATS), established in 1976 when applied scientists felt the need for a distinctive academy separate from the AAS.⁴ The academies have had their historians who have outlined varying periods of their activities. Frank Fenner wrote an account of the first twenty-five years of the AAS and John W. Zillman an account of the first thirty years of the Australian Academy of Technological Sciences and Engineering (ATS before 1997).⁵ Graeme Davison noted the first women involved in the AAH in his article on the inauguration of the AAH in the first edition of the academy’s new journal, Humanities Australia.⁶ Stuart Macintyre in his extensive study of the social sciences in postwar Australia and the ASSA in particular, The Poor Relation: A History of the Social Sciences in Australia, noted the first women researchers and the academy’s gender imbalance without the space to pursue the problem in depth.⁷

The Australian Academy of Science somewhat oddly included in its initial by-laws adopted at a general meeting on 12 November 1954 the following: ‘words importing a gender include any other gender’.⁸ It was as if the academy did not wish to designate the only other ‘gender’ as female. The extent to which the academies, like universities and research institutions,
consciously or unconsciously utilised sexist practices is a contested arena. There can be no doubt, however, that while the cultures of the four academies differed, all the first women joined organisations that were overwhelmingly male, as were the tertiary and research institutions that employed them. The means by which fellows were elected after the formal establishment of the academies differed slightly between the academies, but it was through a process that outsiders found somewhat obscure. Normally a small number of fellows who supported a particular scholar consulted with the appropriate disciplinary section, and if there was enough approval the entire academy was offered the opportunity to confirm or reject the candidate through a secret ballot of all fellows. The AAS had a tight restriction on the number from each section, while the other academies were more flexible.

Sources for examining the early women in the academies are disparate. The academies include all fellows’ biographical details on their websites and tributes prepared for fellows on their deaths; the AAS also offers transcripts of interviews with many early academicians. Each of the academies also keeps archives, which document the election process but are not open to researchers. With the upsurge in interest in women’s history in the past few decades and the development of web-based biographical registers, details of numbers of the women academicians appear on the public record. Brief biographies of the women abound in such compilations as the *Australian Dictionary of Biography*, the *Encyclopedia of Australian Science*, the websites *Bright Sparks* and the *Australian Women’s Register*, and other publications readily reached through Trove in the Australian National Library. Most interesting perhaps for the historian are the interviews and, where they exist, fellows’ autobiographical writings.

The first academicians we trace in this chapter made their significant achievements in diverse disciplinary areas. There were common features in their family and educational backgrounds and opportunities to enter research after completing initial tertiary degrees but in each case specific experiences differed. First, we consider the challenging path women trod when they entered work in the academic profession in the first six decades of the twentieth century. Second, we examine the backgrounds, research training and scholarly achievements that led to the inclusion of these particular fourteen women in a learned academy. Finally, we further illuminate the quality of the women’s leadership in research by briefly recounting their performance following their inclusion in the academies – as they continued to flourish despite declining but appreciable systemic discrimination against women.
Entry to the academic profession

It was no surprise that there were few women who had the opportunity to establish the sort of reputations as scholars that would permit them a place in the learned academies as these formed from the mid fifties. From the beginnings of Australian universities academic employment was strongly divided on gender lines, with women few in number and usually employed in junior teaching. While Australia had a reputation for egalitarianism it sustained a strong gender division of labour under the mantle of protectionism that blocked women’s access to waged employment, including highly skilled work. Young women were expected to marry and married women were expected to sustain work on the domestic front while men brought in the main income for the household. The labour movement was attached to the ‘family wage’ that kept male wages relatively high, and bourgeois households held firmly also to the domestic orientation of married women. The favoured destination of middle-class daughters to which their education was directed was wife and motherhood.9

Alison Mackinnon has been prominent among historians who have focused on women in tertiary education and their movement into work before the 1970s.10 Women had been admitted to degrees in the colonies from the late 1880s. Women students commonly belonged to those middle-class families who had aspirations for professional work for their daughters. Where a family subscribed to alternative avenues for daughters, entry of girls and single women on a pathway leading to one of the professions other than nursing and primary school teaching, was based firmly on class divisions. Only the well off could afford the costs entailed in supporting daughters through an advanced secondary education and years of tertiary education to gain academic credentials.11 Women students clustered mainly in the humanities or sciences, not usually prepared for, or consciously avoiding, the professional faculties like medicine and law that openly discouraged women – they were generally keen to avoid being characterised as ‘blue-stockings’. Graduates frequently went into secondary school teaching until, or unless, they married.

There were no private women’s colleges that in the United States and Britain provided senior waged positions for a small but significant number of highly educated women. The Australian universities had affiliated residential colleges, which offered additional tuition but were not degree-giving institutions; only two universities had women’s colleges before World War II.12 Australian universities were co-educational state institutions that charged fees and were substantially reliant on government funding; there was a thin affluent middle class in Australia, and what little wealth was devoted to philanthropy was not commonly channelled to universities. That was left to governments to do, as much else.13
As in other professional areas, class was highly significant for entry into teaching positions in a university. In universities male professors with a select entourage of staff undertook the lecturing; small-group teaching was restricted to a small cohort of honours students. Part-time staff were employed to lecture and mark in specific subjects. The chief exception is in the sciences, where demonstrators assisted. After World War II small-group teaching was the arena in which most women academics found a place. Those women picked out for work, however, often as demonstrators in science or tutors in arts, were influential in terms of their impact on generations of students. The few lecturers by their very presence and often their prominence as teachers, researchers and, rarely, administrators, encouraged younger women to aspire to tertiary education and to professional engagements, and a select few to consider academia as an appropriate workplace for their sex even if this was atypical employment. These women teachers appeared in academia on the back of the first wave of the women’s movement that visualised the ‘new woman’ as able to take her place in the professions. Those women who ventured beyond their first degrees to pursue advanced studies, research and writing were for the most part single or married with no children. Until after the war there was a prevailing absence of women with children in career path positions. Not even marked talent overcame the responsibility of married women with children to prioritise domestic concerns and to refuse engagement in waged employment that necessitated leaving their children in another’s care.\textsuperscript{14}

Despite all impediments, from the 1920s onwards there were women who persevered to reach the forefront of their fields, the women academicians among them. All the women in this study were of British or European descent, born in Australia, Germany and Britain. Their birth dates ranged across several decades from 1889, the year of Marnie Bassett’s birth, to the year of Enid Campbell’s birth in 1932. They grew up in middle-class families, where at least one parent applauded their daughters’ aspirations for advanced education. Supportive collegial networks including key male mentors were usually crucial in their careers and their eventual inclusion in the academies. Their marital status in adulthood differed. Six never married; eight married, though one was divorced within a few years; six of the married women had children, often continuing to study or work while the children were young. If one characteristic stands out, it is the women’s passion for their discipline and their persistence and personal commitment to advancing knowledge. They interacted with notable generosity not only within their disciplines and universities but also in their outreach to the broader community. We begin with the three women admitted to the science academy.\textsuperscript{15}
The first science academicians

The first two women elected to the AAS, the Brisbane-based geologist Dorothy Hill and the Canberra-based mathematician Hanna Neumann, were born before the outbreak of World War I. Hill was forty-nine years old and working at the University of Queensland when she was elected in 1956.\(^6\) She was born in Taringa, a Brisbane suburb, in 1907, the third in a family of seven children; her father worked in a large city store. She was educated at the Coorparoo State School and the Brisbane Girls’ Grammar School (the leading girls’ school). She would have studied medicine but family finances could not cover the funds required for a shift to a university in a southern state, as medicine was yet to be established as a discipline at the University of Queensland. She won a scholarship and enrolled in science at the University of Queensland where she became focused on geology after encouragement from the professor – and, she said, she liked the fieldwork. After graduating in 1928 with first class honours and a gold medal for outstanding merit, she took up an overseas scholarship at Cambridge University where from 1930 to 1932 she undertook a doctoral thesis. Her research focused on corals, initially from Mundubbera on the Burnett River in southeast Queensland and then in Britain on carboniferous corals, when she extended into the area of palaeontology. Having increased her range with a series of short-term fellowships, in 1937 she accepted an invitation to return to the Geology Department back at her home university, to a research and teaching position funded by the Council for Scientific and Industrial Research (CSIR, later CSIRO). Her academic career was interrupted by several years of war work. By the time she entered the academy in 1956, still working at the University of Queensland, she had published over fifty papers, most single-authored, mirroring a fine research engagement.

Hanna Neumann, the second woman in the AAS, a 55-year-old professor of mathematics at the Australian National University at the time of her election in 1969, had perhaps the most difficult path to research leadership of all the first academicians. Neumann was born Johanna von Caemmerer, (but was always known as Hanna), in Lankwitz, Berlin, in 1914, the third child in a family of socially secure intellectuals.\(^7\) Her historian father was killed in the first days of World War I, after which the family lived on her mother’s war pension supplemented in time by her children’s casual work. At the Augusta-Victoria-Schule, where Neumann excelled, she became fascinated by mathematics, while she also earned money coaching younger children. She entered the University of Berlin in 1932, graduated with distinction in 1936 and began postgraduate research at the University of Göttingen. The advent of the Nazi regime in Germany put her studies in jeopardy and in 1938 she joined her fiancé, fellow mathematician Bernhard Neumann, in England.
where he had fled as a Jewish refugee. The couple married, and raised five children.

Hanna enrolled as an external student at Oxford University, while her husband – a German in a country at war with Germany – lived at some geographical distance from his family. For a time he was interned, following which he served in the British forces. For several years the only accommodation Hanna could rent in Oxford was a caravan in a farmer’s field where she cared for her babies, transporting them around the university town in side-cars on her bicycle, and typed her thesis at night by candlelight; on a good day, she set up her typewriter outside in the shade of a haystack. After completing a brilliant thesis under these difficult conditions, she graduated DPhil in 1944 and was awarded a DSc from Oxford in 1955 for her highly significant discoveries in group theory. Hanna Neumann and Bernard, who was elected a Fellow of the Royal Society in 1961, eventually found positions together in Manchester and then in 1962 at the Australian National University. Bernard informed the men who ‘headhunted’ him that he and Hanna formed a ‘housekeeper and gardener team’, indicating that Hanna also needed a job offer if he was to come. Bernard was appointed to head mathematics in the Research Institute of Advanced Studies, while Hanna rose from an initial position as a research fellow to Professor of Pure Mathematics in the School of General Studies, the first woman professor in the university. She held the post of Dean of Students from 1968 to 1969, had an active involvement in the Canberra Mathematical Association and was known for her mentoring of research students, her hospitality and outgoing generosity. By the time of her election to the AAS she was the author of numerous significant papers that had established her reputation as a mathematician of profound originality.

The third fellow was physiologist Mollie Holman, who was forty years of age when she was elected to the AAS in 1970, just one year after Hanna Neumann. The latest born of the women fellows, she also gained election at a relatively youthful age: academy fellowships customarily went to more senior scholars. Holman was born in Launceston in 1930, the eldest of four daughters; their father was a radiologist, the life of whom she recorded in the Australian Dictionary of Biography. The family was ‘not at all rich’, she told her interviewer, but nevertheless ‘we all went to private schools rather than state schools from the very beginning’. She showed notable academic promise at the Church of England Girls’ Grammar School in Launceston but as science was barely covered, her father arranged for her to take physics at the Launceston Technical College and then to board for her final years in Melbourne at the Melbourne Church of England Girls’ School (Merton Hall). She appreciated the school’s regime of independent learning under the well-known headmistress, Miss Dorothy Ross. Hill moved on to the University of Melbourne where she graduated Bachelor of Science in 1952, and Master of
Science in 1955 after guidance from Professor Douglas Wright in physiology. While she undertook the latter degree she worked as a demonstrator in pharmacology. She undertook a PhD at Oxford University on a scholarship under a female supervisor, Dr Edith Bulbring. Her research focused on the interaction of nerve cells with smooth muscles in the body, an area she would expand into fruitful research directions. Holman returned on the completion of her doctorate to a position at the University of Melbourne where a laboratory was set up for her in the university paint shop. In 1963 she shifted to Monash University as senior lecturer. In 1970, the year of her election to the academy, Holman received a personal chair in physiology at Monash.

Recognition in the humanities

Of the women who became fellows of the academy focused on the humanities in the twenty-year period, three – the historians Marnie Bassett, Kathleen Fitzpatrick and art historian Ursula Hoff – had been previously members of the Humanities Research Council (Fitzpatrick and Hoff from its inauguration). They were included as Fellows of the AAH from its inception in 1969 along with the poet and literary critic Judith Wright McKinney who was elected a fellow in the same year. All four women entered the academy as authors of published work that was widely respected within academia and a wider circle of educated readers. They showed considerable diversity among themselves, and differences from the science academicians in the scholarly paths that led them into the academy.

Bassett had childhood memories ranging back to Victoria’s colonial period; at eighty years on her election, she was the oldest of the early women academicians. She was born Flora Marjorie Masson in Melbourne in 1889 in the on-campus home of her father, the professor of chemistry at the University of Melbourne. 

Apart from a few months she spent at the age of seventeen at the Melbourne Church of England Girls’ Grammar School she was educated at home by governesses. After taking a course in typing and shorthand, she worked as her father’s secretary. She did not undertake a formal undergraduate degree but her enormous interest in history led her to attend lectures at the University of Melbourne, where Professor Ernest Scott fostered her early research endeavours. She won a minor research scholarship but her plans were interrupted by war work in World War I. In 1923 she married Walter Bassett, an engineering lecturer; the couple had three children. After many years devoted to the family, Bassett returned to research and writing. In 1940 she published a biography, The Governor’s Lady, a study of Anna King, the wife of Philip Gidley King. She followed this book in 1954 with the acclaimed The Hentys: A Colonial Tapestry, which became a classic study of Australian colonial history. She also published two works on voyages of

The path to research leadership of Kathleen Fitzpatrick, historian of Britain and Australia, had a more expected academic trajectory that she herself traced in an autobiographical essay and a book. She was sixty-four years of age when she became a foundation member of the AAH and was already some years into retirement from her position in the History Department at the University of Melbourne. Born Kathleen Pitt in Omeo in Victoria in 1905, she was the second of four children; her father was a civil servant. She was educated at a series of private girls’ schools and in 1926 completed a BA Honours degree in History at the University of Melbourne. She enrolled at Oxford University where she completed a second BA degree in 1928. After temporary teaching appointments at the Universities of Sydney and Melbourne, she was forced to resign her job on her marriage to Brian Fitzpatrick in 1932, as married women were required to do. After a divorce she returned to positions at the University of Melbourne first in English and then, in 1939, in the History Department. She served for some years of World War II as president of the Council for Women in War Work. She was promoted to senior lecturer in 1942 and associate professor in 1948, only the third woman to have been appointed at that level. Fitzpatrick’s publications by the time she was included in the AAH included *Sir John Franklin in Tasmania, 1837–1843,* published in 1949 by Melbourne University Press, *Australian Explorers: A Selection from their Writings* published in London by Oxford University Press in 1958 and a short study of the Australian writer Martin Boyd. Her leadership was evident in teaching as well as her research: her lectures on British History became famous and added to her efficacy in community outreach as an advocate for history and the humanities.

The career of the art historian Ursula Hoff was affected like Hanna Neumann’s by the rise of Nazism. Hoff was sixty years of age when she became a fellow of the AAH. An only child, she was born in London in 1909 to German Jewish parents, who were there on a short visit connected to her father’s pharmaceutical business. Her early education was in Germany; she completed her schooling in Hamburg and graduated from Hamburg University with an undergraduate degree in English literature and art history. The Hoff family fled Germany for London in 1933 on Adolf Hitler’s appointment as Chancellor, though Hoff herself returned to Hamburg in 1935 to complete her doctoral thesis on Rembrandt. Eligible by her place of birth for British citizenship, she worked with the curatorial staff at the Ashmolean Museum in Oxford, the British Museum and the Courtauld Institute of Art.
amidst challenging circumstances. Hoff relocated to Australia in 1939 where she took up the position of secretary at the University Women’s College at the University of Melbourne. Linking up with Melbourne’s art community, her erudition impressed the director of the National Gallery of Victoria, and in 1943 she became the first tertiary qualified woman to work in an Australian state gallery. Initially Assistant Keeper, eventually Keeper of Prints and Drawings, she also served from 1968 as the gallery’s deputy director. The professor of Art History at the University of Melbourne, Joseph Burke, offered her a teaching position that she sustained for years in a dual role as gallery curator and lecturer in art history. By the time of her inclusion in the academy her numerous publications included *Rembrandt and England*, published in 1935; *Charles I, Patron of the Arts* in 1942, *Charles Conder: His Australian Years*, in 1961; and *European Paintings before 1800* in 1967.

Judith Wright McKinney, most admired for her poetry published under the name Judith Wright, also wrote literary criticism and taught sessionally at the University of Sydney. Like Marnie Bassett she attended university but did not complete a formal degree, nor did she ever hold a senior university or research position. McKinney was fifty-six years of age when she was elected fellow in recognition of both her international reputation as a poet and the importance of her critical scholarly work. She was born Judith Arundell Wright in 1915, the eldest daughter of parents who owned a pastoral station in northern New South Wales. She was educated at home by governesses until 1928 when she became a boarder at the New England Girls’ School in Armidale. Not qualified to matriculate to university because she failed mathematics after a serious accident in her final year at school, she nevertheless spent the years from 1934 to 1936 studying English, oriental history and anthropology at the University of Sydney. Wright married the philosopher Jack McKinney in 1962; the couple had one daughter. After her husband’s death in 1966 Wright taught intermittently at the University of Sydney. Her first collection of poems, *The Moving Image*, had appeared in 1954 and over the next fifteen years she published five further volumes of poetry. She had also published on Australian history and the history of Australian poetry with *The Generations of Men* in 1959 and a study of the nineteenth-century poet Charles Harpur in 1963.

The literary scholar Leonie Kramer was aged fifty when elected to the AAH in 1974. She was born Leonie Gibson in Melbourne in 1924 to parents Alfred and Gertrude Gibson. She was educated at the Presbyterian Ladies’ College and enrolled at the University of Melbourne, where she gained her Bachelor of Arts Honours degree in English in 1945. She won a scholarship to Oxford University, where she was awarded a PhD in 1953 and tutored at St Hugh’s College. She married a fellow postgraduate student, Harold Kramer, in 1952; the couple had two daughters. In 1958 Kramer gained a position as
The social sciences

Female academics were less numerous in the social sciences than in the humanities, especially in law, economics, political sciences, international relations and anthropology. These were disciplines favoured in their early years rather more in the United States than in Britain where so many Australian academics trained. Historians and philosophers were included in both academies. Nevertheless there were prominent female members of the Social Sciences Research Council, including Camilla Wedgwood, the well-known British-born anthropologist of the Pacific whose studies of women and children on the island of Manam off the coast of New Guinea brought her considerable renown. She died in 1955 at the age of fifty-four years.32 Another woman, Norma McArthur, the ANU demographer of the Pacific, had also been active in the SSRC and became foundation of fellow of the ASSA in 1971. Somewhat surprisingly, McArthur resigned her fellowship for reasons noted but left unexplained in the ASSA annual report for 1971–1972.33 She was born Norma Ruth McArthur in July 1921 in the small town of Ararat in rural Victoria, where her father was a timber merchant and builder.34 She was bright at school, and gained entry to the University of Melbourne where she studied mathematics as part of her BA degree awarded in 1941. After participating in war work, she returned to the university for postgraduate study, from 1947 working in biological statistics at University College, London. In 1952 she was appointed to a lectureship at the Australian National University, where she undertook pioneering work on the population statistics of the Pacific islands and in 1967 produced a classic book, Island Populations of the Pacific.

Sociologist Jean Martin was also closely involved with the SSRC, having undertaken valuable research as part of its projects. She was elected to the ASSA in 1971, at the age of forty-eight.35 She was born Jean Isobel Craig in 1923 in East Malvern, Melbourne; her father was a civil servant. She
attended the Anglican Abbotsleigh Girls’ School in Sydney, and then enrolled at the University of Sydney, where she studied anthropology under E.P. Elkin. She graduated BA in 1943 followed by a first class honours Master of Arts in 1945 for which she received a University Medal. After some study at the London School of Economics in the United Kingdom, she moved to the United States to study sociology at the University of Chicago from 1947 to 1948. After returning to Australia she undertook research at the ANU and graduated PhD in 1954. She married fellow academic Dr (later Professor) Allan Martin in 1955; the couple had two children. She undertook a range of short term and casual positions before in 1962 she received her first full time job in 1965 as Foundation Professor of Sociology at La Trobe University.

The second woman elected to the ASSA was the constitutional lawyer Enid Campbell. Born Enid Mona Campbell in 1932 in Launceston, Tasmania, daughter of Neil and Mona Campbell. She was educated at Launceston Methodist Ladies’ College where she was dux. At the University of Tasmania she graduated Bachelor of Laws and Bachelor of Economics with first class honours and was awarded the University Medal. In 1955, following graduation, she won a scholarship to undertake a PhD at Duke University in North Carolina. She returned in 1959 teach to take up a lecturing position in law in Tasmania, then moved in 1967 to become the Sir Isaac Isaacs Professor of Law at Monash University, where she assumed the responsibilities as dean in 1971, the year of her inclusion in the ASSA.

Jacqueline Goodnow, aged fifty-two years in the year of her election to the ASSA in 1976, was born Jacqueline Jarrett in 1924 in Toowoomba, Queensland, the oldest of six children; her father was an accountant who shifted through several positions in the Depression including running a dairy farm in Queanbeyan. She completed her secondary education in Sydney after her family moved there, at St Vincent’s College, a girls’ school that offered none of the science subjects Goodnow sought. She enrolled at the University of Sydney at age sixteen and graduated in 1944 with a BA Honours degree in Psychology which, she said, was the nearest she could get to science. She was awarded the University Medal and a travelling scholarship to Harvard University, the only one of the fourteen first fellows to undertake her doctorate in the United States rather than Britain, though Martin had undertaken a year of research there. In 1951 she completed a Harvard PhD in psychology and married Robert Goodnow; the couple had two children. After holding several lecturing and research positions in the United States, in 1971 she was appointed Professor of Psychology at George Washington University. The following year, however, she returned to Australia to Macquarie University where in 1976 she became Professor of Psychology. Her major research interests focused upon the intersection of developmental and social
psychology, with a particular emphasis on the social development of families, communities and cultures over their lifespan.

The technological sciences

The two further scientists who became academicians in the twenty-two year period, the animal geneticist Helen Newton Turner and the marine scientist June Olley, found themselves in 1976 the only female Foundation Fellows among the total of sixty-four fellows in the newly formed ATS. Like the women elected to the AAS, Olley had sterling academic credentials: both an outstanding undergraduate record and a postgraduate degree from the prestigious University of London, from which she moved immediately into waged research positions. Newton Turner’s curriculum vitae differed. Her initial degree was in an area outside science, she undertook no formal postgraduate qualification (though she had a crucial research year in Britain) and she made a path from secretarial work into a career in original research. Both women differed from the women elected to the AAS in that they carried out their research, not in universities, but in the Council for Scientific and Industrial Research (CSIR) that became known from 1949 as the Commonwealth Scientific and Industrial Research Organisation (CSIRO). Their contribution to knowledge, in their case in applied sciences, was similarly impressive.

Helen Newton Turner was sixty-eight years old and already three years into retirement when she was elected to ATS in 1976 as an internationally recognised world expert on sheep genetics; her work had substantial impact on merino sheep breeding. Her early career differed markedly in some aspects from the other scientists in this chapter. She was born in Sydney in 1908 to a mother who was a university medalist of the University of Sydney and a father worked in the State Children’s Relief Department of New South Wales. Her career took a number of twists and turns. Newton Turner had been identified at school as very gifted, and her parents encouraged her to continue study at the University of Sydney. She graduated with a degree in architecture, but she found herself unemployed in the Depression. After learning to type she found a job as a secretary in an architecture firm and then – most fortunately as it turned out – as secretary to Dr Ian Clunies Ross in the CSIR division of animal health. She became curious about the data she typed for others and returned to university part-time to undertake courses in mathematics and statistics. Impressed by her acute analysis, Clunies Ross appointed her statistician at the laboratory and in 1936, now classified as a technical officer, she was awarded leave to study in Britain with a foremost statistician. Newton Turner returned home to a more senior position and from 1956 to 1973 held the post of Senior Research Scientist in the Division of
Animal Genetics, leading the team working on sheep genetics. In 1970 she was awarded the degree of Doctor of Science at the University of Sydney. The significance of her research was underlined by her high profile on a national stage and her impressive international recognition. In retirement from 1973 she continued her research and also worked extensively with researchers in developing countries in an effort to assist them increase local animal health and fertility.

June Olley was fifty-two years of age in 1976 when she became a fellow. Her early research career had many similarities with the AAS women fellows; like them, she undertook her postgraduate research at a prestigious university in Britain and proceeded directly to fellowships and employment with a research component. Olley was born near Croydon aerodrome south of London in 1924, the first and only child of a pilot father who did not believe in education for girls. Her mother, however, insisted that she attend an academically oriented secondary school, Wycombe Abbey, which offered a range of science subjects. She entered University College in the University of London where she completed an honors degree in chemistry in 1944; through the complications of the war rearrangement she was prevented from studying biochemistry. She then undertook a doctorate in 1950 in the chemistry of nutrition in the London School of Hygiene and Tropical Medicine under Professor B. Platt who then and later fostered her career. She graduated PhD in 1950; in 1968 the University of London awarded her the degree of Doctor of Science. Starting from her doctoral research, Olley pioneered work on scientific methodologies to predict food safety, now known as predictive microbiology. Olley worked from 1950 to 1967 in the Department of Scientific and Industrial Research on the harbour in Aberdeen, Scotland. She accepted an appointment in the Tasmanian Regional Laboratory of the CSIRO in 1968, the same year in which she married a Hobart barrister, Francis Cumbrae-Stewart, whom she had met in Britain. At the time of her election to ATS in 1976 she had completed work of enormous importance on the preservation of fish and shellfish in Division of Food Preservation.

Academicians and academies: later years

The first academicians were remarkably active in research and other academic projects until their retirements and beyond. Sadly, Hanna Neumann died in 1971 when she was fifty-nine years old of a brain aneurism that she suffered near the end of a Canadian lecturing tour. Jean Martin, by then a senior research fellow in the Research School of Social Sciences at the ANU, died of cancer in 1979 at the age of fifty-six. Both were mature scholars at the height of their powers. But many others sustained productive lives well into their
seventies and eighties, a favoured few into their nineties.\textsuperscript{40} Consider the progress of Dorothy Hill with whom we started this chapter and her fellow science academician Mollie Holman. Three years after Hill’s election to the AAS in 1956 she was appointed to a professorship in geology at the University of Queensland, a position she held from 1959 to 1972. In 1965 she was the first Australian woman to be elected to the British Royal Society, a tremendous honour. In 1969 she became the first woman elected vice president of the AAS and served a one-year term as president in 1970. From 1971 to 1972 she was the first woman in an Australian university to be president of her university’s professorial board. She took leadership also in promoting nationally the interests of Australian universities and university libraries; for her multiple contributions Hill was awarded a CBE in 1971 and an AC in 1993. She kept working till a fall compromised her mobility not long before she died in 1997 at the good age of ninety years. Mollie Holman’s research similarly flourished and she made internationally significant breakthroughs, by dint, she said, of routinely working in excess of sixty hours per week. Even after her retirement in 1996 she gave generously of her time and advice, and was honoured with appointment as an Officer of the Order of Australia in 1998, an honorary Doctor of Laws at Monash University in 1999, and in 2007 the David de Kretser award for her outstanding contribution to the Faculty of Medicine, Nursing and Health Sciences. She died in 2010 two months after her eightieth birthday.

Similar reports can be compiled of the ATSE fellows June Olley and Helen Newton Turner after their election in 1976. Olley continued major research projects, offered generous assistance to honours and postgraduate students in the Microbiology Research Group and mentored researchers in developing countries, including Indonesians involved in fish drying. Olley was awarded an AM in 1988. After her retirement in 1989, she took up an honorary appointment at the University of Tasmania, from which she received a Doctor of Science. A colleague declared of Olley when she turned eighty years of age that she was maintaining a ‘blistering pace’ that showed no sign of slackening. She now nears her ninetieth birthday. Newton Turner similarly continued well into her retirement to offer her skills on national and global scale. Awarded an OBE in 1977 and an AO in 1987, she inspired in others an immense gratitude and affection that were expressed on her death in 1995.

Of the humanities fellows, Kathleen Fitzpatrick was a revered figure in Melbourne. After her inclusion in the AAH she published a fine study of a girls’ secondary school, \textit{PLC Melbourne: The First Century, 1875–1975} in 1975 and in 1983 the autobiography, \textit{Solid Bluestone Foundations and other Memories of a Melbourne Girlhood 1908–1928}. She had retired in 1962 at the relatively early age of fifty-seven years but continued a vigorous engagement in research and other academic matters up till her death in 1990. Judith Wright
continued to write but increasingly pursued other concerns with Aboriginal land rights and environmental protection. She resigned from the AAH in 1993, for what reason is uncertain. She died in 2000 at the age of eighty-five years. Ursula Hoff was awarded an OBE in 1970 and AO in 1985. Hoff’s biographer claims ‘her influence continues in a living inheritance in the directors past and present of major Australian galleries, whose standards have been formed by hers.\(^4\) On Hoff’s death in 2005 at the age of ninety-six, the art historian Jaynie Anderson wrote: ‘Ursula Hoff was one of the earliest women scholars to pursue a rewarding intellectual career in art history. Irrespective of her gender, her life was an extraordinary one.\(^4\) Leonie Kramer extended her research leadership when she edited the *Oxford History of Australian Literature* (1981) that defined a significant entry to understanding Australian writing and produced important critical editions of Australian poetry and poets. In 1983 she was made a DBE, she served as Chairman of the ABC and in 1990 received an AO. Kramer was an influential leader in her field and in academic concerns, including academic administration, serving as Chancellor of the University of Sydney. She now nears her ninetieth birthday, due in 2014.

Enid Campbell was widely admired through her mature years for her exceptional intellectual achievements and the women lawyers she inspired; her fine students included Judith Gaudron of the High Court of Australia and Marilyn Warren of the Supreme Court of Victoria. In 2005 Gough Whitlam described her, in the foreword to a collection of essays honouring her at the time of her award as Companion of the Order of Australia, as ‘a public scholar of the highest distinction’.\(^4\) Jacqueline Goodnow continued as an outstanding scholar and contributor to academic and community debate and activities. In 1992 she, like many of these early academicians at later stages of their careers, received a state honour, in her case a Companion of the Order of Australia. She continues active involvement as an Adjunct Research Professor in Psychology at Macquarie University and as a member of the advisory board of the Centre for Children and Young People. She is currently completing a book on Australians’ views of inheritance with Jeanette Lawrence. She, too, will turn ninety years of age in 2014.

If asked whether they personally had faced discrimination as a woman across their careers, the early academicians generally responded quickly in the negative. In an interview with Ann Moyal in 1993, Helen Newton Turner insisted that in her career she had never, ever been discriminated against because she was a woman. She recounted how following an interview she returned to her laboratory to report that she had been asked ‘the usual question’. Her male collaborators replied that she gave the right answer – she was one of the boys. Had she confronted obstacles because of her sex, Ragbir Bhathal asked Mollie Holman in 1997. ‘Absolutely none at all, quite the
reverse,’ was her reply. ‘No, everyone was just wonderful, there was no problem at all.’ When her interviewer put to June Olley: ‘It doesn’t sound as if the fact that you are a woman has made any difference to your career in science’, Olley promptly replied ‘Oh, it has – I’ve been thoroughly spoilt’. In an autobiographical essay Kathleen Fitzpatrick was at pains to deny that she experienced discrimination over the appointment of a second chair in History at the University of Melbourne. While others had predicted her appointment to the newly established Ernest Scott Chair, she decided against applying as, she felt, she did not meet her own expectations of the scholar who filled the position.\textsuperscript{44} The women did not want to admit to personal difficulties over male perceptions of them in their careers, and they were glad to be there. There were many other women who declared that in academia they encountered reasonably equitable treatment, at least when they compared themselves with their peers in other professional employment, or with their sisters who became homemakers.

The same academicians who downplayed the presence of discrimination in their working lives might nevertheless align themselves with the forces demanding better opportunities for women when that became an issue from the 1980s. Holman in the same time interview declared it was ‘just ridiculous that there are so few women in top roles in science’. It was good that Suzanne Cory was in charge of the Walter and Eliza Hall Institute, she continued, but there ought to be far more women in the administration of science all the way through. ‘I think science would be much better for a lot more women in science, and I feel very strongly about that.’ In her interview Newton Turner added a wry comment about gender imbalance in ATSE: ‘they keep asking me to nominate more women and then knocking them back. I’m very cross with them at the moment [laughter].’\textsuperscript{45}

Most fellows lived long enough to benefit from the enhanced awareness of women’s issues that saw the talents and contributions of female scholars more widely valued. In part because of a retrospective awareness of gender discrimination, the universities and research institutions where the first women academicians taught and the professional bodies that represent their disciplines have moved in recent years to honour the women, and have now established in their names prizes, awards or dedicated public lectures. They realise more fully that these early researcher leaders achieved their goals against the odds, and take pride in the institutions and mentors who fostered their careers. The catalyst for change had been the impact on academia of the resurgence of the women’s movement in Australia from the late 1960s that undermined the prioritisation of male waged work and unsettled gender divisions within workplaces.\textsuperscript{46} The influx of married women into the waged workforce, including the academic profession, was promoted by equal employment opportunity legislation that the Australian Labor Party
government under Robert Hawke saw through federal parliament. The Sex Discrimination Act of 1984 outlawed discrimination on the basis of sex in employment and the Affirmative Action Act of 1986 made the reporting of statistics on women in the profession mandatory. Universities immediately established units to monitor women’s employment and establish targets (though not quotas) for recruitment and promotion. These innovations had a noticeable effect on the work situations of women in most tertiary institutions.

Most academicians also witnessed the steadily increasing proportion of women in the learned academies in which typically they were active participants. In 1976 the total membership of the AAS after twenty-two years of operation stood at 194, two of whom were women. There were 112 fellows of the AAH after seven years of existence, five of whom were women, and at the end of its first five years there were 150 ASSA fellows, including three women. The total membership of ATS in its first year was sixty-four, of whom two were women. These numbers amounted to a very marked gender imbalance. With the increased number of women in a wider range of research degrees, their appearance at the upper levels of the academic ladder became commonplace. Far more potential fellows emerged as women moved into the upper echelons of research and heard feminist critiques of the ways male dominated academies assessed research leadership. Elections of women to the academies edged up in the 1980s then increased quite rapidly in the 1990s and 2000s.

The rate of increase was most marked in the ASSA. Following on from McArthur, Martin, Campbell and Goodnow, it elected the anthropologist Marie Reay in 1977 and the geographer, Fay Gale in 1979. In the 1980s nine further women were elected. In the 1990s it elected forty-six women and Fay Gale became its first female president in 1997; in the 2000s seventy-two women were elected and Sue Richardson served a term as president; ten were admitted as fellows in the year 2011. In 2012 the ASSA had 524 fellows (including honorary fellows), a total which included 140 women, around a quarter of the membership.

The AAH also increased noticeably the number and rate of elections of women. Following Leonie Kramer, it elected the linguist Luise Hercus in 1978 and the archaeologist Isabel McBride in 1979. The 1980s saw the election of nine women. In the 1990s thirty women were elected and in the 2000s, a further fifty. The AAH elected its first female president from 2004 to 2006, Professor Margaret Clunies Ross of the University of Sydney. In 2012 the president is Lesley Johnson and the vice president is Anna Haebich; the AAH included ninety-four female fellows in its total of 524 (including honorary fellows), around a fifth of the membership.

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The increase was also apparent in the two science academies, although the record was less impressive. There were comparatively fewer women in professorial or other senior research posts in science but, arguably, the science academies resisted any special effort to identify and elect women of talent.\textsuperscript{51} The proportion of women in the membership of the AAS and ATSE currently stands at around six to seven per cent. No further women were elected to the AAS after Holman in the 1970s and in the 1980s just three more women were admitted.\textsuperscript{52} These entry numbers tripled in the 1990s with nine women elected and in the first decade of the 2000s a further twenty. In 2012 there were thirty-five female fellows out of a total of just over four hundred (including corresponding fellows).\textsuperscript{53}

Turning to the ATSE, after its initial appointments in the inaugural year, the academy elected the microbiologist Nancy Millis in 1977, followed in the 1980s by the plant biologists Elizabeth Dennis and Adrienne Clarke. Seventeen further women were elected in the 1990s. A marked gender imbalance continued up to 2012, when fifty-two out of a total of some eight hundred members were women.\textsuperscript{54} Suzanne Cory is currently president of the AAS and Mary O’Kane is vice president of ATSE. The ATSE has finally taken steps to redress the gender ratio beginning with the academy’s adoption in November 2010 of a gender equity policy. The policy ‘recognises leadership is needed to address the gender imbalance both within the Academy membership and its activities as well as more broadly in promoting women in senior level in technological sciences and engineering in Australia’. In 2011 the academy alerted fellows to an element of bias in their election process when it instituted a positive discrimination policy to increase the numbers of women fellows. It announced the establishment of a target for the election of women, to constitute one-third of new fellows elected each year.\textsuperscript{55} Helen Newton Turner would have been gratified to know it.

**Conclusion**

In her interview in 1997 Mollie Holman, recently retired from her chair at Monash University, remembered with warmth and gratitude her academic engagements through a creative and satisfying career going back more than forty years. But she referred also to the challenges of leadership within the constraints of university employment:

> Every academic has got three responsibilities, three jobs in one lifetime: one is to be an administrator, one is to be a teacher and one is to be a researcher. It’s virtually impossible to be fully satisfied that you’ve done well in any of the three areas … It’s an impossible life being an academic.\textsuperscript{56}

Yet Holman and her peers who became designated as leaders in their fields by virtue of their inclusion in one of the learned academies acquitted themselves
impressively. While the entry of women into the academic profession above the level of tutor, demonstrator or research assistant was uncommon up to the 1960s, individual women forged research careers of outstanding excellence. Among these pioneering scholars were the fourteen women who became the first fellows of the Australian academies over their initial two decades. Diverse in their entry paths to distinguished scholarship, the women were alike in their determination and persistence in pursuing their disciplines, and the generosity of their engagements with academics and the wider public. The academies were eventually aware of the gender issues that kept the numbers of early female fellows so restricted and the willingness they needed in turn to assess fairly the worth of the research of women.

1 This chapter arises from the ARC Linkage Grant ‘Women and Leadership in a Century of Australian Democracy’. See also the entry on the history of women in the learned academies from 1954 to 2012 for the eEncyclopedia of Women and Leadership Since 1900, edited by Judith Smart and Shurlee Swain, forthcoming with the eScholarship Research Centre, University of Melbourne.


3 See Frank Fenner, The Australian Academy of Science: The First Twenty-five Years (Canberra: Australian Academy of Science, 1980).


5 Fenner; Zillman.


7 Macintyre.

8 Fenner.


Patricia Grimshaw and Lynne Strachan (eds), *The Half-open Door: Sixteen Modern Australian Women look at Professional Life and Achievement* (Sydney: Hale and Iremonger, 1982); Patricia Crawford and Myrna Tonkinson, *The Missing Chapters: Women Staff at the University of Western Australia, 1963–1987* (Perth: Centre for Western Australian History, University of Western Australia, 1988).


See Carey and Grimshaw, *Women Historians and Women’s History*.


41 Anderson, ‘Ursula Hoff’.


46 They were the political scientist Carol Pateman, the historian Pat Jalland, the economist Helen Hughes, Beverley Raphael in social medicine, two lawyers Marcia Neave and Alice Tay, and three sociologists Eva Etzioni-Halevy, Bettina Cass and Jane Marceau.

47 See information on the ASSA website: www.assa.edu.au.

48 The women elected were: in the arts and art history, Virginia Spate, Margaret Manion, Ann Galbally and Margaret Plant; in history, Dale Kent; in Asian studies,
Margaret Kartomi; in archaeology Sylvia Hallam and Betty Meehan; and Anna Wierzbicka in linguistics.

30 See information on the AAH website: www.humanities.org.au.
31 Professor Tom Healy, personal communication, 24 April 2012.
32 They were the palaeontologist Elizabeth Truswell, the molecular geneticist Suzanne Cory and the biologist Jan Anderson.
33 See information on the AAS website: www.science.org.au.
34 See information on the ATSE website: www.atse.org.au.