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Mary Adams and the producer's role in early BBC science broadcasts

Allan Jones

Abstract

Mary Adams was a science producer at the BBC from 1930–6. She is shown to have played a crucial role in shaping science broadcasts, in particular devising formats and styles of presentation. However, her approach is shown to have been primarily motivated by broadcasting considerations rather than by the popularisation of science. Through her interaction with scientists she helped to construct a new professional domain, that of the science-broadcasting professional, at a time when other producers were creating analogous roles in other areas of broadcasting. This paper is based largely on unpublished archival documents.

1 Introduction

In 1930, a 30-year old biologist from Cambridge University, Mary Adams (1898–1984), joined the staff of the British Broadcasting Corporation (BBC), Britain's only official broadcasting body at the time. She was the first specialist science producer in the BBC that we know by name.¹ A colleague wrote that during her six years in post “she raised high the level of broadcast science talks” (Lambert, 1940, p.75). This paper looks at her role as a science producer, and at her ideas about science broadcasting. It also presents the organisational context within which she worked.

¹ There is a suggestion that there was a science specialist, or specialists, before Adams. It comes in a letter dated 31 February [sic] 1928 from the BBC's Head of Talks Hilda Matheson to science journalist J. G. Crowther. Matheson says: ‘Regular science talks are not my domain, but I learn from the section responsible for them...’ (Matheson, 1928).

Adams was not a broadcasting novice when she joined the BBC in 1930. In the spring of 1928 she had given a series of six radio talks on *Problems of Heredity*. These talks “caused widespread interest” (BBC, 1930, p.9), and were published the following year (Adams, 1929). In the book’s preface Adams offered some thoughts on science broadcasting. She considered that, in a broadcast talk, ideas counted for more than facts, which often had to go unstated. A good voice was more important than subtlety of expression. Finally, “[b]roadcast talks need not be confused with education: they are promising stimulants which may become a powerful aid to the spread of education.” In other words, mainstream broadcasting (as opposed to specialist broadcasting such as Schools broadcasts) was not a medium for delivering lectures; but, used in the right way, it could surprise casual listeners into wanting to know more. This was broadly the view she maintained during her tenure as a radio producer, as I show in this article.

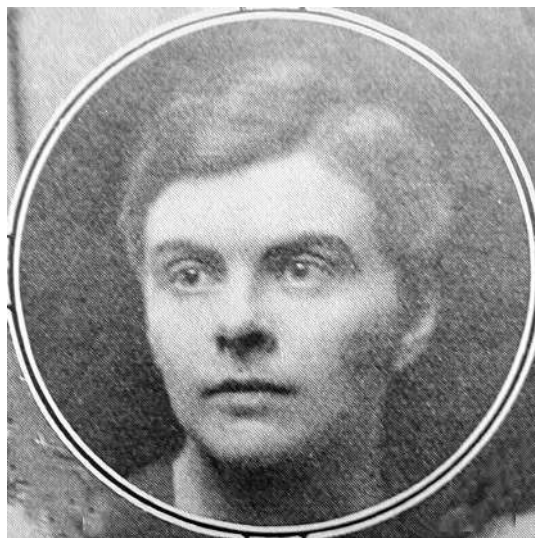


Figure 1 Mary Adams at the time of her first broadcasts in 1928 (BBC, 1928)

Science scarcely figures in histories of British broadcasting (see, for example, Briggs, 1961, 1970 and 1995; Paulu 1956 and 1981; Scannell and Cardiff, 1991; Crisell, 2002.) In this, their authors follow a pattern set by the many early BBC staff members who published reflections on broadcasting. For instance, John Reith, the first Managing Director of the BBC and (from 1927) its first Director General, outlined his conception of public-service broadcasting in his book *Broadcast over*

Britain (Reith, 1924), with chapters on the enormous potential of the new medium for music, literature, religion and general education; but only a single sentence alludes to its potential for science. Similarly taciturn about science was the BBC's first Talks Director, Hilda Matheson, whose 1933 book *Broadcasting* has chapters on literature and drama, music, entertainment, and education, but only a couple of paragraphs on science as a broadcasting subject (Matheson, 1933). More recently, specialist historical studies have appeared which examine particular facets of the BBC, such as its activity in music, modernist literature, medicine, and its relations with the press (see respectively Doctor, 1999; Avery, 2006; Karpf, 1988; Nicholas, 2000). However, science remains largely unexplored. (The present author's doctoral thesis, Jones 2010, is a preliminary foray; and Boon, 2008, looks at early television science documentaries.) The relative absence of science from the historical literature, however, does not mean that science was of little account in the BBC's early history, as will become clear.

Away from broadcasting history, much of the scholarship relating to science in the popular media has focused on science journalism, especially in newspapers (Bucchi and Mazzolini (2003); Sumpter (2007); McComas and Simone (2003); Hansen (1994), to give a few examples) and television (for example, Murcott (2010), Tanner (2004) and Bienvenido (2008)). This work has largely shown that science news stories are framed primarily by contemporary news values: topicality, sensation and relevance to readers trump the canonical scientific values of caution, qualification and precision. In other words, the institutional values of the context in which the science is presented are crucially influential, and this remains true when the science stories are not news-related. For example, Ulin (2003), drawing on American experience, shows how an exceedingly concise programme format fostered a politically and ethically neutral view of science which suited the programme's corporate sponsors. The format also, ironically, suited advocates of a greater public understanding of science, who equated a knowledge of science with assimilation of decontextualised facts – the type of content engendered by the programme's format. Hughes (2007), in a study of the early freelance science journalist J. G. Crowther

(who appears in this article), demonstrates how the shifting power balance between Crowther, his editor and his scientific contacts materially affected the content and style of the published stories. Silverstone (1985) observed, in the making of a BBC *Horizon* television documentary, the gradual evolution of storyline by the television producers in such a way that the final product met the producers' needs rather than the scientists'. Science output in the popular media thus straddles several areas of professional competence (as does much media production). The interaction of those competences bears on the final product.

With science broadcasting at the BBC, the institutional dimension looms especially large because of the singular ethos of the organisation. Within a short time of its founding, the BBC became a byword for high-mindedness and public service, and for many of the staff who joined in the 1920s and early 1930s (the cohort which included Adams), broadcasting was almost “a social and cultural crusade” (Briggs, 1995, p.12).

2 The BBC; paternalism and public service

Broadcasting in Britain, which began during the early 1920s, was very much a product of the immediate post-First World War era. Its public-service ethos was a response to social conditions in the aftermath of the war. Briggs (1995, p. 173) refers to a widespread feeling during and after the First World War that national education in Britain had served the population badly. For many Britons, formal education had been limited to basic skills (LeMahieu, 1988, p. 10). Many intellectuals considered that the public was deprived of education in democratic citizenship. In effect there was a “knowledge gap” between the state and the citizenry, especially among those newly enfranchised in 1918 – that is, men aged 21 and over, and women aged 30 and over (Scannell and Cardiff, 1991, p. 11). According to John Reith, the begetter of British public-service broadcasting, creating a better informed and more responsible citizenry was one of the many potential benefits of radio (Reith, 1924, p. 18–19).

A knowledge deficit was not the only disadvantage endured by the mass of citizens. New forms of commercial popular culture (cinema, recorded popular music and large-circulation publications) were considered, by pessimists within cultivated élites, to be debased. They were banal, appealed to base instincts and undermined established cultural hierarchies (LeMahieu, 1988, pp, 107–121). Some “progressive” intellectuals, however – characterised by LeMahieu (1988, p 138–9) as sceptical about the efficiency, fairness and social utility of *laissez-faire* economic policy – took a more sanguine view. They believed that the new modes of communication, used responsibly, could help create a more unified, egalitarian society (Scannell and Cardiff, 1991, p. 13). LeMahieu sees John Reith’s conception of broadcasting as one such progressive response to mass, commercial culture. Reith’s aim as a broadcaster was not to satisfy a market want, but to elevate taste by supplying edifying material. He was overtly paternalistic:

It is occasionally indicated to us that we are apparently setting out to give the public what we think they need – and not what they want, but few know what they want, and very few what they need. (Reith, 1924, p.34)

Responsibility for determining listeners’ needs lay solely with the BBC, which effectively had a monopoly on broadcasting in Britain until the introduction of commercial television in the mid-1950s. Under the aegis of the BBC, such cultural luminaries as W. H. Auden, Hilaire Belloc, Robert Bridges, G. K. Chesterton, T. S. Eliot, Aldous Huxley, John Masefield, George Bernard Shaw, Beatrice and Sidney Webb and H. G. Wells were brought before the public in the early years of broadcasting (Avery, 2006, p. 139).

Although the fare offered by the BBC was not always popular, broadcasting itself proved highly popular, as in many other parts of the world. Between 1930 and 1939, the proportion of UK households possessing a radio rose from 30% to 70% (Pegg,

1983, p. 7). The medium was not only popular, it was also universal. Scannell (1980, p.24) has observed: “Radio addressed not the particular publics of the daily newspapers, not the specialised readership of the Left Book Club, not the tiny audiences for documentary films, but the general public, society at large.” The BBC, then, had a wide and increasing reach during the 1930s. Furthermore, it was not merely a disseminator of cultural artefacts; rather, it had a pastoral role in relation to its listeners, guiding their taste.

3 Talks and adult education

In the period during which Mary Adams worked as a radio science producer, and for long after, there was no department in the BBC specialising in science. In principle, what distinguished BBC departments from each other was not content but mode of presentation. In 1927 there were four main programme-producing departments (Briggs, 1965, pp.664 and 665):

Talks

Education

Music

Productions

The last of these, “Productions”, handled popular entertainment, as well as dramatic presentations. The Music department, which dealt only with “classical” music, was an exception to general principle that departments were not defined by content. During the 1930s, other departments were added for overseas broadcasts, television, outside broadcasts, news, and schools, all of which could handle many types of output, including science.

From roughly the mid-1920s to the mid-1930s, many of the talks presented during the prime listening time of early evening were produced by the Adult Education section, which, prior to 1928, had been in the Education department.

Thereafter it formed part of Talks, except for a hiatus around 1931 when it was briefly split from Talks (Scannell and Cardiff, 1991, p. 155; Briggs, 1995, p. 206). Adult Education was the section Mary Adams joined in 1930, and for whom she had presented her six talks on the *Problems of Heredity* in 1928, referred to earlier.

Adult education talks were meant to be interesting to general listeners; but, for the more motivated listener, additional resources were available. For the price of postage, listeners could get a syllabus of talks, which gave a timetable for the term (12 weeks), synopses of talks, information about the speakers, lists of further reading, and questions for discussion. The BBC encouraged collective listening, under the direction of an adult education officer, who would not be formally connected with the BBC. Figures 2 and 3 are taken from adult education syllabuses.

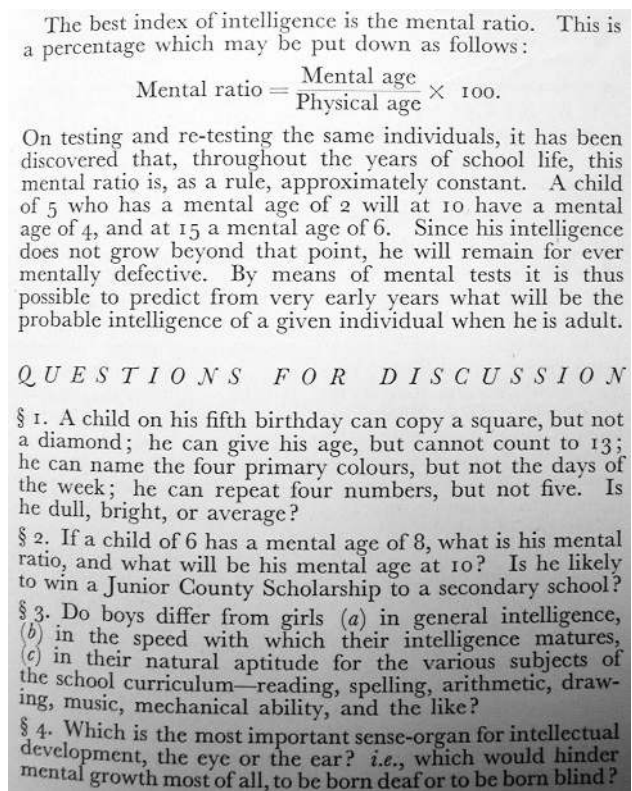


Figure 2 Page of an adult education syllabus relating to the talk *Mental Growth*, broadcast by Cyril Burt on 15 June 1927, as part of the series ‘The Development of Mind and Character’ (BBC, 1927)

PLAN OF TALKS—APRIL TO JULY 1930							
	10.45 a.m.	6 p.m.	7 p.m.	7.25 p.m.	8 p.m.	8.30 p.m.	9.20 p.m.
MONDAY	THE COUNTRYWOMAN'S DAY	TOPICAL TALKS	BOOK REVIEWS Mr. Desmond MacCarthy Miss V. Sackville West	LANGUAGE TALKS (Fortnightly) FRENCH M. E. M. Stephan COMMERCIAL SPANISH Don Juan Mascaro	<i>London and Midland Regionals</i> TO-DAY AND TO-MORROW: A Philosophy of Freedom Prof. J. Macmurray		STARS AND STRIPES INDIA
TUESDAY	EMPIRE MARKETING BOARD RECIPES (Fortnightly) OTHER PEOPLE'S LIVES (Fortnightly)	READINGS FROM THE VICTORIAN POETS	LOOKING BACKWARD (During May) HINTS ON SPORT MUSIC IN THE THEATRE	THE MAKING OF A PERSONALITY The Body as a Maker of Mental "Controllers" Prof. W. H. R. Rivers The Nervous System, Prof. G. Elliot Smith; again: One's Parents, Prof. F. A. E. Crew	<i>Daventry only</i> THE STUDY OF THE MIND Dr. Cyril Burt	<i>London and Midland Regionals</i> TO-DAY AND TO-MORROW IN ARCHITECTURE MODERN ASPECTS OF FINANCE	THE PROGRESS OF MUSIC Dr. G. Dyson
WEDNESDAY	THE WEEK IN WESTMINSTER	FARMERS' BULLETINS (Fortnightly) THE CARE OF DOGS (Three talks, monthly)	MINISTRY OF AGRICULTURE DEPARTMENT OF OVERSEAS TRADE OVERSEAS SETTLEMENT DEPARTMENT EMPIRE MARKETING BOARD	SIX VICTORIAN POETS F. L. Lucas DIGGING UP THE PAST Mr. Leonard Woolley	<i>London and Midland Regionals</i> GERMAN LANGUAGE TALKS Mr. Otto Siepmann		TOPICAL TALKS 9.25-10.15 DISCUSSIONS (Monthly)
THURSDAY	OURSELVES AND THE STATE Mrs. H. A. L. Fisher BOOKS FOR SUMMER READING Miss Ann Spice	READINGS FROM CHARLOTTE BRONTE (Weekly) 6.35-40 MARKET PRICES FOR FARMERS	THE CINEMA PLAYS AND THE THEATRE Mr. James Aggrey	PROBLEMS OF INDUSTRY 1900-1914 SOME INDUSTRIES OF GREAT BRITAIN TO-DAY			THE WAY OF THE WORLD Mr. Vernon Bartlett
FRIDAY	THE TOWNSWOMAN'S DAY	GARDENING, HOUSEHOLD, AND POULTRY TALKS	MUSIC CRITICISM Mr. Ernest Newman NEW DISCOVERIES	BIRD-WATCHING AND BIRD BEHAVIOUR Prof. Julian Huxley LABOUR AND INTERNATIONAL AFFAIRS		<i>London and Midland Regionals</i> BIOCHEMISTRY: What it is and what it does ANIMALS IN CAPTIVITY BEHAVIOUR OF APES	PEOPLE AND THINGS The Hon. Harold Nicholson
SATURDAY	OUT-OF-DOOR TALKS HOBBIES AND HANDICRAFTS		HOLIDAYS AT HOME AND ABROAD LITERARY COMPETITIONS	7.0-7.30 THE WEEK'S WORK IN THE GARDEN		<i>London and Midland Regionals</i> LOVE SCENES FROM ENGLISH NOVELISTS	SERIAL STORY

Figure 3 Plan of Talks for April–July 1930, from BBC (1930)

Figure 3 is the timetable of talks for April to July 1930. Each box in the table represents a slot for 12 weeks' worth (i.e. one term's worth) of broadcasts. Some "slots" in Figure 3 are shared by two or more series of broadcasts. For example, the slot on Friday at 7.25 p.m. is split between *Bird-watching and Bird Behaviour* (first half of the term) and *Labour and International Affairs* (second half). Splits could be organised in other ways too; for example, the slot on Fridays at 7 p.m. was split between *Music Criticism* and *New Discoveries* (a topical science series). In this case the two programmes alternated, each appearing fortnightly through the twelve-week term.

The thirty-five occupied slots in Figure 3 give a total of $35 \times 12 = 420$ talks, or, as there were three terms per year, 1260 talks per year. This figure fluctuated somewhat, but is not untypical of the early 1930s. Figure 3 indicates the eminence of some of the speakers: among the scientists are Julian Huxley and Cyril Burt, and among the non-scientists are Vita Sackville West, Desmond MacCarthy and Ernest Newman.

Science broadcasts often did not fit the conventional scientific disciplines of physics, chemistry and biology. In fact deciding which of the talks series in Figure 3 were scientific is not easy, although the decision is not always as difficult as in this example. Some of the series in Figure 3 are clearly psychological (such as *The Study of the Mind*, on Tuesday at 8.00), and could be regarded as scientific. Similarly, the series *Digging up the Past* (Wednesday, 7.25), although concerned with archaeology, might have had some scientific content, as might the series *Some Industries of Great Britain Today* (Thursday, 7.25). This discipline-straddling approach reflected the intention of giving the broadcasts general appeal. It also partly illustrates the difficulty of establishing quantitatively the amount of science broadcasting in the adult education output. I tentatively estimate that 11.5% of the 420 adult-education broadcasts in this table were scientific, and that the same percentage was devoted to literature.²

² For my estimate I count the following series as scientific: *New Discoveries* (6 broadcasts), *The Making of a Personality* (12 broadcasts), *Bird-watching and Bird Behaviour* (6 broadcasts), *The Study of the Mind* (12 broadcasts), *Biochemistry* (4 broadcasts), *Animals in Captivity* (4 broadcasts) and *Behaviour of Apes* (4 broadcasts). That gives a total of 48, which, as a percentage of the 420 broadcast in this timetable, is about 11.5%. For comparison, literary talks in the table comprise *Book Review* (12 broadcasts), *Readings from the Victorian Poets* (12 broadcasts), *Six Victorian Poets* (6 broadcasts), *Readings from Charlotte Bronte* (6 broadcasts) and *Love Scenes from English Novelists* (12 broadcasts), again totalling 48 broadcasts, or 11.5% of the total.

The formal process of programme planning from 1927 (when the BBC was converted from a commercial company to a public corporation) until the outbreak of war in 1939 underwent various changes. However, the broad principles remained the same. Programme planning was a mixture of top-down input from programme planners and bottom-up programme ideas from producers and their heads of departments. The top-down aspect was largely a matter of planning schedules, reviewing recent broadcasts, vetting programme ideas, and ensuring good use of resources. Programme planners were by no means indifferent to listeners' tastes – for all the BBC's paternalism – and set much store by “balancing” the schedules to create a suite of offerings that, in the long run, catered for a wide range of interests (Burns, 1977, p. 124).

This formal arrangement, though, gives little indication of the degree of autonomy enjoyed by individual producers. Briggs (1995, p.9) suggests that during the BBC's first decade, which overlaps with Adams's first few years at the BBC, most programme decisions came from below. One BBC staff member of the 1930s characterised the Talks department in the early part of the decade as marked by a “cult of the temperamental producer” (Green, 1962). Matters began to change around 1934 when, for reasons explained later, “an elite of policy making high officials – with little experience of programme making, or any specialised knowledge of programme areas – began to impose corporate definitions of BBC policy across the whole range of programme output” (Scannell, 1980, 26). For the period covered by this paper, however, producers enjoyed a good deal of autonomy, and a significant amount of the output of the Talks department was associated with adult education.

4 Mary Adams, pioneering science producer

Mary Grace Agnes Campin was born on 10 March 1898 in Hermitage, Berkshire, in England. She was brought up in Wales, and attended University College, Cardiff, gaining a first-class honours degree in botany in 1921. For the next four years she was a researcher in biology at Cambridge University. Around 1925 (the year of her marriage to Samuel Vyvyan Trerice Adams, 1900–51), she became an extramural

adult-education tutor in Cambridge, and continued in this role until she joined the BBC in 1930. It was during this pre-BBC period as an adult education tutor that she gave her first broadcasts for the BBC, referred to earlier (Adams, 2004). In 1930, she gave a series of six talks on *Pioneers of Health* and a series of five eugenically themed talks *A1 or C3? The Future of the Race*. For the next six years Adams worked in the Talks department as a producer, and gave a few further broadcasts.

Like many intellectuals of the time, Adams was a keen advocate of eugenics. In one of her 1928 BBC talks she drew attention to what was, for many eugenicists, a primary problem facing society: the deteriorating quality of the human breeding stock. In a book based on her 1928 broadcasts she wrote: "... the children of able parents are more likely to be gifted than the children of empty-headed, indolent or idle parents. Yet statistics show that the casual labourer leaves nearly twice as many children as the professional man" (Adams, 1929, pp. 89–90). Universal education was necessary if eugenics was to succeed: "So long as certain classes are denied access to knowledge on account of their poverty, it will be difficult, if not impossible, for the Eugenist to persuade people to listen to him" (Adams, 1929, p. 91). There were implications for children's education too: "Let us give [children], first of all, a saner, freer education about sex" (Adams, 1929, p. 96). Possibly it was suggestions like this that prompted one listener to express a hope that "no member of the opposite sex had been obliged to remain in the studio while [Adams] was broadcasting" (Adams, 1929 p.ix).

Some prominent science broadcasts produced by Adams, or produced during her tenure as a producer, include *What is Science?* (six broadcasts by mathematician Hyman Levy in autumn 1931); *Science and Civilization* (six broadcasts by Aldous Huxley, Bertrand Russell, Hilaire Belloc, J. B. S. Haldane and Oliver Lodge, January and February 1932); *Biology in the Service of Man* (6 broadcasts by J. Arthur Thomson, spring 1932); *How the Mind Works* (18 broadcasts by Cyril Burt and others, October 1932 to February 1933); and *A Tour Through Space and Time* (8 broadcasts by James Jeans, October and November 1934). Many other broadcasts could be cited. BBC staff member Richard Lambert paid tribute to Adams production skills as

follows:

[Mary Adams] raised high the level of broadcast science talks, through her contacts with scientists at the universities, and her ability to pick out the latest scientific developments and have them presented in a lively and informative way. [...] when she was transferred to Television [1936], the light she had lit in the Talks Department grew dim again (Lambert, 1940, p.75).

What is noteworthy here is not so much Lambert's eulogising of Adams – he is, after all, one BBC professional writing about another – but his depiction of her role. He highlights her gatekeeping and framing functions – her choice of speakers and topics, and her skill in finding “lively and informative” styles of presentation. He attributed the success of science talks to her rather than to the speakers she commissioned. She was, he implies, largely responsible for the quality of science broadcasts, although it is clear from BBC documents that she was not the only producer of science broadcasts, or science-related broadcasts, at this time. In fact, producers seem to have been flexible. For example, Felix Greene, the producer of a 1934 series on unemployment *Time to Spare* (Scannell, 1980, pp. 19–20), invited William Bragg to take part in a programme on psychical research (Friday, 1974, p.73), and producers Lionel Fielden and Joe Salt worked with science broadcaster Gerald Heard, though they were not specialist science producers. Mary Adams herself had a managerial role from August 1934 as part-time assistant to Head of General Talks, and arranged a series of unrehearsed debates on miscellaneous topics in 1935 (Briggs, 1995, pp. 137 and 140).

Scannell and Cardiff (1991, p.x) characterise the early years of the BBC as notable for the development of now-familiar formats and styles of broadcasting through experiment and refinement. An innovative type of science broadcast introduced under Adams, entitled *Science in the Making*, ran for two series, in 1931 and 1932. Each week, listeners were asked to participate in research activities, albeit of a homely sort. In one broadcast, the biologist John R. Baker asked listeners to report when blackbirds laid their first eggs. In another, natural historian and

geographer Ivan Margary asked for observations of the time of flowering of the first blackthorn; and physicist Dr John Shaxby conducted perceptual experiments to investigate masking of one sound by another played simultaneously. Nearly 1000 listeners returned accounts of what they had heard in the broadcast (BBC, 1932, pp. 170–1). Adams liked this type of broadcast, and commented that Baker’s and Shaxby’s broadcasts had yielded results “of real value” (Adams, 1936).

In Adams’s view, talks which explained what scientists did were more successful than talks aimed at conveying what scientists knew, because listeners lacked the requisite background knowledge to comprehend scientific findings (Adams 1936). In 1933 Adams wrote that science was widely misconceived as “the history of sudden and startling inventions,” whereas fundamentally it was a process or a method: “systematic trial and error ... frustration and discovery, a laborious construction of instruments, theories and methods of investigation” (Adams, 1933, p. 12). This goes to the core of why Adams favoured programmes such as *Science in the Making*. She liked them “because they show methodology” (Adams, 1936).

A frequent science broadcaster from the Adams period was Gerald Heard, referred to earlier. From 1930, he broadcast regularly on topical science matters, first in the fortnightly series *Research and Discovery* and then in *This Surprising World* (Moseley, 1933). The latter series continued until 1934.³ Adams considered that for this type of broadcast, Heard was the most successful presenter she had used (Adams, 1936). She especially admired his wide range of scientific interests (Adams, 1936), and also his virtuosity and sharpness of mind. His bravura performance in an unrehearsed broadcast debate, speaking against the motion that ‘Life a hundred years

³ Heard’s BBC broadcasting career came to an end with his departure for the USA in 1937, where he remained for the rest of his life, becoming a public intellectual, an early proponent of ‘alternative’ spirituality and mysticism, and a writer of science fiction. (Falby 2008).

ago is preferable to life a hundred years hence', prompted this enthusiastic response from Adams:⁴

Just a note to let you know how very brilliant we all thought you were last Saturday. Praise pours in on all sides, and I just want to turn it towards you. I think the way you leapt on to their points was staggering. Thank you very much. (Adams 1935)

Heard's performance, and Adams's appreciative response, can illuminatingly be contrasted with that of another science populariser of the time, the journalist J. G. Crowther, who gave a broadcast under Adams's supervision in 1931. In that year, Adams saw a short filler item in *Nature* in which an unnamed commentator observed that the tails of sparrows in London appeared to be frequently misshapen.⁵ Adams invited Crowther to speak about this (Adams, 1931a). His broadcasting experience at this time was limited to three short talks on astronomy in early 1928 (Matheson, 1927).

Adams suggested to Crowther a way to handle the sparrow story. Its "human interest" could be used as bait to seize the listeners' attention, prior to the presentation of weightier evolutionary matters (1931b). (LeMahieu, 1988, p. 22–3, observes that "human interest stories" were a feature of nineteenth-century popular journalism, and made impersonal issues interesting by emphasising aspects of the stories that bore directly on the lives of the public.) Crowther was reluctant – maintaining that scientific exposition ought not to be motivated by "entertainment" (Crowther 1931). Adams responded on the basis of her professional expertise:

⁴ The broadcast was on 5 October 1935 on the BBC Regional service. The motion was defended by G. A. Street.

⁵ The story in question is Anon (1931).

I am afraid bitter experience has shown me that it is only by this round about method that the great B.P. [British Public] will listen to a wireless talk on science. (Adams 1931c)

For Adams, imaginative and entertaining styles of presentation (such as Heard's) were essential if listeners were to be hooked. Crowther, on the other hand, felt science popularisation served a higher purpose in which "entertainment" had no place. In 1928 he had written:

The public should be made to realize that their own existence is largely the result of the application of science to the old domestic manufacturing arts, and that social organization is obviously in the long run very sensitive to the application of science. (Crowther, 1928, p. 236)

For Crowther, then, at least one of the functions of popular media was to serve science: to show people how dependent they were on science, and to engender a proper esteem for science. His approach was no less paternalistic than Reith's, but, unlike Reith's, was based on the notion that science had a special status and was owed special consideration.

Crowther, despite his misgivings, went ahead with the sparrow talk,⁶ but received only one further commission from Adams – a talk on radioactivity in March 1934. Reviewing the merits of various scientific broadcasters some time later, Adams acknowledged that Crowther's wide breadth of scientific understanding ought to have made him an ideal radio speaker, but she judged him "a poor broadcaster." She put C. P. Snow in the same category. (Adams 1936). For Adams, where science

⁶ *City Sparrow Economics*, 22 September 1931, BBC National service. Reprinted in *The Listener*, 23 September 1931, pp. 500–1.

popularisation was concerned, the primary activity was capturing the listeners' attention, and then projecting a scientific story entertainingly – as Heard could do. The public needed to be won over, not lectured to.

In devising ideas for programmes and finding suitable speakers, producers such as Adams often needed advice and suggestions from outside the BBC. Formal and informal arrangements existed for this. The formal arrangements were based on a range of advisory committees, whose members were drawn from inside and outside the BBC. A prime example (from 1937 onwards) was the Talks Advisory Committee, whose membership included biologist Julian Huxley, a frequent broadcaster in the 1930s and afterwards (Talks Advisory, 1937–9). There was, however, no advisory committee specialising in science. Informal advisory arrangements, on the other hand, operated through networks of acquaintance and friendship. Here again Gerald Heard proved valuable, not only to Adams but also to several of her colleagues. In 1934, he proposed that the psychoanalyst Jung be invited to broadcast (Heard, 1934). In the same year, he recommended to a BBC producer that journalist Peter Ritchie Calder (later a celebrated science populariser) be invited to broadcast (Salt, 1934). In 1935, he was sounded out by a staff member for his views on a proposed new series (Salt, 1935). Adams, therefore, although professionally distinct from the world of science (in the sense that she saw her role as deciding what was best for listeners) was also dependent on science – or representatives of it – for particular sorts of expertise.

5 Science and society

The 1930s were notable for the growth of the social relations of science movement. Among other goals, this movement advocated increased use of science for the betterment of society and public administration (MacLeod, R. and MacLeod K., 1976). Scientists associated with the movement were predominantly, but not exclusively, left-wing, and often admirers of the USSR as a model of what rationally organised administration could achieve (McGucken, 1984; Werskey, 1978; Vincent, 1997, p. 328).

For many scientists associated with this movement (and including the journalist Crowther), promoting the public understanding of science had a utilitarian and a moral purpose related to social amelioration. The left-wing physicist Patrick Blackett, in a 1934 radio talk later published in a book, referred to science's unexploited capacity for remedying social ills: "Industry and science have made such huge advances that a large improvement in the standard of life, particularly of the workers, is now technically and immediately possible" (Blackett, 1935, p. 129); and in 1939 the crystallographer J. D. Bernal wrote that if the potential of science for benefitting human welfare were "drummed into" people, the demand for science to be used in this way would become irresistible, to the displeasure of the "vested interests of owners and advertisers" (Bernal, 1939, p. 305). The power of science to "diagnose the cure the problems of society" was also often proclaimed in science documentary films at this time (Boon, 2008, p.109).

Mary Adams produced a number of broadcasts by scientists associated with the movement, beginning with the communist mathematician Hyman Levy. In the autumn of 1931, Levy gave a series of six talks entitled *What is Science?* Adams was drawn to use Levy because she admired 'his ability to communicate complex scientific ideas in simple, everyday language' (Werskey, 1978, p.170). On the strength of *What is Science?*, Levy was invited to participate in two further series. The first was *Scientific Research and Social Needs*, broadcast in the autumn of 1933, in which he appeared with Julian Huxley. The second was *Web of Thought and Action*, broadcast in the spring of 1934, during which Levy interviewed twelve experts (one per week) from diverse fields, such as engineering, economics, politics, philology, biology, and philosophy.

One of Levy's scripts for the *Scientific Research and Social Needs* series aroused Adams's anxiety. Apprehensive about the political tone of Levy's script, she sent a note to William Bragg, who had been asked to supply an introductory talk for the series. Adams asked Bragg to put Levy's views "in perspective", and added that "Scientific progress seems ... to have magnified rather than minimised social

instability.” (Friday, 1974, p.71.) Adams on this evidence was by no means an uncritical advocate of science.

In view of Adams’s reservations about the social consequences of science, it might be wondered why she presented the “science and society” type of broadcast at all, albeit as a minor part of her department’s science output.⁷ Adams’s own justification for this type of broadcast comes in a memo she wrote in 1936, in which she set down her thoughts on the effectiveness of various types of science broadcasting developed during her tenure.

According to Adams, talks aimed at instilling scientific ideas were of little value because, as mentioned earlier, “The general public has no background for the appreciation of technical scientific talks. A proper appreciation of [scientific] results is therefore practically impossible” (Adams, 1936). As far as the public were concerned, scientific facts were “only interesting ... if they are attractively presented.” Adams’s judgements here were not based on systematic audience research, which had yet to be adopted at the BBC, but almost certainly on correspondence from listeners (Silvey 1974, pp. 87–102; 28–31).

Adams was equally sceptical about the value of reflective talks by scientific celebrities, such as James Jeans or Arthur Eddington. Listeners tuned to such broadcasts “primarily on account of the attraction of [the broadcaster’s] name & reputation.” In so far as such talks were intelligible, it was because the subjects were treated “philosophically or semi-philosophically” (rather than scientifically):

⁷ Of the approximately 400 science broadcasts known to me between 1 January 1930 and 31 December 1935, I estimate about 40 could count as “science and society”.

In the nature of things such talks have little educational value: but they have presentation & publicity value & are at any rate unharmful. We have had a good many such series in the past. Many of this kind frankly speaking are certainly not understood but the broadcasts have a spurious appeal. (Adams, 1936)

As mentioned earlier, Adams's preferred type of talk concerned what scientists did rather than what they knew. However, this type of talk was, in her view, not the one most widely appreciated by listeners. For wide appreciation it was necessary to turn to "science and society". Unfortunately this type of talk was the hardest to plan, because:

The working scientist who is competent to describe the facts ... is often the worst person to discuss their relevance to social affairs. The speaker competent to do that is generally a Marxist & therefore "biased". (Adams 1936)

Allegations of political bias became a serious issue for the BBC in the increasingly conservative political climate of the mid-1930s. The BBC was repeatedly accused of left-wing bias by conservative newspapers and commentators (Lambert, 1940, pp. 76–7) though Scannell, 1980, p.25 characterises attitudes within the Talks Department at this time as predominantly 'progressive' rather than left wing. During the mid-1930s, BBC managers, sensitive to these allegations of bias, embarked on "the wholesale dismantling of the [Talks] department" (Scannell, 1980, p. 26). The resulting exodus of liberally inclined production staff included Mary Adams. The reconstituted Talks department which replaced the earlier one had a more conservative slant, and was marked by a "retreat from dealing with contentious issues" (Scannell and Cardiff, 1991, p. 69). Programme form, content and production became more systematised and routinised. Producers increasingly "played safe", and invoked professional judgements on speakers, such as "poor broadcaster," as reasons to deny the microphone to controversial speakers (Lambert, 1940, p.81). The later 1930s were also marked by a

sharp decline in adult education output as the BBC became less willing to fund the local activities that its adult education broadcasts were intended to sustain (Briggs 1995, pp. 206–7).

Following her departure from Talks in 1936, Adams moved to the fledgling BBC television service, where she enjoyed a long career producing arts, science, and children's programmes, eventually becoming Head of Talks for television. After retiring from the BBC in 1958, she worked at the Consumers Association (Adams 2004).

Adams's replacement in Talks in 1936 was Ian Cox, also a scientist by training. He remained in post until the outbreak of war, and returned briefly after the war. During his tenure, as might be expected in the more conservative administration, science-and-society broadcasts disappeared from the schedules. In addition, as mentioned earlier, there was a steep decline in adult education. Nevertheless, Cox's general approach was not greatly different from Adams's. Major series on *Scientists at Work* (autumn/winter 1936), *What More do You Want from the Scientist?* (autumn 1937), *The Story of the Rocks* (autumn of 1938) and *Modern Inventions* (spring 1939) would not have been out of place during Mary Adams's tenure. Cox also revived regular, topical science programming, with *Science Review*, which had languished since the cessation of Gerald Heard's *This Surprising World* series in 1934. Like Adams, Cox believed that, provided basic requirements of accuracy were met, a speaker's most important asset was an engaging style at the microphone, "no matter how learned an authority he may be" (Cox, 1939).

6 Conclusions

Despite the absence of science from the historiography of British broadcasting, and from the contemporaneous memoirs and commentary from the early days of broadcasting, science was by no means a negligible part of BBC output during the early 1930s. Mary Adams was a key figure in the development of science broadcasting during at this time. Furthermore, as with other areas of broadcasting, this

was a period when producers were experimenting with programme formats, abandoning them and refining them, as they invented the institution and profession of broadcasting “on the job.”

Adams should be viewed not as a proselytiser for science, or even as an promoter of science proselytism by others. Indeed her attitudes to science and science presentation were somewhat equivocal. Rather she should be viewed as a practitioner of a new profession – that of the professional public-service broadcaster. Her role was to create entertaining and informative scientific broadcasts, not because science could transform society for the better (as members of the social relations of science movement maintained), but because education – broadly interpreted, and across all subjects – could transform society for the better. This was a founding belief of public-service broadcasting in Britain. As an exponent of the new profession, she, like other producers, had to construct a professional jurisdiction. This jurisdiction encompassed such activities as editorial control, claiming insight into the audience’s tastes, and justifying decisions by appeal to specialist broadcasting knowledge.

In suggesting that Mary Adams acted as a broadcasting professional rather than as a science promoter, I do not suggest she was isolated from, or antagonistic to, the world of science. Rather, I suggest that the interests she sought to serve were those of the listener (as she conceived them), guided by the values of her profession. In fact, far from being isolated from the world of science, Adams valued the advice and help of selected scientists, or quasi-scientists, with whom she maintained cordial relations. Principal among these were Gerald Heard and Julian Huxley. Figures such as these, and more formal advisory arrangements, helped to define the boundary of the broadcasting profession pragmatically. Nevertheless, Adams’s primary orientation was not towards scientists, who, for her, were a resource to draw on rather than a constituency to represent. In this there is probably a general message for any group, not just scientists, that seeks promotion through channels that lie within other professional domains.

Finally, this paper has illustrated how Reith's paternalistic conception of public service broadcasting did not amount to a prescription for how broadcasting should be done in practice. Rather, BBC staff had to work out for themselves what 'public service' meant, and ways of performing it. In Mary Adams's case, this led her to a conception of science broadcasting somewhat different from traditional science pedagogy. It was a conception centred more on what science represented – in its practices and social relations – than on what science constituted as a body of knowledge.

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