

# 1 Presidential politics and postwar priorities

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None of us . . . has known what the Fellows really think about him.<sup>1</sup>

The election of a new President of the Royal Society in 1945 turned out to be good deal more interesting than these things usually are. It was one of those occasions when a significant number of Fellows decided not to leave it all to the trusted process of private soundings leading to a recommendation by the Officers<sup>2</sup> duly ratified by Council, but instead set out to make their voices heard directly. It was also one of those occasions when the Society seemed to be at something of a turning point. So the presidential debate was not just about personalities: it was also about the Society's identity and future direction. Indeed, it rehearsed issues that would loom large in the Society's affairs later in the century, and it exposed difficulties that the Society would find itself repeatedly having to face. And, as it turned out, it illustrated how high-level strategic considerations can sometimes be overwhelmed by capricious happenstance.

## The Royal Society in 1945

Three of the Royal Society's core leadership team of five Officers were due to stand down at the end of 1945: the President (Henry Dale), the Biological Secretary (A. V. Hill) and the Foreign Secretary (Henry Tizard). A year ahead of the event, that prospect was giving rise to much discussion.

<sup>1</sup> Henry Dale to Henry Tizard, 3 June 1945, reflecting on the business of enabling individuals to make professional judgements about each other without rupturing personal relationships: Tizard papers, Imperial War Museum, #427. Some of the material in this chapter has already appeared in Peter Collins, 'Presidential politics: the controversial election of 1945', *Notes and records of the Royal Society of London*, 65 (2011), 325–42, and is reproduced here with permission.

<sup>2</sup> The Officers are five Fellows who fill particular functions in the Society's governance on a volunteer basis; for details, see Annex. In 1945, the President and Foreign Secretary could serve up to five years, and the Treasurer and Biological and Physical Secretaries could serve up to ten years, all subject to annual re-election.

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It was not only a matter of administrative disruption. The Society's role in public life also seemed to be at stake at that time. Its leadership had aspired to a corporate role in shaping science policy during the Second World War, but this had proved a frustrating experience, and the Society had found itself working mostly outside the established structures, its ties with government 'informal, discrete, ubiquitous'.<sup>3</sup> Many Fellows recognised that the postwar Society would be operating in a radically new context for science and would need to develop new skills. The position of science had been transformed during the War; its peacetime status had yet to be negotiated. The growth of public spending on science brought with it the spectre of increased government control. There had been vigorous debates before and during the War about centralised planning in science and about how to maximise the social benefits of science.<sup>4</sup> Individual Fellows featured prominently on various sides of these debates, but the Royal Society corporately had kept a low profile. The growing prominence of these issues towards the end of the War challenged the Society's incoming leadership team to engage more openly with public controversy.

One specific trigger for internal debate about the Society's postwar role was a letter to the Society's Officers from the physicists Ralph Fowler and Patrick Blackett in October 1943. They were worried about how fundamental physics would fare in a postwar world that they expected would prioritise the applications of science. This could not, in their view, be left to chance: it needed organised advocacy if the necessary resources were to be secured for fundamental physics, and it needed organised oversight if the extra resources were to be used well.

The defence of fundamental research was an archetypal cause for the Royal Society. In response to the Fowler/Blackett letter, the Society set up a series of committees to examine not only physics but also seven other broad areas of science. The ensuing report, colloquially known as the *Postwar*

<sup>3</sup> Philip Gummett, *Scientists in Whitehall* (Manchester University Press, 1980), 30–1, 93–5; Philip J. Gummett and Geoffrey L. Price, 'An approach to the central planning of British science: the formation of the Advisory Council on Scientific Policy', *Minerva*, 15 (1977), 121; Ronald W. Clark, *Tizard* (Methuen, 1965), 273–5; William McGucken, 'The Royal Society and the genesis of the Scientific Advisory Committee to Britain's War Cabinet, 1939–1940', *Notes and records of the Royal Society of London*, 33 (1978), 87–115; Stuart S. Blume, *Toward a political sociology of science* (Collier Macmillan Publishers, 1974), 191; John Peyton, *Solly Zuckerman: a scientist out of the ordinary* (John Murray, 2001), 109–10; Tizard to Dale, 1 June 1945: HD/6/2/4/6; Dale to Tizard, 5 June 1945: HD/6/2/4/7.

<sup>4</sup> See, for example, Peter Collins, 'The British Association as public apologist for science, 1919–1946', in Roy MacLeod and Peter Collins, eds., *The Parliament of science* (Science Reviews Ltd, 1981); William McGucken, *Scientists, society and the state: the social relations of science movement in Great Britain, 1931–1947* (Ohio State University Press, 1984); Gary Werskey, *The visible college* (Allen Lane, 1978), 244.

*needs* report and circulated to the Fellowship in January 1945, concluded that academic scientific research would have to expand so much in future that it could no longer rely on private benefactions or the block grants allocated by the University Grants Committee but, in the national interest, would require major direct inputs of public money.<sup>5</sup> Blackett wanted the Society to be the body controlling these financial provisions for research.<sup>6</sup> The Society's Council would not go that far, but the *Postwar needs* report did argue – more strongly than it would have done a few years earlier<sup>7</sup> – for a central role for the Society in advising the Treasury on how such money should be spent. It also argued that the Society should receive substantial increases in funding for its own programmes of research grants, travel grants and publication grants. The Society at that stage wanted to be actively involved in the national organisation of science, but through exercising influence rather than serious power and through securing enough resources to pursue its own niche initiatives.

The Society's balancing act was highlighted at a small meeting of Fellows in May 1945 to discuss the *Postwar needs* report. Here A.V. Hill argued, in agreement with Blackett, that the Society was the most appropriate body for 'guiding and stimulating the healthy and balanced development of scientific enquiry taken as a whole'. The Fellows agreed, but thought that healthy and balanced development would be achieved naturally if each university always chose the most distinguished research leaders for its posts. Central planning was unnecessary provided there was sufficient spontaneous support for the less fashionable areas of research.<sup>8</sup> This was management with a very light touch.

The debate about the Society's postwar aspirations was not a purely private matter. The radical science journalist J.G. Crowther speculated in the *New Statesman* in December 1944 how the Society might respond to wartime developments and peacetime opportunities.

<sup>5</sup> Royal Society, *The needs of research in fundamental science after the war* (printed January 1945; also at Appendix A to CM 14 December 1944). Also CM 4 November 1943, minute 16; CM 30 November 1943, minute 7; CM 13 July 1944, minute 11(b); and CM 12 October 1944, minute 6. Fowler died in July 1944, so did not see the outcome of his initiative. The report became known as the 'pink paper', because of the colour of its cover: see interview with Bernard Lovell.

<sup>6</sup> Bernard Lovell, 'PMS Blackett', *Biographical memoirs of Fellows of the Royal Society*, 21 (1975), 102. Also an important talk by Bernard Lovell to the Association of British Science Writers in October 1984, 'Authority in science': D.C. Phillips papers, MS Eng. c.5510, O.121.

<sup>7</sup> Gary Werskey, *Visible college*, 273.

<sup>8</sup> A.V. Hill, 'The needs of special subjects in the balanced development of science in the United Kingdom', *Notes and records of the Royal Society of London*, 4 (1946), 133–9.

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What relation is the Society to have to these new and immense scientific activities, many of them conducted and financed by Government? Is it to have a directive function? ... Hasn't the policy of the last hundred years unfitted the Society for the role of statesmanship? If so, shouldn't the Society reform itself again on the original Baconian lines, rather like the Soviet Academy of Sciences, with definite official status, resources and powers?

Crowther was worried that the Fellowship had become so specialised since competitive elections were introduced in 1847 (see Annex) that it lacked the broader skills needed for a major executive role in public life of the type that Blackett sought. He feared that, if the Society were not centrally involved in running science, there might be a separation of scientific authority (resting with the Society) and administrative responsibility (resting with government): 'these huge administrative machines will grow without ideas and possibilities of their own, repulsive to men of intelligence, and finally without brain or soul.' However, he resignedly concluded that the Society, as the 'custodian of scientific quality', would probably stay clear of planning and seek the more modest path of 'fostering and encouraging, with the sustainment of quality'.<sup>9</sup>

The Society's leadership expected, by long custom, to keep the debate about who should succeed Henry Dale under reasonably tight control. The formal process was that, towards the end of the Society's year, the existing Council would determine a slate of eleven current members and ten new members,<sup>10</sup> and, among those twenty-one, the individuals recommended for appointment (or reappointment) to the five Officer posts; this slate would be put to such Fellows as were able personally to attend a formal meeting at the Society on Anniversary Day (30 November); and the newly elected or re-elected Councillors and Officers would take up their posts at the end of that day. Quiet discussions among the most influential individuals about potential nominees would of course start rather earlier, not least to ensure that those identified were in practice willing to take up their intended roles.

This controlling organisational culture rankled with quite a few Fellows. In 1935, ninety-two Fellows (20 per cent of the total Fellowship), animated by Frederick Soddy, had petitioned Council to shorten the terms served by each Officer, to allow for Council members

<sup>9</sup> J.G. Crowther, 'The Royal Society', *The New Statesman and Nation* (2 December 1944), 375, a review of Henry Lyons' history of the Royal Society; advance copy in the Blackett papers: PB/8/12. Andrade wrote a vigorous response accusing Crowther of completely misrepresenting the Society – see *The New Statesman and Nation* (16 December 1944), 405–6 – and sent the typescript to Henry Dale: HD/6/8/6/6.

<sup>10</sup> The Society's Charter then stipulated a Council of twenty-one members of whom ten must retire each year.

to be elected by postal ballot, and from a list of names greater than the number of vacancies, and for the Officers then to be chosen by the incoming rather than the outgoing Council. These proposals had been rejected by the then Council, and by the Fellowship as a whole.<sup>11</sup> The demand for greater democracy in the Society's affairs and, associated with that, for greater public engagement by the Society had borne some modest fruit in the following years, but not enough to still the pressure for reform. It just needed a Fellow determined to stir things up.

### The Andrade 'memorial'

The physicist Edward Neville da Costa Andrade, known to his friends as Percy (Figure 1.1), was elected a Fellow of the Royal Society a month after Soddy's 1935 petition was submitted to Council. He served two years on Council, finishing in November 1944, and during that time contributed to shaping Council's response to the Fowler/Blackett letter. He was deeply opposed to Crowther's suggestion that the Royal Society might emulate the Soviet Academy's central role in the national planning of science, but short of that he was keen to see the Society contribute strongly to the development of science policy.

Andrade was a man of strong personal likes and dislikes. From his vantage point on Council he caught the early chatter about possible candidates to succeed Henry Dale as President. He did not like what he heard. Undeterred by Soddy's experience, he decided to draft a 'memorial, or what you will' and to collect signatures in support of an alternative candidate. While on Council he had heard 'frequent regrets that Fellows did not more frequently let Council know what they are thinking';<sup>12</sup> he decided to take Council at its word.

He discussed the idea quietly with a few trusted colleagues, including his fellow physicists Patrick Blackett and Henry Tizard. Tizard was then the Society's Foreign Secretary, and Blackett was about to go back onto Council. Once he had completed his term on Council at the end of November 1944, Andrade started approaching his friends and contacts to collect signatures to his memorial. By mid January 1945, ten Fellows had signed; by 19 February, fifty Fellows had signed; and by the time

<sup>11</sup> Jeff Hughes, '“Divine right” or democracy? The Royal Society “revolt” of 1935', *Notes and records of the Royal Society of London*, 64 (2010), S101–17.

<sup>12</sup> Andrade to A.M. Tyndall, 10 January 1945. Uncatalogued Andrade correspondence, Royal Society archives. Unless otherwise indicated, all cited Andrade correspondence below is from this collection.

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Excerpt

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Figure 1.1 Percy Andrade. © Godfrey Argent Studio

Andrade finally submitted the memorial on 19 March, eighty-four Fellows had signed it.<sup>13</sup>

This was all done by personal contact, with a strong emphasis on confidentiality. The aim, however, was not to catch the Society's core leadership off its guard: the byword was discretion rather than secrecy. Andrade kept the Officers informed, taking care to do so in such a way that they would not have to respond officially before the memorial was formally submitted. So, for example, in addition to consulting Tizard, he discussed the memorial at length with the Biological Secretary A.V. Hill 'as a wise friend and not as an official of the Royal Society', and he reported to his close friend Charles Sherrington that Hill 'considers our action a perfectly proper and constitutional one, welcomes it, and thinks we are doing the Society a service . . . If A.V. Hill thinks that all is well I do not think there can be much wrong.'<sup>14</sup> He also informed John Griffith Davies, the head of the Society's staff. Sherrington had been President during 1920–5, and his early decision to sign was a major fillip for Andrade since it unequivocally legitimised the initiative. He could tell potential signatories that his initiative was, apparently, compatible with organisational culture: 'There is, of course, nothing irregular or Bolshevistic in the Fellows memorialising Council.'<sup>15</sup>

Andrade wanted the Society to be more outward facing, engaging more effectively in public life and injecting science into the highest levels of policy-making: 'The Royal Society completely missed the boat at the beginning of the war and I am afraid that unless we have an energetic and courageous President, who has experience of how to get things done, we shall do the same at the end of the war.'<sup>16</sup> It was essential to have the right leadership team: 'The whole future of the Society is at stake, and if we appoint an ornamental or quarrelsome President the Society will lapse into being a purely honorific body.'<sup>17</sup> Sydney Chapman agreed: 'There is much need for the Royal Society to awaken to the social and national relations of science, and to bestir itself in these matters, just as the British Association [for the Advancement of Science] has in recent years, to

<sup>13</sup> Andrade to C.S. Sherrington, 16 January 1945; Andrade to W.E. Curtis, 19 February 1945. Of the eighty-four signatories, half had been elected to the Society in the previous ten years, compared with 40 per cent of the Fellowship as a whole; three quarters were from the physical sciences, compared with just over half for the Fellowship as a whole; and 70 per cent were based in the Oxford/Cambridge/London triangle, compared with, again, a little over half for the Fellowship as a whole. Only two of Andrade's signatories (E.F. Armstrong and Gordon Dobson) had also signed Soddy's petition in 1935.

<sup>14</sup> Andrade to C.S. Sherrington, 14 February 1945.

<sup>15</sup> Andrade to A.M. Tyndall, 10 January 1945.

<sup>16</sup> Andrade to W.E. Curtis, 31 January 1945.

<sup>17</sup> Andrade to C.S. Sherrington, 8 January 1945.

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much good effect.<sup>18</sup> Dudley Newitt commented darkly: ‘I have had the impression during recent years that there have been influences at work in political circles which have tended to deprive the Society of its rightful place in national affairs; and there could be no better time than the present to deliver a counter-attack.’<sup>19</sup> To those concerned about politicisation, Andrade stressed ‘None of us wants to see the Royal Society a political body although we do want to see it speak for science when the politicians want advice.’<sup>20</sup>

So the memorial argued that the Society should put its elitism to work in public life. It should ‘assume its just place as the voice of British science and exercise that guiding influence on the scientific aspect of our national wellbeing which was contemplated by our founders’. Such status seemed then to be slipping from its grasp. The Society had earlier played a key role in the nation’s scientific machinery, but now ‘its real influence in national matters would seem to be decreasing rather than increasing’. In international relations, too, ‘the prestige of the Society has not increased in recent years’. These trends had to be reversed, or else it would be left, precariously, to ‘the various government departments and government-controlled corporations, and to other scientific and professional scientific bodies, to advise our rulers; to see that science, in particular academic science, is justly treated’. The memorial took heart, though, from the *Postwar needs* report, which showed that the Society had ‘clearly realised its national responsibility in the matter of scientific research’.<sup>21</sup>

When discussing the matter with potential signatories, Andrade typically quoted the Society’s need for better headquarters as an example of a policy issue needing vigorous attention from a new, politically sophisticated and politically engaged President.<sup>22</sup> This was certainly a big talking point within the Society at that time, and for another twenty years. But it seems a touch parochial in view of the high-flown rhetoric of the memorial.<sup>23</sup>

<sup>18</sup> Sydney Chapman to Andrade, 15 February 1945. Chapman had been involved with the British Association in initiatives on the social relations of science.

<sup>19</sup> D.M. Newitt to Andrade, 16 February 1945.

<sup>20</sup> Andrade to S.R. Milner, 19 February 1945.

<sup>21</sup> There are copies of various drafts of the memorial in the Royal Society archives, for example at MDA/B/3.4 and 3.5, HF/1/17/1/30 and PB/9/1/101.

<sup>22</sup> For an account of the accommodation issue and its bearing on the Society’s sense of its own identity, see Jeff Hughes, Presidential Address to the British Society for the History of Science, July 2009; Trevor I. Williams, *Howard Florey: penicillin and after* (Oxford University Press, 1984), 327–39; and Trevor I. Williams, *Robert Robinson, chemist extraordinary* (Clarendon Press, 1990), 136–9.

<sup>23</sup> William Wilson, refusing to sign the memorial, told Andrade that the Society should be able to sort out the housing issue ‘even if its President were in the final stages of senility’. Wilson to Andrade, 10 February 1945.



It is unlikely that Andrade's initiative was motivated primarily by a wish to secure a better home for the Royal Society. He was determined that the Society should share his aspirations for impact at national level, exercising a guiding influence on science policy. He was also keen that the Society should not allow itself to be outmanoeuvred on the international stage by the British Council, which he saw as trying to usurp the Society's natural position as 'the voice of British science abroad'.<sup>24</sup> But Andrade was motivated, too, by personal reactions to the individuals being mooted as potential Presidents.

The memorial spelt out in considerable detail the attributes required of the President if the Society was to be the voice of British science and to exercise a guiding influence on the nation's scientific affairs. He<sup>25</sup> should understand the machinery of government and not be unduly in awe of the leading figures in government and administrative circles; he should be accustomed to presenting the case for science to politicians; and he should have considerable international experience. He should also, of course, be energetic, sufficiently young in spirit to handle both opposition and apathy, a good speaker and of high academic status.

But could such a paragon be found? And if not, was there any scope for negotiation over just how brilliant a scientist the President himself had to be? Would it be appropriate, in the exceptional circumstances prevailing in 1945 and without necessarily setting a precedent, to settle for an individual whose scientific achievements were of just below Copley Medal<sup>26</sup> status in order to secure the other attributes? The memorial suggested that this would indeed be appropriate, but such a break with the prevailing culture was not lightly to be entertained. Though Andrade was careful in selecting those he approached, one third of them refused to sign the memorial, nearly all because they feared the Society's prestige would suffer if the President was not demonstrably in the very top rank of acknowledged scientific achievement. The argument about exceptional circumstances proved double-edged: if a President thus elected proved successful, it would be all the easier for the practice to become embedded.

<sup>24</sup> Andrade to Cecil Tilley and Owen Jones, 26 February 1945. J.G. Crowther had been appointed the first Director of the Science Department of the British Council at the outbreak of war and used the position to promote his radical politics.

<sup>25</sup> When the memorial was drafted, the election of the first female Fellows was still some months off. The election of the first female Officer lay forty-six years in the future, and the first female President further off still.

<sup>26</sup> The memorial originally cited the Nobel Prize, but several Fellows argued that the Society's own Copley Medal was the preferable benchmark of exceptional quality. See, for example, Henry Plummer to Andrade, 12 February 1945: 'I cannot see why our President should be elected by a Scandinavian body.'

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Besides, ‘The times truly are critical, but I cannot remember any time when they were not.’<sup>27</sup>

The two specific names being floated most prominently at the outset as potential Presidents were the organic chemist Robert Robinson and the physicist G.I. Taylor – both men of great personal scientific distinction, devoted to their work and unlikely to be sympathetic to Andrade’s activist agenda. Andrade dismissed them together: ‘Neither of them is a good speaker, neither of them is particularly a man of affairs, and neither of them would, I feel, give sufficient attention to the affairs of the Society’ – adding, unconvincingly, ‘I have not a grain of personal feeling against Taylor or Robinson . . . I am thinking solely of the Society.’<sup>28</sup> For all his protestations to the contrary, Andrade’s campaign had shades of being directed personally against Robinson, whom he repeatedly described to potential signatories as ‘temperamentally unfitted for this particular post’. Given Robinson’s scientific eminence, and given that he had just become a member of the Royal Society Council and that Dale had made him one of the Vice-Presidents, this needed some care.

Andrade’s preferred choice for President was Henry Tizard (Figure 1.2). Tizard was a man with serious Whitehall experience, first as Secretary in the Department of Scientific and Industrial Research and later as Chairman of the Air Defence Committee before and during the War. He had also been Rector of Imperial College. At the time of the memorial, he was starting his final year as the Society’s Foreign Secretary. However, he had not been awarded any of the Society’s medals, let alone the Copley. What Andrade did not know was that Tizard was then hoping to reduce his involvement in Society affairs, not increase it. In response to the problem of three Officers retiring together, he had even offered to resign immediately, in January 1945, so that his successor could start ten months early.<sup>29</sup>

The first draft of the memorial, which Andrade sent to Tizard on 28 October 1944, was too subtly phrased for Tizard to realise its full import. The memorial was intended to signal to Council that Tizard commanded considerable support among the Fellowship as a potential President and should therefore be considered seriously – lack of Copley Medal notwithstanding. So in early February Andrade amended the text to say just that, explicitly and controversially mentioning Tizard by name. Tizard was horrified, and said so to Andrade. Andrade tried to soothe him, extolling

<sup>27</sup> W. V. D. Hodge to Blackett, 26 March 1945, PB/9/1/101; Gilbert Cook to Andrade, 9 February 1945.

<sup>28</sup> Andrade to Gilbert Cook, 16 February 1945.

<sup>29</sup> This would give Tizard early release from what had become a burden: ‘I don’t fill the office well, and am already doing too many things.’ Tizard to Dale, 8 January 1945. HD/6/2/1/56. In the event, however, he served out his full term.