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**‘AIR, EARTH, AND SKIES ...
AND MAN’S UNCONQUERABLE MIND’**

**RELATIONSHIPS BETWEEN THE
ROYAL METEOROLOGICAL SOCIETY AND
THE ROYAL GEOGRAPHICAL SOCIETY**

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PREFACE

This paper is based on a presentation at the 150th Anniversary Meeting of the Royal Meteorological Society, which was held in the rooms of the Royal Society, London, on the 3rd and 4th April 2000. I am grateful to the organisers of the Anniversary Meeting for encouraging me to prepare the talk and to Malcolm Walker for his subsequent suggestion that I write it as an Occasional Paper.

I chose the title, “air, earth and skies ... and man’s unconquerable mind”, out of context from *To Toussaint L’Ouverture* by William Wordsworth, in the hope that it would in some way bring to mind the “the call of the untravelled world and catch the inspiration and passion of the spirit of inquiry” that moved Sir Napier Shaw (1919) and has motivated the work of the Royal Meteorological and Royal Geographical Societies from their foundation to the present day.

JMK

Air, earth, and skies ... and man’s unconquerable mind.
Relationships between the Royal Meteorological and Royal Geographical Societies

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INTRODUCTION

The founding of the Royal Geographical Society (RGS) in 1830 and the British¹ Meteorological Society in 1850, together with the Linnean Society (1788), the Geological Society (1807), the Zoological Society of London (1828) and the earlier but unsuccessful meteorological societies founded in 1823 and 1848², reflected a growing interest in science and provided for a late blossoming of the concern to elaborate knowledge of the earth documented by Hakluyt and dramatically influenced by James Cook. Hogsbawm (1962) describes the changes that took place between 1789 and 1848 as “the greatest transformation in human history since the remote times when men invented agriculture and metallurgy, writing, the city and the state”, changes which led to the continuing expansion of European influence through much of the world. There was growing awareness of the benefits that advances in science, mechanisation and communication could offer to trade and industry. It is hardly surprising that geography was considered fundamental to the operation of British influence overseas, while the urge to collect data on terrestrial magnetism, that “major scientific enterprise of early Victorian days” (Morrell & Thackray 1981), gave particular scope to meteorology through the setting up of observatories and inspired geographers through the exploration involved.

The Royal Geographical Society and the British Meteorological Society also followed a trend in the foundation of learned societies, particularly after the death of Sir Joseph Banks³, which reflected disenchantment with patronage in the Royal Society. We might expect the “disrobing of the ‘old lady’” (MacLeod 1983) to have resulted in a separation of the membership of new societies into specialist groups - and a movement towards specialization has been recognised as characteristic of nineteenth-century science (Knight 1986). But interests overlapped and many belonged to several societies simultaneously. The interweaving links between people and “disciplines” in the early and mid-nineteenth century are so many, as are writings on the period by historians of science, that the choice of material for this paper has at times seemed almost arbitrary. This was a period when to be “Fellow of this” or “Lecturer to that” served to enhance reputations (Hays 1983; Inkster 1983). Some of those active in one or both of the Geographical and Meteorological Societies were members of one or more of the Geological Society, the Astronomical Society or the Institution of Civil Engineers. Not all were “scientists”, as we understand the term, though many were involved in the Royal Institution and the British Association for the Advancement of Science. Fellows of the Royal Society, some of them medical men, continued to be influential.

The inaugural council of the Royal Geographical Society included a group of naval men and soldiers, including Francis Beaufort, Hydrographer to the Navy, who persuaded Sir John Barrow, then Permanent Secretary of the Admiralty, to chair the preliminary discussions and the first public meeting of the new Society. Both were founder members of the Raleigh Club, a dining club for travellers, from which the idea of a geographical society had emerged.⁴ Early membership of the Society, which took on commitments from the earlier African Association (Hallett 1964), included aristocrats as well as explorers and scholars. Stoddart (1986) tells us that the RGS was “a social network of a very specific kind” that “differed in this respect from the more severely technical societies such as the Geological and Astronomical”.⁵ The founding members of the British Meteorological Society included a number of astronomers (Walker 2000). Among them was James Glaisher, Superintendent of the Magnetic and Meteorological Department of the Greenwich Royal Observatory, who was influential in the standardization of meteorological observations and later served as President of the Meteorological Society from 1867 to 1868.

¹ Founded as the British Meteorological Society, the Society was known as the Meteorological Society from 1866, when it received its Charter and its members became Fellows. It became the Royal Meteorological Society in 1883. This paper will mostly refer to the “Meteorological Society” until the date when it became Royal.

² See Walker (1993), Ratcliffe (1978) and Symons (1881).

³ President of the Royal Society from 1788 to 1820.

⁴ *Journal of the RGS of London* 1, 1831, pp.v and 257.

⁵ It is disappointing that there is no mention of the British or Royal Meteorological Society (alone of relevant learned societies) in Stoddart’s otherwise splendid *On Geography*. See also Stoddart (1980) and Cameron (1980) on the history of the RGS.

Some progress had been made by the mid-nineteenth century in the identification of geography and meteorology as subjects for study and research⁶, but their respective learned societies were established long before either subject was recognised in Britain as an independent discipline for study in a university. Various lectures and courses in geography were given through the centuries, but Oxford was to recognise the “new geography” (Stoddart 1980) with the appointment of Sir Halford Mackinder to a Readership in 1887 and the establishment of a School of Geography in 1899 (Baker 1963). Sir Napier Shaw gave his first course of lectures in meteorology in 1880, when “meteorology was recognised as a branch of physics” (Shaw 1934). He was appointed Reader in Meteorology in the University of London in 1905 and to the Chair at Imperial College on his retirement from the Meteorological Office in 1920 (Brunt 1934).

For geography and meteorology, it was a long haul in the struggle for each to find its core as a discipline. Hostility towards geography from those who thought it insufficiently scientific can be traced to the early days of the British Association (founded in 1831) when its founder members believed strongly in the superiority of physical science. Geography was linked with geology in Section C from 1832-1838, but provoked opposition through its emphasis on exploration. For that reason, and perhaps to avoid sensitive territorial issues, scope for geography at British Association meetings was limited to physical geography from 1838, until a separate Section E for geography was created in 1851.⁷ Meanwhile, with the patronage of the British Association, Snow Harris recorded 120,000 hourly meteorological observations at Plymouth to early 1840, apparently without any analytical objective.⁸ It is not surprising that hostility towards meteorology was largely from those who feared that continuing accumulation of observational data might prove an unproductive end in itself.

THE RGS AND METEOROLOGY

When the Royal Geographical Society was established in 1830, it was stated that “among the numerous literary and scientific societies established in the British metropolis, one was still wanting to complete the circle of scientific institutions, whose sole object should be the promotion and diffusion of that most important and entertaining branch of knowledge, Geography”.⁹ There was to all intents and purposes another still wanting, however, for early attempts to sustain a meteorological society were proving unsuccessful despite a number of distinguished honorary members like Luke Howard and Sir John Herschel¹⁰, so that the Royal Geographical Society had the advantage of two decades before those who were to establish the British Meteorological Society assembled in Hartwell House in 1850 (Walker 2000; Corless 1950).

During that period, the task of representing interests in meteorology had been more or less taken over from the Royal Society by the British Association (Morrell and Thackray 1981; Burton 1986), but the Royal Geographical Society made an important contribution by reporting developments in meteorology. It is not surprising that the Society's dominant focus on exploration of land and sea included an interest in climate and weather. Exploration of new territories involved meteorological observations. Writers on the geography of a region often included comments on the weather and climate, a weather journal or a table of observations. The new Society encouraged the submission of reports from travellers and residents overseas¹¹, including “the meteorological and magnetic phenomena that may have been observed”.¹² Examples are an account by Captain Parker King FRS (1831) of the geography of Tierra del Fuego, and Captain Robinson's 1820 journal from H.M.S. Favorite at Newfoundland (Robinson 1834). It followed that developments in instrumentation, the organization of observations and the evolution of theories of weather and climate were of interest to the RGS. In 1835, it was reported that the Meteorological Committee of the Southern African Literary and Philosophical Institution intended to circulate instructions drawn up by Sir John

⁶ On geography, see comment by J. N. L. Baker (1948), p. 210 onwards; on meteorology, see Whewell, Lancaster, to Harcourt, 1 September 1831, in Morrell and Thackray (1984) p.53.

⁷ Morrell and Thackray (1981) p. 286.

⁸ *ibid.* pp. 274-5.

⁹ *Journal of the RGS of London* 1, 1831, p.v.

¹⁰ See footnote 2.

¹¹ As did the Meteorological Society of London 1823-43. See Symons (1881).

¹² *Journal of the RGS of London* 1, 1831, p. ix.

Herschel¹³ for the making and registering of meteorological observations at various stations in Southern Africa and other countries in the southern hemisphere and also at sea. The committee requested “the assistance of its correspondents and of all who may have leisure and inclination for observations of the kind towards the gradual accumulation of a continued and extensive series of Meteorological Journals, and towards carrying into effect a concerted plan of contemporaneous observations on stated days, from which it is conceived that much advantage will be derived”.¹⁴

In 1849, W. J. Hamilton called for “a careful investigation of the laws of meteorology, including those of winds and currents”¹⁵ and for a considerable period thereafter presidential addresses to the Royal Geographical Society showed a conspicuous interest in developments in meteorology. No doubt the thoroughness with which they were reported was a response to the speed of developments, but whether the foundation of the new British Meteorological Society was expressly welcomed is not clear. This writer would be glad to be corrected but has found no announcement of its foundation in the *Proceedings* or the *Journal of the Royal Geographical Society*, nor is the British Meteorological Society included among the various institutions listed in the *Journal* to receive copies. When Captain (later Admiral) W. H. Smyth, RN, gave a presidential address to the Royal Geographical Society in May 1850¹⁶, he set out to show that geography embraced all subjects concerning the earth and its peoples, listing astronomy, geology, mineralogy, meteorology, botany, zoology, palaeontology and anatomy before going on to consider the relevant humanities. He claimed that:

as geography really embraces almost all the sciences, and its inquiries are pregnant with consequences important to the improvement of man ... various classes of persons may all contribute to the progress of science, and may all become members of the Geographical Society.

Smyth cannot have intended in this way to oppose the existence other specialist societies and his approach to meteorology was catholic:

Meteorology studies the variations of the atmosphere enveloping the earth, and its effects through all the Protean changes on inorganic substances.

In a subsequent address¹⁷, he mentioned the thermal maps of Professor Dove and praised the provision of wind and current charts by Lieut. Maury, though disagreeing with Maury’s interpretations. Smyth was a personal friend of John Lee and had transferred his astronomical instruments to John Lee’s home, Hartwell House, where the British Meteorological Society was founded. We might expect that he would encourage links between the two societies¹⁸, although the new Meteorological Society had as yet had little time to prove itself more enduring than its predecessors. In 1855, the *Journal of the RGS* included discussion on the causes of hurricanes. It also included remarks on a series of three-hourly meteorological and other observations made during a passage from London to Algoa Bay by Dr P. C. Sutherland, who commented that his pressure readings from an aneroid “may not be entirely valueless, as *the error of the one in my possession was carefully ascertained by the Secretary of the British Meteorological Society*” (my italics).¹⁹

The purposes of the British Meteorological Society were largely to encourage and supervise the use of instruments in the making of meteorological observations. It seems possible that Sir Roderick Murchison, subsequently and repeatedly President of the Royal Geographical Society in 1843-5, 1851-3, 1856-9 and 1862-71, was anxious to retain a central role in reporting the wider context of developments in meteorology. A geologist, twice President of the Geological Society, and Director-

¹³ Sir John Herschel, astronomer, was resident at the Cape from 1834 to 1838, in which year he was created baronet. He was a friend of Thomas Maclear, Director of the Royal Observatory, Cape Town. He made meteorological observations at his South African home in Wynberg but did not publish them (Jackson 1977) and his interest in meteorology led to honorary membership of the short-lived Meteorological Society of London from 1838.

¹⁴ *Journal of the RGS of London* 5, 1835, pp. 367-80.

¹⁵ *ibid.* 19, 1849, p. xci.

¹⁶ *ibid.* 20, 1851, pp. lxvi-xlvii.

¹⁷ *ibid.* 21, 1852, p. xcix.

¹⁸ I am grateful to Malcolm Walker for this suggestion.

¹⁹ *Journal of the RGS of London* 25, 1855, pp. 250-60.

General of the Museums of Practical Geology from 1855, Murchison was an influential “gentleman of science” of the British Association²⁰ and was a founder member of the RGS. Confident “in his own powers and in importance as a member of high society”²¹, his position in the RGS was as dominant as that of Sir John Barrow before him. His influence might be likened to that of Sir Joseph Banks, who had “jealously guarded the Royal Society’s monopoly of metropolitan science”.²² It is significant that Murchison was a friend of Robert FitzRoy.

In 1852, Murchison included a long section on meteorology in his presidential address, referring to the work of the meteorological society of Mauritius, Sir William Reid’s success in proving the gyration of storms, rainfall at Chura Poonje (*sic*), a meteorological journal kept at Alexandria for eight months from 1847 to 1849, pointing out that its use by Dove in a published table showed the importance of new data even when it was for so short a period, and to the need for meteorological observations in Africa.²³ In 1853, the year of the International Maritime Meteorology Conference in Brussels, Murchison included an extensive review of developments in oceanography, adding the following statement on meteorology:

The prayer of the British Association for the Advancement of Science, and of the Royal Society, that a more extended and systematic direction be given to meteorological observations at sea, as prepared by Lieut. Maury, will, I trust, meet with favour in the eyes of the British Government. The Royal Society says truly that, short as the time is that the system has been in operation, the results to which it has led are of very great importance to the interests of navigation and commerce: and it is earnestly to be hoped that the system of co-operative observation may be zealously promoted. In short, when Lord Wrottesley explained in Parliament what enormous spaces of the ocean were still blanks as to any records of the winds, or of the currents and temperatures of the sea, the words which he added will find a response in the breasts of all whom I now address: - “That these blank spaces are a reproach to the civilization of the present age; that it is our duty not to rest satisfied until we know all that can be known about the globe we inhabit that can be rendered in any way profitable to our common species; and that, therefore, the principal maritime nations should share the labour of exploring these vacant spaces.” ...
... The geologist, meteorologist, and geographer, are indeed each of them equally interested in the determination of grand problems like these.²⁴

In 1857, the *Proceedings of the RGS* recorded the communication by Captain FitzRoy, R.N. of a paper by Captain Alfred Parish on the formation of cyclones, after which FitzRoy commented that he would “rather ascribe these so-called circular movements to two bodies of air coming from different directions and meeting together”.²⁵ In his presidential address of May 1859, Murchison referred to the establishment of a Meteorological Society for Scotland, and mentioned that that his “distinguished friend Admiral FitzRoy, now at the head of the Meteorological Survey of our country”²⁶ had assured him that many of the texts on climate and weather currently in circulation were not to be depended on. He commended the works of Humboldt, Herschel and Dove, which “grounded on sound induction, constitute, indeed, a safe basis on which the numerous class of observers may rest their meteorological facts, preparing, reducing and classifying them”. In 1861, Murchison included a section provided by FitzRoy under the heading “Progress in Meteorology”²⁷, as did Lord Ashburton, who was President in the following year.²⁸ An obituary of Robert FitzRoy was included in the presidential address of 1865,²⁹ and in 1866, Sir Roderick referred to the report by Galton and Farrer on proposals for the organisation of meteorology following the death of FitzRoy. He described the report as “one of

²⁰ See Morrell and Thackray (1981) pp. 28-29 on the “gentlemen of science” whose interests lay in physical science and who saw themselves as “the anointed interpreters of God’s truth about the natural, and hence the moral world”.

²¹ Mill (1930), quoted by Stoddart (1986) p. 61.

²² Stoddart (1986) p. 18.

²³ *Journal of the RGS of London* 22, 1852, pp. lxxxix-xc.

²⁴ *ibid.* 23, 1853, pp. cxxxiii-cxxxv.

²⁵ See also *Journal of the RGS of London* 28, 1858, 154-157.

²⁶ *ibid.* 29, 1859, pp. clv-clvii.

²⁷ *ibid.* 31, 1861, pp. cli-clvi.

²⁸ *ibid.* 32, 1862, pp. cxxix-cxxx.

²⁹ *ibid.* 35, 1865, pp. cxxix-cxxx.

the most valuable documents ever laid before Parliament and the public in the form of a Blue Book, whilst it must be peculiarly interesting to all geographers". The Committee had urgently recommended resumption of the registering of meteorological observations made at sea that FitzRoy had abandoned under pressure, but suggested that to continue the practice of issuing daily official notices of the weather would be prejudicial to the advancement of "true science", though concluding, in words that "most gratified" Sir Roderick, that "if a more scientific method should hereafter succeed in placing the practice of foretelling weather on a clear and certain basis, it will not be forgotten that it was Admiral FitzRoy who gave the first impulse to this branch of inquiry, who induced men of science and the public to take an interest in it, and who sacrificed his life to the cause".³⁰ After 1866, presidential addresses to the Royal Geographical Society contained limited reference to meteorology and Murchison focussed rather more on developments in geology after his usual resume of recent exploration and discovery.³¹ The Meteorological Office was included in the list of institutions to receive copies of the *Journal* from 1869.

It is of course relevant to the theme of this paper that Francis Beaufort (1774-1857)³² and Robert FitzRoy (1805-65), key personalities in the early years of modern meteorology, are remembered for their important contributions to the Royal Geographical Society. A founder member of the RGS, Beaufort was a Fellow of the Royal Society and of the Royal Astronomical Society. He was much concerned with the debate about a possible northwest passage.³³ His legacy is considered to lie in the furtherance of maritime sounding in hydrographic survey, though he is perhaps best known as the originator of meteorological symbols and the Beaufort wind scale. He was active in encouraging the making of weather observations at sea and persuaded Sir John Herschel to edit the *Manual of Scientific Enquiry* for the use of naval officers and to contribute a section on meteorology (Herschel 1848). Correspondence in the Royal Geographical Society's archives shows that he recommended papers by colleagues and colleagues for Fellowship, that he was able to advise maritime explorers on the availability of maps and documents at the RGS and that he was generous in providing Admiralty charts for the RGS collection.³⁴ An extensive obituary was included in Murchison's address to the RGS in May 1858.³⁵ That he did not join the British Meteorological Society can be explained by his declining health in the period after its foundation in 1850 (Courtney 2002).

Vice-Admiral Robert FitzRoy³⁶, Commander of the *Beagle* and first Director of the Meteorological Department (Burton 1986; Barlow 1994), was a member of both Societies. At a special meeting of the Royal Geographical Society held on 8th May, 1837, he was presented with the "Royal Premium" (Gold Medal) for his valuable additions to knowledge of a large portion of the South American continent and adjacent islands. In reply, FitzRoy acknowledged the encouragement of Beaufort and the "most cordial co-operation of Darwin", commenting with tragic foresight that if at any future time his "humble efforts should be thought likely to be useful", he would be "proud to prefer public duty to private happiness".³⁷

He was persuaded to serve on the Council of the Royal Geographical Society for a second time, having the first time, in his words, "seceded – (displeased)".³⁸ He contributed a highly regarded report on the possibility of a navigable channel between the Atlantic and the Pacific.³⁹ He offered a paper to the RGS in which he expressed doubts about the sinking and stranding of the *Erebus* and *Terror*, but later withdrew it for fear of offending those involved in the controversy.⁴⁰ His lasting contribution was his work with Lieutenant Raper RN on the report of a sub-committee of the RGS, to which Galton contributed a section and which was later published and revised repeatedly by the RGS as *Hints to*

³⁰ *ibid.* 36, 1866, pp. clvi-clviii.

³¹ Stoddart (1980) points out that the number of geologists involved in the RGS declined rapidly after Murchison's death.

³² Ultimately, Rear-Admiral Sir Francis Beaufort KCB.

³³ *Journal of the RGS of London* 6, 1836, pp. 34-50.

³⁴ *RGS CORR. BL. 1841-50*, letters to Colonel Jackson.

³⁵ *Journal of the RGS of London* 26, 1858, pp. cxxiii-cxxvii.

³⁶ FitzRoy was a Fellow of the Royal Society from 1854, Rear Admiral from 1857 and Vice Admiral from 1863.

³⁷ *ibid.* 8, 1838, pp. xvi-xviii.

³⁸ *RGS CORR BL 1851-60*, Capt. R. FitzRoy to Dr Norton Shaw, Feb 20/50.

³⁹ *Journal of the RGS of London* 20, 1851, pp.161 –189.

⁴⁰ *RGS CORR BL 1851-60*, Capt. R. FitzRoy to Dr Norton Shaw, Feb 6 1860.

Travellers. The report included notes on the use of the thermometer in determining height and (under the heading of “geographical information”) on the keeping of meteorological notes.⁴¹

FitzRoy joined the British Meteorological Society in March 1855 (Walker 2000), having become head of the new Meteorological Department (later the Meteorological Office) in August of the previous year. He had acted before 1855 as intermediary between the two societies when, eight months after the founding of the British Meteorological Society, he gave notice to the secretary of the Royal Geographical Society that the Council of the Meteorological Society hoped to hold a few monthly meetings at the Royal Geographical Society’s house: “I am authorised to ask your view of the propriety of such a request before making it. The Met.¹ meetings usually number some *ten to twenty* persons”.⁴²

Thomas Sopwith (1803-1879), an exemplar of the nineteenth-century generalist, was also a member of both societies. A mining engineer and geologist by profession, he served the British Meteorological Society as President from 1859 to 1860. Richardson (1891) tells us that Sopwith was:

... a Fellow of the Royal Society; a member of the Athenaeum Club; a Fellow of the Geological Societies of England and France; a member of the Geological Club; a member of the Institution of Civil Engineers, and a Telford Gold Medallist of that Institution; a member of the Royal Institution, proposed by Faraday; a member of the Royal Geographical Society, of the Palaeontological Society, of the British Association for the Advancement of Science, of the Society of Arts, of the Meteorological Society of England and Scotland, of the Statistical Society of London, and of the Archaeological Institute and Archaeological Association. ... In addition, he belonged to many local societies; and in total was connected with no less than twenty-six learned institutions.

His obituarist comments that his publications and the numerous papers which he presented to learned societies brought him into contact with many of the leading minds of the day, including Sir Roderick Murchison, Mary Somerville and James Glaisher. He was a popular member of the Newcastle Literary and Philosophical Society (McCord 1994) and his contributions to the meteorology of North-east England included a description of the helm wind of Crossfell (Sopwith 1833). He also conducted an investigation into temperature variation with height by comparing observations at Allenheads and Bywell and, in conjunction with the Duke of Northumberland, placed meteorological instruments “at the several fishing villages on the coast of Northumberland, for the keeping of correct observations where a knowledge of the weather is so important to the lives and property of the fishing population”.⁴³

NON-SPECIALISTS AND THE DEVELOPMENT OF SPECIALIST DISCIPLINES

Uncertainty as to the directions geography and meteorology should take influenced many discussions. The two subjects shared an interest in spatial distributions. John Ruskin called for co-operation between observers who “should think, observe, and act simultaneously”, pointing out that “the meteorologist is impotent if alone; his observations are useless; for they are made upon a point, while the speculations to be derived from them must be on space” (Ruskin 1839). There were those who thought geography to be fundamental to meteorology. William Whewell suggested to Harcourt, the first honorary secretary of the British Association, that “it would be proper to make geography a branch” in a report on meteorology to be presented to the Oxford meeting of the British Association in 1832.⁴⁴ Yet Commander David Wilson-Barker, member of the Challenger Society, Fellow of the Royal

⁴¹ *Journal of the RGS* 24, 1854, pp. 328-358.

⁴² *RGS CORR. BL 1841-50*, Capt. R. FitzRoy to Sir Roderick Murchison, Dec 4. 50.

⁴³ Obituary, *Q. J. Met. Soc.* 6, 1880, 74-75.

⁴⁴ Whewell to Harcourt, 1 September 1831 (see footnote 6). William Whewell, mathematician and philosopher, was later Master of Trinity College, Cambridge.

Geographical Society and President of the Royal Meteorological Society from 1902 to 1904, was to suggest much later that meteorology was a science deserving more attention than it received and ought to be recognised “as a preliminary to the studies of Geography, Geology and kindred subjects” (Wilson-Barker 1905; Deacon 1990). As for geography, there were acid comments on “the travellers’ tales” type of geography, “suitable only for beginners”.⁴⁵ It was no doubt in defence against such accusations that Smyth described geography as “a progressive science of observation”.⁴⁶

Data gathering was a determined objective of the British Meteorological Society and, whether descriptive or numerical, had always been part of geography. The value the two Societies placed on information about the earth, ocean and atmosphere is evident in their publications. Francis Galton explained the need for geographical information when he wrote: “Travellers of the present generation need some effort of imagination to put themselves into the mental positions of those who were living in 1849. Blank spaces in the map of the world were then both large and numerous, and the positions of many towns, rivers, and notable districts were untrustworthy. ... It was a time when the ideas of persons interested in geography were in a justifiable state of ferment” (Galton 1908). The position was much the same for meteorology. Cannon points out that the search for factual data was characteristic of many sciences in the first half of the nineteenth century and that “accumulation was deliberate, not the result of some inherent sociological growth factor. In area after area, scientific spokesmen called for more data, and the scientific community laboured to respond”.⁴⁷ There were arguments about the relative merits of inductive reasoning based on the collection of information and a more deductive approach. Reference to the writings of Francis Bacon on empirical science was common and the work of Alexander von Humboldt was influential – although historians of science are in dispute as to whether “Humboldtian science” involves straightforward collection of data, or the search for data with a system, hypothesis or theory in mind (Cannon 1978).

The snag was that development of a theory on which to base deductive reasoning depended on there being a pre-existing focus. J. D. Forbes, author of the report to the British Association in 1832, expressed concern at the lack of a unifying theory for meteorology, believing that much time and labour had been lost “in making and recording observations utterly useless for any scientific purpose”.⁴⁸ That the focus of meteorology remained diffuse was no doubt influenced by what was also a consequence of it, the predominance of non-specialists. It was necessary to specialise if ideas were to mature and Robert FitzRoy was clearly aware of this in his acerbic reaction to an invitation from the Secretary of the RGS to speak again to Section E of the British Association. “Don’t ask me, I beg, to take any geographical part at Oxford”, he wrote in 1860, “I *cannot* and shall be *sorry* to say more. I am a ‘one syllogism man’ and immersed in Meteorology – but truly yours in *air*”⁴⁹ (Figure 1, overleaf). FitzRoy issued forecasts from the Meteorological Department in the following year. His forecasts were later criticised as unscientific and his use of weather maps as empirical, but he regarded the term forecast as applicable only when “the result of a scientific combination and calculation”.⁵⁰

⁴⁵ Colonel Julian Jackson, *Journal of the RGS of London* 5, 1835, pp. 381-7, quoted by T. W. Freeman (1980) p. 4.

⁴⁶ *Journal of the RGS of London* 21, 1852, p. xcix.

⁴⁷ Cannon (1978) p. 225.

⁴⁸ Morrell & Thackray (1981) p. 517. James David Forbes, a founder member of the British Association, was Professor of Natural Philosophy at Edinburgh from 1833 and Principal of St Andrews University from 1849.

⁴⁹ *RGS CORR. BL 1851-60*, Admiral Robert FitzRoy to Dr. Norton Shaw, June 9, 1860.

⁵⁰ FitzRoy (1863) p.171.


 June 9. 1860.
 Dear Dr Shaw
 I will send
 you such an
 Abstract as may
 suit the object
 in


 in your view
 as early next
 week as may
 be possible.
 The word on
 another subject
 Don't ask me,
 I beg, to take

any geographical
 part of Oxford?
 I cannot and
 should be sorry
 to say more.
 I am a one
 Sylligiam man
 and immersed
 in Meteorology -
 but truly yours
 in aid

Figure 1: Admiral Robert FitzRoy to Dr Norton Shaw, June 9, 1860 (by courtesy of the Royal Geographical Society).

Robert James Mann, 1817-86, a member of the Meteorological Society and Fellow of the Geographical and Astronomical Societies and the Royal College of Surgeons, had followed an early career in medicine (Walker 2001). He became Superintendent of Education in Natal and was among those in South Africa who were encouraged by Sir John Herschel to take an interest in observing the weather. He presented well-received papers, on the climate of Natal based on his own observations to the Meteorological Society (Mann 1866) and on the physical geography and climate of Natal to the Royal Geographical Society (Mann 1867). When President of the Meteorological Society from 1873 to 1875, he had to deal with the prevailing criticism that meteorological observations represented “an attempt at induction that had yielded little or no fruit”. In his first address, he alluded to the fashion “even among scientific men, to point the finger of incredulity and reproach at the labour of meteorologists” and to the recent reference in a monthly magazine⁵¹ to the earlier concern of Sir William Herschel, father of Sir John, as to whether “millions of useless observations will be added to the millions that already exist, or whether something may be expected to result which will lead to a theory”. Mann responded confidently that such criticisms arose from a misapprehension of the primary aims of meteorological science and that “the establishment of a comprehensive theory; - or - ... foretelling of the weather - is not the sole, or even the primary object of meteorological labour. The first aim of scientific meteorology is the study and investigation of the facts of climate, rather than the establishment of a theory”. He added that “out of meteorological investigation, taken as a whole, many things will result which will contribute in a very material degree to man’s knowledge of the laws of nature, and to man’s power over the so-called natural forces and elements”.⁵²

In a subsequent address, Mann met the theorists part way when he said that “deduction leads the way, and marks out the course, and induction then takes up the running and tracks the half-seen truth home to its hidden lair”. He called for strictly comparable observations. He claimed that “uniformity in the character and conditions of the instruments had been secured by inspection and registration of the circumstances and equipment of each station”, and that care had been taken “not to multiply needlessly the stations of observation, but to select them on the ground of topographical position”. He quoted a letter that had appeared in *The Times* suggesting that “the requisite in Meteorological Science now is, not observations, but brains to work out the results”.⁵³

Henry Storks Eaton, another Fellow of the Royal Geographical Society and Mann’s successor as President of the Meteorological Society from 1876 to 1877 (Walker 1997), pointed out that meteorology had long been divided into two branches, statistical meteorology and dynamical meteorology. He looked at theories of climatic change and at the importance when drawing deductions from a long series of air temperature observations at one place of ascertaining whether conditions in the surrounding district had altered. “Who can doubt that the climate of London has been modified by the growth of its populations and the consumption of fuel?” he asked, raising an issue of continuing interest to meteorologists and geographers.⁵⁴

There was also need to define what was properly within the remit of geography. Beaufort suggested that a paper submitted for publication in the *Journal of the RGS* did not contain “sufficiently geographic information for a place in the Journal”.⁵⁵ Recognition of the need to justify submission of articles on weather and climate to a geographical publication was shown by Thomas Hopkins, Vice-President of the Manchester Literary and Philosophical Society, when he offered to send the Secretary of the RGS a paper “on certain arid countries and the causes of their dryness”, adding that it was “quite as much a Geographical as a Meteorological Essay”.⁵⁶ In the following year, he put forward a paper on the winter climate of the British Islands on the grounds that it had “Geographical character”.⁵⁷ Conversely, when the RGS received a letter from Lieutenant Col. Cameron, H. B. M. Consul in Abyssinia, expressing his wish to be of service to meteorology and make observations “under proper guidance”, the letter was passed to the Meteorological Society as more qualified to deal with it. The Meteorological Society set up a committee to look into the matter under Glaisher, Galton

⁵¹ *Saint Paul’s Magazine*, July 1873.

⁵² *Q. J. Met. Soc.* 2, 1874, pp. 59-74.

⁵³ *ibid.* 3, 1876, pp. 37-48.

⁵⁴ *ibid.* 3, 1877, pp. 309-17

⁵⁵ Admiral F. Beaufort to Dr Norton Shaw, Dec^r 29/49.

⁵⁶ *RGS CORR. BL. 1851-60*, Hopkins to RGS, July 20, 1855.

⁵⁷ *RGS CORR. BL. 1851-60*, Hopkins to RGS, Aug^t 13/56.

and Thomson, which resulted in Galton's presentation of "Meteorological instructions for the use of inexperienced Observers resident abroad" to the Society in 1863.⁵⁸

As we have seen, the British Association set out to retain a focus on physical geography as being the more scientific aspect. Sir Edward Sabine went so far as to express doubts about the determination of the RGS to sustain physical geography, commenting on a paper submitted for publication that it would by no means be "unsuitably presented to the Geographical Society, (if it pretends to be in any degree a society for Physical Geography)".⁵⁹ In 1848, Mary Somerville's *Physical Geography*, dealing with land, oceans, atmosphere, plant and animal geographies, was published and received favourable comment from Humboldt and Herschel (Baker 1948), but Sabine continued to complain that "... the cause of Geography in this country suffers ... by the separation of Physical Geography from its proper alliance with descriptive Geography; but the English Geographer prefers that it should be so; and so long as they do, will geographical societies be deprived of the interest which would be given to them by the cultivation of the more intellectual portion of their science."⁶⁰ Some aspects of the problem remain with us today.⁶¹

How the study of "scientific geography" should develop was unclear. As late as 1875, Alexander Keith Johnston, the younger⁶², proposed an occupation for himself in "the collection and arrangement of the ever accumulating facts of scientific geography in a great series of maps for exhibition in the Society's rooms". He suggested that once "the general features and character of any country are tolerably well known, the interest in it sinks to the ordinary level. ... the geography of the future must take a new channel ... it may turn to the solution of the problem of scientific geography".⁶³ By the end of the nineteenth century, the "new geography" was considered to be more scientific, primarily because it had claimed the study of landforms as its own despite competition from geology (Stoddart 1980).

Meanwhile, reports on the climate of wherever continued to interest both Societies and the following suggests that the Royal Meteorological Society was as happy as the RGS to report a traveller's tale:

On the evening of December 9th, 1891, I was rowing down the Pungwe River, Manicaland, Portuguese East Africa, with two friends, Mr. Bobbert of Mpanda, and Mr. Armytage of America, when at 6 p.m. or thereabouts, just before sunset, the moon having risen, and being almost directly overhead, we saw ... a light blue streak in the sky ... This may or may not prove of interest, but we were very struck by it. Our position on the map was about 20 miles north west of Beira, which is almost lat. 19 S, long. 35 E.⁶⁴

MAJOR PERSONALITIES LINKING THE TWO SOCIETIES

A personal selection of some of the many individuals who have influenced both Societies follows. Sir Francis Galton (1822-1911) was awarded a Gold Medal of the Royal Geographical Society following his exploration in southwest Africa. He played a part in encouraging the publication of the first edition of *Hints to Travellers* by the RGS, and was later its editor. He published *The Art of Travel* in 1855. He was for a time Honorary Secretary and Foreign Secretary of the Royal Geographical Society and was influential in Section E of the British Association. He was an advocate and supporter of "scientific

⁵⁸ *Proceedings of the British Meteorological Society* 1, 1863, p. 396.

⁵⁹ *RGS CORR BL 1841-50* Colonel E. Sabine to Col. Jackson July 20 1846.

⁶⁰ *RGS CORR BL 1851-60* Colonel E. Sabine to Dr Norton Shaw July 27, p. 53.

⁶¹ Physical geography has not always been well represented in geographical publications, although an editorial, "Where have all the physical geographers gone?" in the *Transactions of the Institute of British Geographers*, a journal of the RGS with the IBG, seems to have stimulated some improvement (Agnew and Spencer 1999).

⁶² A. K. Johnston, the younger, published maps of Africa. He died in 1879 leading a RGS expedition to Nyassaland. His father, Alexander Keith Johnston, the elder (1804-1871), published a physical atlas in 1848 and was awarded a medal at the 1851 Exhibition for his physical geography globe.

⁶³ *RGS CORR. BL. 1871-80*, Johnston to Bates, 30th Nov. 1875.

⁶⁴ Lord Deerpurth, *Q.J.R.Met.Soc.* 18, 1892, p. 147.

geography" in school education, until he began to have misgivings, suggesting to Hugh Robert Mill that geography was "... an unsatisfactory subject on which to set examinations ... You cannot set problems in it ... Given the data you cannot draw inferences of any high degree of subtlety".⁶⁵ Yet, to some extent it was as a geographer that he influenced meteorology. In the words of Sir Crispin Tickell (1993) "Galton's long-standing interest in meteorology came through an interest in maps, in turn engendered by his long and generally fruitful association with the RGS".

Galton was elected a member of the Meteorological Society in 1861, at a time when he was involved in a major project of meteorological enquiry, setting out to obtain all possible data on the state of the weather over Europe, three times a day, for the month of December 1861. In a presidential address to the Meteorological Society, Nathaniel Beardmore⁶⁶ referred to Galton's efforts in collecting and reducing at his own expense "all available meteorological observations taken between the latitudes 42° 25' and 61° north, and from the west of Ireland as far east as Russia", and trusted that he would "get through the collation of this great work and labour of love, and give your Society what will not fail to afford a most valuable contribution to the science of meteorology".⁶⁷ In 1862, Galton presented a paper to the Royal Society on the theory of cyclones in which he introduced the word *anticyclone*.

Tickell (1993) tells us that Galton resigned as Honorary Secretary of the Royal Geographical Society in 1863 following a quarrel with the executive secretary Norton Shaw. In the same year, he presented instructions for the use of observers resident abroad to the Meteorological Society and published *Meteorographica* on the making of weather maps. He was made Foreign Secretary of the Meteorological Society in June 1863, having been a member of Council from June 1862. He does not mention these activities in the Meteorological Society in his autobiography, written in old age (Galton 1908), but he shows pride in his role on the committee for Kew Observatory and on the Meteorological Committee (later Meteorological Council), which was set up in 1868 following the report by himself and Farrer on the direction to be taken after the tragic death of Admiral FitzRoy.⁶⁸

While Galton had an important influence on geography and meteorology, there is no doubt that Hugh Robert Mill (1861-1950) (Figure 2, overleaf) stands tallest among those who served both the Royal Meteorological and the Royal Geographical Societies. He was also an influential member of the Challenger Society for the Promotion of the Study of Oceanography, founded in 1903 (Deacon 1990). Freeman (1961) writes that:

A student at Edinburgh, and a scientist by training, he met Patrick Geddes⁶⁹ and learned to combine an interest in human affairs with a zeal for scientific investigation. He worked from 1878 at the Scottish Marine Station in Granton and also as a university extension lecturer, and in 1892 went to the Royal Geographical Society as Librarian: in 1901, he became director of the British Rainfall Organization. With Edward Heawood and A. J. Herbertson, he began a survey of English Lakes. His proposals for an official regional survey of Britain were excellent but fruitless though he had a considerable influence on private workers. He was an expert on Polar exploration, but without any practical experience of such areas.

⁶⁵ Galton to H. R. Mill, quoted in Tickell (1993).

⁶⁶ Beardmore was President of the Meteorological Society from 1861 to 1862.

⁶⁷ *Proceedings of the British Meteorological Society* 3, 1865, pp. 8-41.

⁶⁸ He also took pride in his work on eugenics, and was President of the Anthropological Institute in the 1880s.

⁶⁹ Patrick Geddes (1854-1932), one-time biologist, was best known as a geographer and planner.

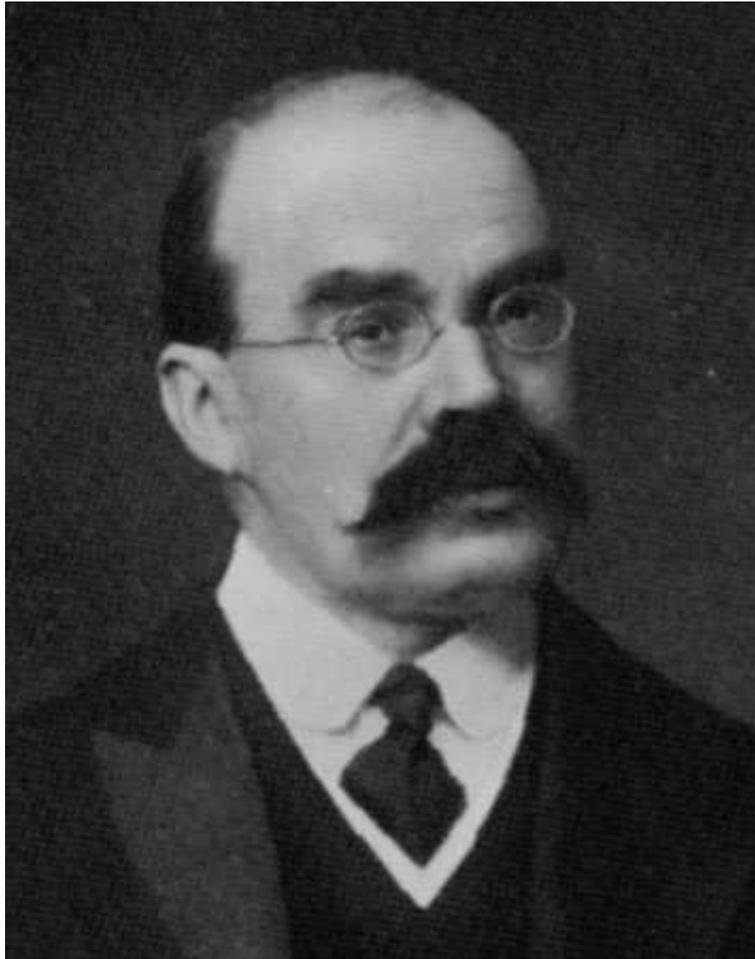


Figure 2: Hugh Robert Mill (by courtesy of the Royal Meteorological Society).

Mill wanted to put geography on a sound scientific basis (Pedgley 1994 & 2002). He believed that the study of scientific geography had much to offer climatology and that there was scope in his work at the British Rainfall Organization “for investigating the central problem of Geography, the controlling influence of land forms on mobile distributions” (Mill 1930).

The Royal Meteorological Society’s commendation on Mill’s eightieth birthday leaves no doubt as to the high regard with which his achievements in meteorology were held. It was to:

... so distinguished a meteorologist ... whose membership dates from the year 1893, who occupied the Presidential chair in 1907-1908 after having served for five years as Honorary Secretary and for 15 years as a Councillor, and who received the Society’s highest honour, the Symons Memorial Medal, in 1918.⁷⁰

Yet, Mill claimed that if he were asked to designate himself “according to vocation by a single label, it would have to be geographer”, but that he would “consider meteorologist no libel” (Mill 1941).

Like Mill, A. J. Herbertson (1865-1915) worked for a time with Geddes as a demonstrator in Botany at Dundee University College. He also worked with Alexander Buchan on Bartholomew’s *Atlas of Meteorology* and on a hygrometric survey of Ben Nevis. Herbertson was responsible for many important climatic maps, including maps of mean annual and monthly rainfall for the land surfaces of the globe, later printed by the RGS, for which he received the degree of PhD *multa cum laude* from Freiburg.⁷¹ For many decades, his work on natural regions (Herbertson 1905) influenced the teaching

⁷⁰ *Q.J.R.Met.Soc.* 77, 1941, pp. 296-98.

⁷¹ *RGS CORR BL 1881-1910*. Herbertson to Keltie, 12.viii.98

of geography in schools and in the School of Geography, Oxford, where Herbertson played an important part in the development of the degree course. He was Professor of Geography at Oxford from 1910.

Lieutenant-Colonel Henry Mellish (1856-1927), mathematician and natural scientist, served on the committee that produced the *Rainfall Atlas of the British Isles* and was interested in the application of meteorology and climatology to agriculture (Walker 1996). He was elected a member the Meteorological Society in 1879 and a Fellow of the Royal Geographical Society in 1902. He was President of the Royal Meteorological Society from 1909 to 1910, and a trustee of the British Rainfall Organization.

Colonel Sir Henry George Lyons, FRS (1864-1944) was among the last of the great generalists. He lectured in geography at Glasgow, and was an Honorary Secretary of the Royal Geographical Society. He was President of the Royal Meteorological Society from 1915 to 1917 and Symons Medallist in 1922. He was a member of Council of the Geological and Royal Astronomical Societies. He served on the Meteorological Committee, was Secretary-General of the International Union of Geodesy and Geophysics, General Secretary of the International Research Council, and Foreign Secretary and Treasurer of the Royal Society. He was Director of the Science Museum, 1920-1933. Geographers know him for his studies of the Nile when Director-General of the Geological Survey in Egypt and then Director of the Egyptian Survey Department from 1896 to 1909. Meteorologists know him for his creation of a meteorological service for the Royal Engineers in the First World War, and for his term as Director of the Meteorological Office in 1918-1919, when he released Sir Napier Shaw briefly for other work (Burton 1998).

Leo Bonacina (1882-1975) deserves mention. He had shown an early interest in meteorology (Pike 2000) and worked with Mill at the British Rainfall Organization. It was Mill who encouraged him to write a textbook on climate, and it was through Mill that Bonacina obtained a post in the library of the Royal Geographical Society. He published many papers on weather and served on the Council of the Royal Meteorological Society, twice as Vice-President. He was well known as an indefatigable contributor to discussions following the presentation of papers at meetings of the Royal Geographical and the Royal Meteorological Societies. His often-provocative comments in discussion were widely read⁷² and his response to criticism that geography was insufficiently scientific was a healthy challenge (Bonacina 1957):

... geography enjoys a unique status among the natural sciences as a cultural discipline, and accordingly, if geographers themselves will take the precautions in the handling of their subject matter not to play into the hands of scientific critics their position will be found intellectually impregnable.

DEVELOPMENTS IN CLIMATOLOGY

That the Royal Meteorological Society showed a continuing interest in what was happening to climatology within geography departments is evident in the *Quarterly Journal*. In 1914, it was reported that climatology would be included as a subject for examination in geography at Aberystwyth. Appointments of climatologists in geography departments were reported: Austin Miller at Reading in 1926, W.G. Kendrew as Reader in Climatology at Oxford in 1940.

Mill had claimed climatology to be “as much a branch of Geography as of Meteorology”,

in fact more, for it not only deals with the distribution of atmospheric conditions on the Earth's surface, which is a geographical question in itself, but all the varieties of climate that give individuality to different countries are produced by the disturbing or controlling influence of landforms (Mill 1901).

⁷² This writer found his comments enlivened many a paper she was required to read as an undergraduate.

In 1944, he wrote to congratulate Gordon Manley on his paper on topographical features and the climate of Britain, which had appeared in the *Geographical Journal* (Manley 1944.). In reply, Manley, who was then working in the Department of Geography at Cambridge, wrote:

I am the more happy because of your own climatological work, and I am eager to see more links between the geographers and the meteorologists; this was not the least of my reasons in citing so many references from the *Quarterly Journal of the Royal Meteorological Society*. Further, even yet climatology is far too little recognised in our Universities ... one feels the more fortified to learn that one's work is doing something to carry on the tradition set by you and other senior British geographers in the past. ... you may be assured that we all at Cambridge are determined "to keep our end up" with plenty of emphasis on those facts of physical geography which can and should be analysed and weighed before embarking on tendentious generalisations.⁷³

Manley told Mill that he had been asked to succeed David Brunt as President of the Royal Meteorological Society, and showed a close knowledge of Mill's writings in his first presidential address. Compare Manley (1947):

... the geographer can best explore and assemble the material in his own proper domain – the phenomena at the boundary surface of the difficult medium in which it is for the meteorologist to be allowed to fly.

with Mill (1909):

Climate – the condition at the bottom – cleaves to the Earth, and belongs as much to Geography as to Meteorology ... the Meteorology of the Upper Air belongs more and more to the domain of pure Physics.

Gordon Manley was President of the Royal Meteorological Society from 1945 to 1947. He gave the Symons Memorial Lecture in 1944 and amongst his many honours were the Buchan prize of the Royal Meteorological Society and the Murchison Award of the Royal Geographical Society (Ratcliffe 1993a). It was during Manley's Presidency that the Royal Meteorological Society founded the magazine *Weather*, with the aim of making meteorology available to a wider public (Manley 1946). Such a concern was not new, for Cave⁷⁴ had added his thoughts on the *Quarterly Journal* when writing to Mill in 1925 about the status of meteorology. "I am hoping that we shall make the Journal more readable. It is all very well to have learned mathematical papers, and I would not discourage them for anything, but there ought to be enough matter of general interest for the ordinary fellow, who cannot follow the very technical papers; and after all the majority of fellows are not mathematicians".⁷⁵

It would be too big a task here to review the development of modern meteorology, or even to review those papers in the *QJ* (as it is known) that have been interesting to geographers or written by geographers - and equally so to consider papers on climatology published in the *Geographical Journal* (*GJ*) and the *Transactions of the Institute of British Geographers* (now a publication of the RGS). The various debates on desiccation in the *GJ* from the 1860s onwards provide an especially interesting story. A trawl of later papers in the geographical publications would reveal valuable contributions to climatology, although climatologists have long been dissatisfied with the number of papers accepted for geographical publications. The newly merged RGS with the IBG has promised greater coverage of climatology in meetings and published papers.

As for the status of climatology within geography, an early association with climatic determinism tended to repel human geographers, so that the relevance of climate for economic and social life has often been neglected. Physical geographers, less encumbered with anxieties about determinism and more aware of developments in meteorology, have kept the teaching of climatology afloat. The 1950s

⁷³ RGS LBR.MSS. 4(b) *Meteorology and Climatology*, G. Manley to H. R. Mill, 3.xi.44.

⁷⁴ Charles John Philip Cave was President of the Royal Meteorological Society from 1913 to 1914 and 1924 to 1925 (Ratcliffe 1993b).

⁷⁵ RGS LBR.MSS.4 (b) *Meteorology and Climatology*, Cave to Mill, March 16.1925.

saw geographers focus on the dynamics of climate⁷⁶ and, as relatively sophisticated statistical techniques were applied to the analysis of data, there was a tendency to decry “mere” description.

Being a geographer had not precluded an interest in meteorology. Overlap between geographers and meteorologists in interests and skills was especially evident during and immediately after the Second World War, when a number of geographers served as weather forecasters, some following subsequent careers in meteorology or climatology. Examples are F.K. Hare⁷⁷, President of the Royal Meteorological Society from 1967 to 1968, whose distinguished career as a climatologist in Britain and Canada began with a lectureship in geography at Manchester University followed by service as a forecaster during the war, and B.W. Thompson, who was Deputy Director of the East African Meteorological Department from 1958 to 1962 and Director from 1962 to 1966, having served as a forecaster in the Far East.⁷⁸ Both graduated in geography from King’s College, London.

It has to be admitted, however, that antipathy towards geography and geographers from the standpoint of meteorology has sometimes been evident. This is largely explained by the fact that most modern meteorologists have received training in mathematics and many geographers have not. The trend for fewer geographers to become professional or academic meteorologists can be attributed to the increasing emphasis on mathematics in meteorological research. Professor Scorer, President of the Royal Meteorological Society from 1986 to 1988, declared school geography to be “a bad influence on the good student”, although he went on to say that in his opinion both geography and meteorology would be better dealt with at a higher level following initial training in basic sciences (Scorer 1957).

For a long time, meteorologists were inclined to regard climatology as merely descriptive, or as meteorology simplified by geographers for teaching purposes, but a new perception of climatology has arisen through the growing importance of numerical modelling. As the behaviour of the whole atmosphere can be studied using high-speed computers and as research on climatic variation and change has become increasingly associated with modelling, meteorologists could be forgiven for suggesting that once again geographers need mathematics and physics to keep pace.

The Royal Meteorological Society has endorsed the growing interest in climatology in two ways. The proposal by John Wiley and Sons to found the *Journal of Climatology* (later the *International Journal*) gained immediate approval and the Royal Meteorological Society adopted it as publication in addition to the *Quarterly Journal*, giving Fellows choice. In his introductory editorial, Professor Stanley Gregory, a geographer, identified the interdisciplinary nature of climatology:

Meteorology, atmospheric physics, hydrology, geography, ecology, agriculture, forestry, medicine, building science, engineering and quaternary studies are but some of the disparate ‘disciplines’ that are involved with climatology in one way or another (Gregory 1981).

Wishing to set up a Specialist (now Special Interest) Group in climatology, the Royal Meteorological Society adopted the Association of British Climatology, which had been founded by a group of geographers and some others in the 1960s, when it was agreed⁷⁹ that the Association should not seek recognition as a study group of the Institute of British Geographers (yet to be affiliated with the RGS) lest association with geography discourage meteorologists from joining, although some sessions have been held at the annual conference of the IBG (now the conference of the RGS-IBG).

Recent developments reflect the maturity of geography and meteorology as subject disciplines. The Royal Geographical Society continues to have a wide-ranging fellowship, but the proportion of professional geographers has increased following merger with the Institute of British Geographers in 1995. The Royal Meteorological Society has always welcomed a varied membership, providing that each can show a genuine interest in the subject. Geographer-climatologists have served the Royal Meteorological Society as Fellows, members of Council and Presidents, editors, leaders of regional or

⁷⁶ A small but influential textbook was F. K. Hare’s *The Restless Atmosphere*, Hutchinson’s University Library, 1953.

⁷⁷ Obituary, *Weather* 58, pp. 127-128.

⁷⁸ B. W. (Tommy) Thompson later worked for WMO in Paris and then as Professor of Geography at Brock University, Canada.

⁷⁹ The writer was present at the meeting when this was discussed.

specialist groups, referees of submitted papers and authors of papers. The introduction of a Chartered Meteorologist scheme reflects concern to acknowledge professional status for practising meteorologists who have appropriate experience without other recognition. Both Societies are concerned to broaden awareness of their ongoing potential as advisory bodies to government and other organizations.

A LINK WITH HISTORY

In November 1990, Sir Crispin Tickell, President of the Royal Geographical Society, hosted a joint meeting with the Royal Meteorological Society on global warming. A second joint meeting was held in September 1999 and once again the subject of the meeting was global warming. Sir John Houghton was the speaker. The meeting was held at the suggestion of Professor John Woods, Fellow of the Royal Meteorological and the Royal Geographical Societies and recipient of the Royal Geographical Society's Founder's Medal for his contributions to oceanography.

After Sir John Houghton's lecture, the Met Club and the Geographical Club, once the Raleigh Club, dined together for the first time. Such dining clubs follow a tradition, begun by the Royal Society, which is common to many learned societies, although it was *from* the Raleigh Club that the idea of a geographical society emerged in 1830. Hugh Robert Mill was a member of the Geographical Club. His personal encouragement of the Met Club, founded in the first year of his Presidency of the Royal Meteorological Society, was endorsed by his gift of a silver cigarette case in the form of a rain gauge. And so, in effect, the joint dinner can be remembered as a tribute to the memory of Hugh Robert Mill, meteorologist and scientific geographer, who was influential in both Societies.

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