

THE INSTITUTE OF ACTUARIES

MEMOIR

OF

SIR ALFRED W. WATSON, K.C.B.

Fellow and Past-President of the Institute of Actuaries. Honorary Fellow of the Faculty of Actuaries in Scotland. Fellow of the Royal Statistical Society.

WE have to record with great regret the death on 7 May last of Sir Alfred Watson, K.C.B., the Government Actuary and a past President of the Institute.

The death of Sir Alfred Watson terminates a career not merely of great distinction as an actuary and as a public servant, but one which has profoundly affected the scope and status of our profession.

Watson was born in 1870 and educated at Nottingham High School. His choice of a profession was no doubt largely influenced by the fact that his grandfather, Reuben Watson, was a consulting actuary with a wide practice among Friendly Societies. On leaving school he accordingly entered the office of his grandfather, who, although he had no professional qualification himself (or perhaps because of this), had the good sense to encourage his grandson to enter as a student of the Institute of Actuaries. It soon became evident that the Institute had secured a recruit of exceptional promise. For in 1893 at the early age of twenty-three Watson passed the final examination for the Fellowship at the head of the list, the only candidate to be placed in the 1st Class. His early academic success was the more remarkable because as a student he was handicapped not only by living out of touch with any actuarial centre, but also by the fact that the Institute examinations at that time were limited almost entirely to the problems of life assurance. The papers in this final examination in 1893 did not in fact contain a single question on Friendly Society work, the branch of actuarial work in which Watson had acquired most of his practical experience.

Watson's career as a practising actuary naturally divides itself into two periods nearly equal in time. The first period from 1893 to 1912 was, though of course he did not know it at the time, a period of preparation for the great and responsible duties which were to come. In 1912 he accepted an invitation from the Govern-



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ment to become the Chief Actuary to the National Health Insurance Joint Committee, and thus began his great career in the Civil Service which lasted until his death last May.

The fact that Reuben Watson had for many years been actuary to the Manchester Unity of Oddfellows, the largest Friendly Society in this country, played an important part in Watson's early years. It was no doubt due to this connexion with the Manchester Unity and with the work of other provident institutions that in 1896, when he was only twenty-six, he was made a member of a departmental committee, appointed by the Treasury to investigate various proposals for old age pensions, which afterwards became known as the Rothschild Committee. An examination of the minutes of evidence of this Committee shows that Watson played a very prominent and rather pugnacious part in reducing to nonsense the proposals of the various witnesses. His connexion with the Manchester Unity also provided him with an opportunity of showing his real calibre as a practising actuary. The society decided that an investigation should be made into their experience for the years 1893-7. The work of conducting this investigation was entrusted to Watson. The experience, comprising as it did an immense volume of sickness data derived from all parts of the country, provided an ideal opportunity for first-hand research into the foundations of sickness insurance. Watson rose to the occasion and published in 1900 as a preliminary to his final report a paper submitted to the Institute (*J.I.A.* Vol. xxxv, p. 268) in which he gave an exhaustive account of the methods and principles he was employing in his investigation. Finally in 1903 he published the results of his investigations of the sickness and mortality experience 1893-7 of the Manchester Unity. This monumental work at once became and has remained ever since the standard work on sickness insurance. In it Watson showed for the first time the significance in Friendly Society finance of "occupation" in determining sickness rates and of "locality" in its effect on mortality rates. This work definitely established Watson's position as the leading actuarial authority on sickness insurance.

In 1910, the year when he transferred his practice to London, Watson contributed a further paper to the Institute (*J.I.A.* Vol. XLIV, p. 168). In this paper and in his lectures to the Institute two years later on Friendly Society finance he published the fruits of

his unrivalled experience of Friendly Societies, Collecting Societies and similar organizations.

The introduction by the Government in 1911 of the National Health Insurance Scheme was the turning point in Watson's career. He was then forty-one, at the height of his powers, with a unique experience not merely of the actuarial problems of sickness insurance, but also of the practical administration and management of Friendly Societies through whose organization the Government scheme was to be worked. The National Health Scheme was a bold experiment, the success or failure of which would be determined by the adequacy of the actuarial bases adopted and the wisdom of the practical administration. The opportunity found the man. The Government were obviously well advised in offering Watson the appointment of Chief Actuary to the National Health Insurance Joint Committee. If he accepted this offer, as one of his friends pointed out, he would not merely be making a considerable financial sacrifice, but in becoming a permanent civil servant he would have to adapt himself to an official life very different from that of a consulting actuary who was more or less his own master. Watson's strong sense of public duty settled the matter. Here was an opportunity of public service which he could not refuse.

From the outset Watson's new appointment proved a success. He quickly settled down to his new duties and indeed found his true *métier* in the Civil Service. His position brought him into contact with many members of the public service including Cabinet Ministers and the heads of the great departments. His competence and judgment made such an impression that before long his advice was sought on many matters outside the original duties assigned to him, and indeed hardly coming within what was then understood to be the province of an actuary.

Perhaps the best illustration of his statistical, as distinguished from his strictly actuarial, work occurred during the War when his advice was sought by the Ministry of Shipping. His almost uncanny instinct for interpreting statistics and explaining the significance of them was shown at its best in dealing with the statistics of trade and shipping which were at the time an entirely new field to him. Indeed, at one of the most critical periods of the War he played a large part in devising plans which, by enabling this country and our allies to get the fullest economic use out of the

rapidly decreasing volume of shipping then available, made it possible to defeat the submarine menace.

The creation in 1917 of the office of Government Actuary with the appointment of Watson as the first holder of this position is a landmark in the history of our profession, the significance of which has not perhaps even yet been fully appreciated. The confidence which he inspired in all those with whom he was brought in contact almost imperceptibly extended his work throughout all the great Departments of State. Almost fortuitously, therefore, and without any effort on his part or any deliberate intention on the part of others he, as it were, grew into the position of consulting actuary to the Government. His formal appointment, however, as Government Actuary was much more than merely an official recognition of the extension of his sphere of work. It created a new State Department which has played, and is playing, a very important part not merely in the legislative and other work of the Government but also in the daily work of the departments. A large, perhaps the larger, part of the work undertaken by the Government Actuary and his Department does not come before the public at all. But some idea of the wide field covered by Watson during the 19 years he held this office is given in the list in the appendix to these notes, of the twenty-one Royal Commissions and Departmental Committees on which Watson served. This list includes only those of which the reports have been published. It is hardly too much to say that the Government Actuary's Department, now a permanent part of the machinery of the Government, has grown up out of Watson's personality. He was the unconscious creator of it. And had he not entered the Government service in 1912 there would no doubt still be an actuary to the National Health Insurance Joint Committee, but it is difficult to believe that there would be a Government Actuary's Department.

In 1920 Watson was elected President of our Institute, an honour which he greatly appreciated. Notwithstanding the pressure of his official work in Whitehall he gave the greatest care and attention to his duties as President. Those who served on the Council with him will remember him as an excellent Chairman, not pressing his own views unduly but somehow very often getting his own way. He continued to serve on the Council for many years after his term of office as President had expired, always taking the keenest interest

in anything which affected the profession of which he continued to the end to be a most loyal and devoted servant.

In November 1930 he submitted to the Institute what proved to be his last paper, on "The Analysis of a Sickness Experience" (*J.I.A.* Vol. LXII, p. 12). In this paper he took the data accumulated under the National Health Insurance Scheme and interpreted them in such a manner as to make them of use to the Friendly Society administrator.

The experience of the approved societies provided Watson with opportunities for further research on his favourite subject of sickness insurance. The results of his work were presented in his reports on the three valuations of the approved societies which were issued in 1922, 1927 and 1931. It is hardly too much to say that the whole course of National Health Insurance legislation and finance in this country has been determined by these reports. Watson's work on the National Life Tables also enabled him to develop more fully his researches into the variations in mortality in different parts of the country, the significance of which he had first discovered in his Manchester Unity experience.

Watson, unlike George Hardy who was an early authority in the same field of Friendly Society finance, was not a great mathematician, his development coming rather from first principles and from his practical experience in all sides of Friendly Society work, including that of being an office bearer in his local lodge. The following example illustrates the contrast between the different methods of the two men. For a certain purpose it was necessary to subdivide the published Manchester Unity "after two years" sickness rates. Hardy arrived at a solution by mathematical processes, whereas Watson examined the actual data from a representative group of lodges. These entirely different methods produced results which were very close.

After the commencement of the National Health Scheme in 1912 Watson and Hardy were associated in the Actuarial Advisory Committee, and it is an interesting speculation as to whether, if they had been brought together earlier as actuarial advisers to the Government in framing the scheme, some of the important difficulties which afterwards arose might not have been avoided.

Watson's work on sickness insurance will remain valuable and important so long as our present method of insuring against the

contingency of sickness continues. His real monument, one which we may hope will continue for generations, is the great Department of State which he created, staffed and administered for 19 years.

As is fitting in this *Journal* I have attempted so far to summarize Watson's career as an actuary. But what of Watson the man? I knew Watson well, if not intimately, for the last 16 years or so of his life. The chief impression that remains on my memory is that of a kindly unassuming man entirely unspoilt by the great position which he had reached, or by the honours he had received (he was knighted in 1915, and in 1920 he received the K.C.B.). He was never a robust man, and his official and professional life absorbed so much of his physical and mental energy that he had little opportunity for cultivating outside interests. He enjoyed the regard and esteem of all his professional colleagues and will always be remembered with affection by those who knew him.

C. R. V. C.

APPENDIX

Title of Report	Year of Report
Committee on Old Age Pensions	1898
Actuarial Advisory Committee (National Health Insurance)	1912-15
Departmental Committee on Sickness Benefit Claims under the National Insurance Act	1914
Departmental Committee on Approved Society Finance and Administration	1916
Departmental Committee on Old Age Pensions	1919
Departmental Committee on the Superannuation of Persons employed by Local Authorities in England and Wales	1919
Prison Officers' Superannuation Committee	1919
Departmental Committee on the business of Industrial Assurance Companies and Collecting Societies	1920
Departmental Committee on Workmen's Compensation	1920
Royal Commission on Decimal Coinage	1920
Departmental Committee on Approved Societies' Administration Allowance	1921
Committee on Collection and Presentation of Official Statistics	1921
Departmental Committee on the Application of the Government of Ireland Act, 1920, to National Health Insurance	1921

Interdepartmental Committee on Health and Unemployment Insurance	1922-23
Departmental Committee on the Superannuation of School Teachers	1923
Committee on Pensions and Passage Expenses of Colonial Officers	1924
Departmental Actuarial Committee to advise the Royal Commission on National Health Insurance	1925
Royal Commission on National Health Insurance	1926
Departmental Committee on the effect of the Rule of Law against Perpetuities in its application to certain Superannuation Funds and Funds with analogous purposes	1927
Committee on Industrial Assurance and Assurance on the Lives of Children under Ten Years of Age	1933
Committee on Pensions to Widows and Orphans of Officers in the Colonial Service and on Colonial Provident Funds	1936