THE ROLE OF RADIOLOGY.*

By Maurice R. J. Hayes.

In the first place let me assure you of my sincere appreciation of the high honour of being chosen as your President for the coming year. As my introduction to the chair synchronises with the coming into operation of a new regulation which makes instruction in radiology compulsory for all students of medicine, I appreciate the honour all the more deeply, since it comes at the moment when the status of the branch of medicine with which I am so closely identified has been raised to its rightful place in the curriculum.

In his original monograph, published in 1895, Roentgen suggested that his discovery might be of aid to surgery. He did not dream of the aid it would be nor of the revolution it would bring about, for it is quite true to say that it has wrought more changes in our concepts of the pathology of the thorax and abdomen, and provided more exact knowledge of the anatomical relations of the hollow viscera and their motor functions in health and disease than had ever been obtained before. Compared with its sister sciences in the family of medicine it is still in its fascinating age, for its phases of development are by no means exhausted, and it forms a valuable connecting link between the other medical specialities.

The birth of this new child in the medical family was not received with universal acclaim. There were many inheritors of the traditional conservatism of our profession who looked askance at this offspring of physics whose advent was unobtrusively announced to an astonished world under the perplexing name of "X." The more enterprising, however, hastened to turn it to good account, and the old prejudices and hostilities were soon dispelled by the successes which followed in the wake of the new method. When we look at the elaborate equipment of a modern x-ray department it is difficult to realise, but salutary to recall, the enormous difficulties which confronted the early radiologists. The primary electrical current was obtained from a few wet storage batteries of limited capacity: the high tension current from a coil with hammer break; the x-ray tubes were of the flimsiest kind, not much larger nor much more durable than a test tube, and almost as cheap. The photographic plate was of the ordinary kind. With such scanty equipment the average length of the exposure required to take a radiogram was about one hour. Nothing was then known of the dangers of prolonged exposure to x-rays, and radiology, like so many other branches of research, has given many hostages to fortune. Indeed one may say that the milestones on the path of its development are tombstones.

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erected to the memory of those early pioneers. And here I would like to digress for a moment to pay a respectful tribute to the memory to one of Dublin’s pioneers who paid dearly for his enthusiasm. Skilful mechanician and craftsman that he was, Lane Joynt became the foster parent of radiology in Dublin. Aiding its growth and development at a time when its dangers were unknown, he bore the consequences with heroic fortitude and without complaint. He never posed as a martyr.

And on recalling those early days Haughton’s work must not be forgotten, for he was one of the first, I believe, to clip a fragment off an ordinary film, wrap it in black paper, and take the first dental radiogram from inside the mouth. We are glad that the Gods did not smite him for his pains.

To Lane Joynt and to all like him, from whose sad experiences the later generation of radiologists have profited, we pay respectful homage for the lessons they have taught us. A word of solemn warning to the beginner may not be out of place. It is: Never, whether through curiosity, or to give a demonstration, or for any other purpose, expose your hands to the $x$-rays. Such foolishness was no doubt responsible for some of the disasters of the past, as well as the practice of viewing the bones of the hand on the screen to see if the tube was working properly. For caution and restraint in this respect many who have been long engaged in the practice of radiology have been amply rewarded.

Radiology is sometimes blamed for the disappearance of the skilful diagnostician. So is bacteriology. It is said perhaps truly that there is an increasing tendency to resort to the $x$-ray department and the laboratory for a diagnosis without having recourse to a systematic routine examination and a careful analysis of symptoms and signs. Both specialities so frequently appear to establish a diagnosis that inspection, palpation, percussion, and auscultation, it is alleged, are becoming a lost art.

The radiologist must not be blamed for the introduction of the “ready reckoner” methods in diagnosis. He would, indeed, be greatly relieved if none were referred to him but the essential and the doubtful cases in which the positive or negative results of his investigations might prove helpful in establishing the diagnosis. It would even appear that the distractions of the $x$-ray department are sometimes availed of to placate discontented patients who may have to wait a day or two in the wards!

If the high standards of diagnosis of the pre-Roentgen era are to be maintained, the obligation devolves on the clinician who must set the example to the student by making full use of all the ordinary means before calling in ancillary methods; the student should remember that when he goes out to practice in a few years hence he must rely on his own resources, and that he must be able to assess proper values to the symptoms and signs, for the services of well-equipped departments will not then be at his disposal. Despite what alluring advertisements say, and the advent of cheap hydro-electric power, the time is very remote when a radiogram can be produced merely by the turning of a switch.