

written between fifty and sixty years ago by Osborne Reynolds².

The papers by Reynolds deal with the manner in which raindrops, snowflakes and hailstones are formed. Concerning the shape of a hailstone he says: "Although to the casual observer hailstones may appear to have no particular shape except that of more or less imperfect spheres, on closer inspection they are seen all to partake more or less of a conical form with a rounded base like a sector of a sphere. In texture they have the appearance of an aggregation of minute particles of ice fitting closely together, but without any crystallization such as that seen in the snowflake—although the surface of the cone is striated, the striae radiating from the vertex." This description is similar to those given by Mr. Moore and Mr. Wagener for the snowflakes which they observed.

Reynolds made some experimental studies in which he obtained imitation hailstones of this shape, but in connection with real hailstones he says: "When found on the ground the hailstones are generally imperfect." Perhaps this imperfection is one reason why the conical form is not observed more frequently.

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THE SCHOOL DAYS OF LORENTZ

I AM not sure how generally known it is among scientists in this country that on September 9 last a monument to Hendrik Antoon Lorentz was unveiled in the Sonsbeekpark in Arnhem by Princess Juliana of the Netherlands. In connection with this event, one of Lorentz's early school friends published in the *Haagsche Post* for September 5 some recollections of many years ago. Thinking that a good many readers of *SCIENCE* may be interested in anecdotes concerning Lorentz, I am sending herewith a free translation of some of the stories told in this article.

I made the acquaintance of Lorentz in the days when the boiling of a kettle of water in the early morning hours was troublesome for the housewife; it could be bought for a penny and a half in one of the neighboring shops.

Soon after I had come to live in the street where Lorentz's father kept a grocery, each of us was sent to fetch hot water. As customary among boys who meet for the first time, we had to make acquaintance by means of a fight; and I was quite ready for a good working out, but did not get that far. Even in his early years Hentje Lorentz was of a peace-loving nature; besides he showed his powers for logical thinking. I can still hear him say, "Don't you think we had better postpone the fight until another time? Fighting is dangerous when

you are carrying a kettle of boiling water; for burns leave permanent scars." I had lost my desire to fight and we walked home the best possible friends.

From a later period: One of the three teachers in our school used to lecture occasionally on scientific subjects. For these lectures he needed drawings. Drawing was my one accomplishment. The strange thing happened that I was frequently punished a few days before a lecture was to take place. The punishment consisted of having to draw physical apparatus with white chalk on blue paper. One day there was apparently so much work to be done that one boy could not get it completed in time. To the great astonishment and indignation of the entire school, Lorentz was also punished on that day; no one knew why. So that afternoon, Hentje and I sat bent over large sheets of blue paper. During our work he explained to me the principles underlying the various instruments that we had to draw. To him everything was as clear as crystal; I did not understand much about it and did not know where he got all the information, thinking at first that he was fooling me. All of a sudden our teacher came in, probably having heard a good part of the lecture Lorentz had given me; for he patted him on the back and said: "What brains! There is not very much I can teach you about this subject any more." Among the boys of our acquaintance it was the common conviction that Lorentz knew everything.

From his early manhood: One day I nearly burst with laughing for I met Hentje wearing a full, black beard; he was then nineteen years old. When I expressed my astonishment at this remarkable adornment of his chin, he answered, "I have been appointed teacher in one of the evening schools: this beard will support my prestige." His good-hearted, intelligent eyes showed the same twinkle that always characterized him in boyhood.

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THE WORK OF DR. BASKERVILLE

IN the issue of *SCIENCE* for October 30, Dr. Carmichael is credited (p. 422) with the following statement concerning the work of the late Dr. Charles Baskerville: "He discovered the chemical elements, carolinium and berzelium."

This is obviously a slip, as no such elements are recognized by chemists. Dr. Baskerville, with whom I had the honor to be associated for four years, did tentatively announce the discovery of substances which he designated as carolinium and berzelium. The announcement was premature, and I am certain that he regretted it. The literature records many similar occurrences, and this does not in any way detract from the high opinion which Dr. Carmichael holds concerning Dr. Baskerville, who was not only a brilliant research chemist but a man whose kindness and stimulating personality endeared him to his colleagues.

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² Osborne Reynolds, *Lit. and Phil. Soc. Manchester, Memoirs*, Vol. 6 (1876-77 and 1877-78). Reprinted in the *Scientific Papers of Osborne Reynolds*, Vol. 1: 214, 223.