

It forms, therefore, no link in the actual development of the energy-conception; but it is a significant evidence of the direction in which the ideas of natural philosophers were then moving, and of the high degree of clearness to which they rose in individual instances. When we read the following words: "Besides the known fifty-four chemical elements there exists in nature only one agent more, and this is called 'Kraft'; it can under suitable conditions appear as motion, cohesion, electricity, light, heat, and magnetism," it seems difficult, even after the lapse of two generations, to alter anything in this clear and simple enunciation of the law of the conservation of energy. It has indeed been stated that "unless some still earlier author should be discovered, there can be no doubt that Mohr is to be recognised as the first to enunciate in its generality what we now call 'conservation of energy.'"¹ At the same time, the case shows how little, at the beginning of a scientific movement, purely abstract statements are capable of really guiding research into fruitful channels. There is with Mohr no attempt to establish or apply an actual measure² of the amount of energy appearing in the various instances which he mentioned. This further step was taken five years later by J. R. Mayer, who can claim to be the first³ to have ventured on a

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Mayer.

tion; his merit being variously appraised according to the purely scientific, the philosophical, or the more practical standpoint taken up by various critics. See, *inter alia*, P. G. Tait's 'Recent Advances,' 3rd ed., p. 60, &c.; also the correspondence of Mohr and Mayer in the latter's 'Kleinere Schriften und

Briefe,' ed. Weyrauch, p. 407, &c.

¹ See the article on K. F. Mohr in the 'Ency. Brit.,' 9th ed.

² See on this point Weyrauch, in Mayer's 'Kleinere Schriften,' p. 408.

³ Helm ('Energetik,' p. 34) begins the list of undoubted determinations of the heat-equivalent with