

the well, which is still known as the well of the *ca. al-heugh* -- the old Scotch name for a coal-pit. Calderwood tells us, in his description of a violent tempest which burst out immediately as his persecutor, James VI., breathed his last, that in Scotland the sea rose high upon the land, and that many "*coal-heughs* were drowned."

There is no science whose value can be adequately estimated by economists and utilitarians of the lower order. Its true quantities cannot be represented by arithmetical figures or monetary tables; for its effects on mind must be as surely taken into account as its operations on matter, and what it has accomplished for the human intellect as certainly as what it has done for the comforts of society or the interests of commerce. Who can attach a marketable value to the discoveries of Newton? I need hardly refer to the often-quoted remark of Johnson; the beauty of the language in which it is couched has rendered patent to all the truth which it conveys. "Whatever withdraws us from the power of the senses," says the moralist — "whatever makes the past, the distant, or the future, predominate over the present, advances us in the dignity of thinking beings." And Geology, in a peculiar manner, supplies to the intellect an exercise of this ennobling character. But it has, also, its cash value. The time and money squandered in Great Britain alone in searching for coal in districts where the well-informed geologist could have at once pronounced the search hopeless, would much more than cover the expense at which geological research has been prosecuted throughout the world. There are few districts in Britain occupied by the secondary deposits, in which, at one time or another the attempt has not been made. It has been the occasion of enormous expenditure in the south of England among the newer formations, where the coal, if it at all